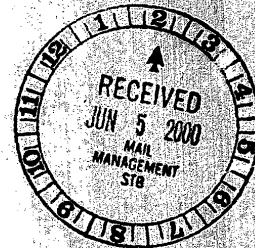


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BEFORE THE
SURFACE TRANSPORTATION BOARD

STB EX PARTE NO. 582 (SUB-NO. 1)

MAJOR RAIL CONSOLIDATION PROCEDURES



REPLY COMMENTS OF CSX, NORFOLK SOUTHERN AND UNION PACIFIC

Joint Compendium of Prior Railroad Submissions
on Forced Access and Bottleneck Rate Issues

VOLUME II

ENTERED
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**Joint Compendium of Prior Railroad Submissions
on Forced Access and Bottleneck Rate Issues**

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CERTIFICATE OF SERVICE

I hereby certify that, on this 5th day of June, 2000, I served the foregoing "Reply Comments of CSX, Norfolk Southern and Union Pacific -- Joint Compendium of Prior Railroad Submissions on Forced Access and Bottleneck Rate Issues" (Volume II) by causing a copy thereof to be delivered by first-class mail, postage prepaid, to each of the persons listed on the Board's service list in this proceeding.



Vincent F. Prada

BEFORE THE
SURFACE TRANSPORTATION BOARD

Docket No. 41242

CENTRAL POWER & LIGHT COMPANY

v.

SOUTHERN PACIFIC TRANSPORTATION COMPANY

Docket No. 41295

PENNSYLVANIA POWER & LIGHT COMPANY

v.

CONSOLIDATED RAIL CORPORATION

Docket No. 41626

MIDAMERICAN ENERGY COMPANY

v.

UNION PACIFIC RAILROAD COMPANY AND
CHICAGO AND NORTH WESTERN RAILWAY COMPANY

COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS

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October 15, 1996

VERIFIED STATEMENT

OF

ROBERT D. KREBS

I am Robert D. Krebs, President and Chief Executive Officer of Burlington Northern Santa Fe Corporation ("BNSF"), 2650 Lou Menk Drive, Fort Worth, Texas. I have held these positions since September 1995, when BNSF was created pursuant to the Interstate Commerce Commission's authorization of the common control of Burlington Northern Inc. and Santa Fe Pacific Corporation and their wholly-owned railroad subsidiaries. In this statement I will use the acronym BNSF to refer both to the parent corporation and to our commonly controlled and operated railroad subsidiaries, Burlington Northern Railroad Company and The Atchison, Topeka and Santa Fe Railway Company.

I began my career in the railroad industry with the Southern Pacific Company in 1966 following my receipt of a Master's Degree from the Harvard Graduate School of Business. I held various positions with Southern Pacific Transportation Company ("SPT") from 1966 until July 1982, when I was elected President of SPT. From December 1983 until July 1987, I was President and Chief Operating Officer of Santa Fe Pacific Corporation ("SFP"). I became Chief Executive Officer of SFP on July 28, 1987 and was elected Chairman of SFP on May 24, 1988. I

served as CEO and Chairman of SFP until I assumed my present position with BNSF last year.

I am submitting this statement in response to the Surface Transportation Board's request for comments in what is referred to as the "bottleneck" coal shipper proceeding currently pending before the Board. I understand that in this proceeding the Board is considering fundamental changes regarding the regulation of rates, and possibly the routing of traffic, on rail movements to or from facilities served by a single bottleneck rail carrier. If adopted, such a re-regulatory initiative would have a major adverse impact on railroad revenues and our ability to provide the best possible service to our customers. I urge the Board not to take any steps that would stifle the railroad industry's willingness and ability to make the new investments necessary to serve our existing shippers and to attract additional traffic.

I see grave risks for railroads, shippers and our national transportation system in the re-regulatory measures that the Board is considering. The risks are vivid to me because I spent the first 15 years of my career in an industry that was in decline, due in part to the heavy burdens of regulation. When I joined Southern Pacific in 1966, prospects for the industry were not bright. Railroads had been losing market share to trucks for

years because rail rates were not competitive and service was poor. Track and equipment maintenance was slipping. Customers were not getting the reliable service they needed. Reinvestment in the nation's rail infrastructure was negligible.

The vicious cycle of declining revenues, under-investment, insufficient maintenance and poor service drove many railroads out of business. Nearly one-third of the 76 Class I railroads that existed in 1966 went into bankruptcy during my first 15 years in the business, including such well known names as the Penn Central, the Rock Island and the Milwaukee Road.

The regulatory reforms of the Staggers Rail Act of 1980 established a legal framework in which railroads had an opportunity to show their mettle. The new freedom to set prices in response to market demand gave us the incentive to cut costs and achieve efficiencies so that railroads could actually compete in the market. Our ability to offer lower rates and to provide better service enabled us to attract more customers. The numbers tell a story of remarkable efficiency gains in our industry since 1980:

- Employee productivity increased more than threefold, with revenue ton-miles per employee growing to nearly 7 million tons per year from 2 million;
- Revenue ton-miles per mile of railroad operated doubled from 5.2 million to 10.4 million;

- Asset productivity improved, as freight car and locomotive fleets have been reduced by 48% and 36% respectively;
- Fuel efficiency increased to 375 revenue ton miles per gallon from 235.

These efficiency gains have paid off for our customers. Rail rates have declined over 50% in constant dollars since 1981.

Virtually every shipper has benefited from rail rate reductions whether or not it is served exclusively by one rail carrier. But the Board must understand that not every shipper can or should pay the same rates. The economic realities of our industry require a mix of prices if railroads are to sustain themselves. There are four basic points:

- Because the railroad industry has very high fixed costs (the costs of track, roadbed, rolling stock, etc.), the cost of handling an incremental unit of traffic is lower than the average cost of handling all traffic on the system.
- It makes sense for railroads to compete for additional traffic, even if that traffic does not cover the system average costs, as long as it makes some contribution to fixed costs.
- But because some traffic is priced below average costs, there must be other traffic that is priced above average costs if we are to cover all our fixed costs.
- If railroads cannot cover their fixed costs, they cannot justify investments in new plant and equipment; in fact, the financial markets will

discourage them from making such investments by driving up their cost of capital.

The success we had on Santa Fe during the 1980's and early 1990's was based on these economic realities. Santa Fe gained a reputation as a premier intermodal carrier during this time period, and we are proud of that reputation. To achieve a foothold in the intermodal business we had to cut costs and to make strategic investments. We could not have made the investments that allowed Santa Fe to compete effectively with trucks without the revenues from our other commodity groups, including such bulk commodities as coal and grain, and other traffic such as chemicals and general merchandise. It was the combination of cost reductions and the ability to price our services differentially that allowed us to make progress toward covering all of Santa Fe's fixed costs.

Now we are confronting a similar challenge on a larger scale at BNSF. As I testified in our merger application, one of the factors that made a merger between Burlington Northern and Santa Fe attractive was the prospect of the diversified traffic base of the two carriers moving over the combined BNSF rail system. Specifically, we contemplated that Santa Fe's strength in intermodal traffic would balance BN's traditional strength in coal and grain. Beyond this, the other principal benefits that we saw in the combination of BN and Santa Fe were the creation of

extensive new single-line routes with expanded geographic coverage and substantial cost savings from combining the staffs and facilities of our two companies.

Realizing the benefits of our merger requires major capital investments. BNSF is investing in improved customer service. We estimate capital spending of \$2.2 billion in 1996. About \$1.3 billion is for maintenance of our infrastructure -- 3 million ties, 500 miles of new rail, 12,000 miles resurfaced. The additional \$900 million is predominantly for expansion. Major projects include reopening Stampede Pass in eastern Washington to increase our capacity for intermodal, grain and general merchandise across the northern corridor. We are expending large sums to expand our intermodal facilities, including the Hobart Yard near Los Angeles, where we anticipate that our capacity to handle port-related traffic will grow to one million lifts per year. BNSF will take delivery of 220 new locomotives in 1996, over half of which will be additions to the fleet.

At BNSF, we are also striving to become a safer railroad. Our 1996 goal is to reduce the injury rate an additional 25 percent below historic levels. Through August, injuries were down 36 percent, while the number of lost work days was down 35 percent against our goal of 25 percent. We are not

only focused on reducing personal injuries but also on reducing derailments and generally creating an era of safer train operations. We hope to be able to identify technologies like Positive Train Separation and electronic brakes that will help us avoid severe derailments and collisions. Of course, it will require more capital investment to put such types of technologies in place.

The point is that railroads like BNSF require continuous infusions of capital if they are to fulfill their potential to serve shippers and benefit the consuming public. We cannot justify the necessary capital investments, and indeed our Board of Directors would not approve such investments, unless we are confident that we will earn an adequate return on the capital employed in the business. And, for all my optimism about the future, I must remind the Board that such adequate returns have not yet been realized on an overall basis, either for BNSF or for the industry as a whole. Inadequate returns not only deter investment, they also make it more expensive to obtain funds from the capital markets.

This brings me to the "bottleneck" proceeding and the possibly severe adverse consequences that it could have on the rejuvenation and growth of the railroad industry that I have been describing. Requiring railroads to route traffic to interline

carriers over nearby junctions at a shipper's request is contrary to the very concept of efficient, single-line service that our merger was designed to achieve. Of course we are anxious to implement operating improvements that serve our customers' business needs, but it is hard to imagine how inserting a new junction in an efficient rail movement could benefit anyone. On the contrary, the unnecessary interchange of traffic between two carriers results in nothing but increased costs for railroads and shippers -- both the costs resulting from delays and the costs involved in investments in facilities (such as sidings) necessary to accomplish the interchange.

The driving force behind railroad mergers has been to increase efficiency by providing more single-line routes and less balkanization. Therefore, I cannot believe that the Board (or shippers for that matter) seriously contemplate a regulatory change that would lead to a re-balkanized rail system. The demand that carriers establish junction-point rates is more likely a device to achieve rate reductions at the expense of the carriers who now serve shipper facilities. Viewed in this light, both the shippers' proposal and the Board's "intermediate approach" appear to be versions of more stringent rate regulation. The effect of either proposal would be to reduce rates on a significant portion of our traffic that involves

"bottleneck" movements and to make a major dent in BNSF's revenues.

It is hard to overstate the adverse effects that would result from a significant reduction of our income through more extensive and stringent rate regulation. Although we have made progress toward earning our cost of capital, we are not there yet. Placing a regulatory cap on our revenues would be akin to requiring us to shift into reverse. The first causality would be capital investment. We would not be able to make all the capital investments necessary to maintain our system and to expand our capacity. Some attractive business that we could have won by upgrading our system would be forsaken. The lost contribution would make it harder than before to earn adequate revenues.

The reduced prospects for future earnings would obviously hamper our ability to raise capital for future projects by making that capital more expensive. The investor confidence that we have earned through the cost reductions and efficiency gains of the past 15 years would be shaken by the perception of an externally imposed revenue cap.

Second only to the adverse impacts of lost revenues is the dismal prospect of trying to run a business and raise capital under a cloud of regulatory uncertainty. To plan effectively for the future, we need to know what regulatory environment we are

operating in. The prospect of multiple rate proceedings with uncertain outcomes before the Surface Transportation Board would severely disrupt our ability to implement our business plans. How can a railroad plan effectively for capital expansion when the revenues might or might not be forthcoming? The adverse effects of a regime of re-regulation would be compounded by the uncertainty of the investment community regarding our prospects for the future.

I am unaware of any evidence that there is a need for the re-regulatory measures that the Board has under consideration. The Board's decision calling for comments in the "bottleneck" proceeding stressed the Board's obligation to maintain a balance between the interests of carriers and the interests of shippers. But there is no indication that anything has become unbalanced. The fact that a handful of coal shippers see an opportunity to improve their positions in the short term should not be taken as a sign that the Board's existing role needs to be redefined.

The fact is that the overwhelming majority of shippers on BNSF, including shippers who are solely served by us, have seen their rates reduced significantly in real dollar terms over the last 15 years. These rate reductions reflect both the efficiency gains that we have achieved and the competitive

options that our shippers use as leverage in rate negotiations. And virtually every shipper has competitive options, including our coal fired utility customers.

Far from seeking to exploit our customers, our goal is to make them more competitive in their businesses so they will have additional, profitable traffic to bring to our railroad. The way we can do this is to improve our service to our customers. And one thing we need to do to improve our service is to continue to invest in our rail network. There is nothing balanced about a regulatory scheme that would deter our ability to make investments to better serve our customers.

At BNSF we are committed to realizing the potential of this great industry that has struggled back to its feet and is now striding forward. I urge the Board not to shackle our progress.

VERIFICATION

STATE OF TEXAS)
COUNTY OF TARRANT)

Robert D. Krebs, being duly sworn, deposes and says
that he has read the foregoing statement, knows the facts
asserted therein, and that the same are true as stated.


Robert D. Krebs

SUBSCRIBED AND SWORN TO
before me this 11th day of
October, 1998




Notary Public

My Commission Expires:

11/30/99

VERIFIED STATEMENT

OF

JOHN W. SNOW

My name is John W. Snow. I am Chairman, President and Chief Executive Officer of CSX Corporation, with offices in Richmond, Virginia. As the Board knows, CSX is the parent company of CSX Transportation, Inc. (CSXT), and controls a number of other transportation-related subsidiaries. I was elected CEO in 1989 and have held my current position with CSX since 1991. Before that time, I held a number of positions with CSX and its predecessor railroads, and served in various capacities with government, academia and private law practice. I hold both a law degree and a doctorate degree in economics. My curriculum vitae is attached to this statement.

Introduction

I am submitting this statement in response to the Board's request for comments on the so-called "bottleneck" or "short-haul" rate and routing proposals that the Board is considering in this proceeding. These proposals -- which would allow shippers at exclusively served points to compel railroads to interchange traffic at any nearby junction point with another carrier that could conceivably provide alternative service beyond the junction, and to obtain regulatory prescription of a maximum rate covering only the movement over such a "bottleneck" segment

without regard to whether the overall through rate for the entire end-to-end movement is unreasonably high -- would radically change the way railroad rates and routing practices have been regulated during the past two decades.

The Board's resolution of this issue is of the utmost importance to CSXT. Adoption of the coal shippers' claims (or the so-called "intermediate" approach suggested by the Board) would have grave consequences for CSXT and its shippers, and for the rail industry in general. As I will explain, these "bottleneck" rate and routing proposals, if adopted, would cut short, if not reverse, the progress that CSXT and other railroads have made toward long-run financial and competitive health. They would impede our ability to attract the capital funds we need to make the investments in plant improvements that our shippers demand in order to be competitive in the global economy. They would saddle the railroads with disabling operating inefficiencies. And, not insignificantly, the "bottleneck" rate and routing proposals would lay the foundation for effective re-regulation of the rail industry.

The coal shippers have attempted to characterize their claims as a seemingly innocuous and simple request that railroads be required to establish reasonable rates to apply between any two points that they serve on their systems (i.e., between a connection with another railroad selected by the shipper and an exclusively served origin or destination). A moment's consideration reveals, however, that the issue which concerns us is not

simply one of establishing a rate to apply to shipments between point A and point B.

As I think about the issues raised by the coal shippers' claims, it seems to me that we must ask ourselves three basic questions. First, how did the rail industry get to where it is today? Second, is there any demonstrable problem with the existing regulatory scheme that cries out for radical changes? And, third, what impacts will the "bottleneck" rate and routing proposals have on the course we have taken over the past two decades?

How the Rail Industry Got to Where it is Today

To answer the first question requires a brief recital of history, which should be well known to the Board. It was only 20 years ago that the rail industry, under the weight of heavy federal regulation of virtually all aspects of its ratemaking, routing and operating practices, was at the threshold of financial collapse. Seven of the nation's railroads in the Northeast were bankrupt. Regulation-induced constraints on earnings forced the railroads to reduce and defer expenditures for plant maintenance and capital improvements. The resulting deterioration in service drove huge amounts of freight traffic off the rails, which further depressed earnings and started the downward cycle anew. Rate regulation prevented railroads from competing effectively with lower-cost modes. Regulation (including the discredited "DT&I" gateway conditions) also forced railroads to keep

open interchange points over a multitude of alternative routes, regardless of operating efficiency, thus fragmenting traffic over many routes, proliferating the number of interchanges and increasing costs. Carriers became embroiled in complicated, expensive and often inconclusive disputes over interline revenue divisions.

I can well recall those days. As a senior official in the Department of Transportation, I was actively involved in developing the deregulatory proposals enacted into law in the 4-R Act of 1976. Several years later, as head of government relations for Chessie System Railroads (a CSXT predecessor), I worked closely with railroad personnel, the Administration and members of Congress on the bipartisan legislative proposals which became the Staggers Rail Act of 1980.

The solution that these pieces of legislation proposed to remedy the railroads' ills was, at bottom, quite straightforward. Railroads should be freed to set their rates for individual shippers in accordance with competition and the demand for their transportation service, subject to regulatory protection for shippers who can demonstrate that they have no effective competitive alternatives. Railroads should also be freed to route traffic efficiently and to eliminate inefficient joint-line routes, subject to regulatory intervention in the event that carriers, for whatever reason, act to foreclose connecting carriers from participating in routings where they can provide more efficient service. And regulatory rules should be designed

to create incentives for railroads to respond to competitive forces and operate efficiently, thus minimizing the need for regulatory intervention.

By any objective measure, these deregulatory initiatives have been nothing less than spectacularly successful. Indeed, the successes of deregulation of the rail industry have been so dramatic and so obvious that it is now almost hard to believe that scarcely 20 years ago serious and knowledgeable policy makers were predicting the need for imminent nationalization and government ownership of our rail freight system.

It is worthwhile to review the progress and improvements that the rail industry, and CSXT in particular, have achieved as a direct result of these deregulatory reforms and the ICC decisions implementing them.

The cases now before the Board are complaints about the level of rail rates, so it is perhaps appropriate to begin with an account of what has happened to our rates during the period following Staggers. (As I will explain below, exclusive focus on rate levels obscures issues that may be more important for shippers.) Deregulation gave railroads the opportunity to compete with other modes for traffic and to price our services on the basis of the demand characteristics of individual movements. Differential pricing means charging higher-than-average markups over variable costs where demand conditions permit and lower-than-average markups where competition requires it in order for us to participate in traffic that still makes a contribution to

our fixed and common costs. As virtually all economists, Congress and the ICC have understood, this system of pricing is the only means by which railroads can have any hope of earning revenues sufficient to recover their full economic costs, including current cost of capital.

This system of pricing has permitted us to attract new traffic to the rail system. By charging differentially lower rates for more competitive traffic, we have succeeded in bringing back to the railroads competitive traffic that, while making a smaller contribution to our fixed and common costs than less competitive traffic, still makes a positive contribution that reduces the costs which must be borne by the less competitive traffic. Our success in attracting new freight to the system serves to benefit all of our shippers.

What has this ratemaking system done to overall rate levels? Since Staggers, railroad rates have consistently fallen in real terms. For the industry as a whole, inflation-adjusted rate levels have dropped over 50 percent since 1980. Our experience at CSXT is similar. Since 1981, our average revenue per ton-mile has fallen 53 percent in real terms. This trend has held true for coal traffic as well. Since 1985, CSXT's average revenue per ton-mile for coal traffic has dropped 40 percent in real terms. More than 95 percent of our coal traffic is now subject to contracts, mutually entered into by our company and shippers. The latter figures on coal are particularly important, because the preponderance of CSXT's coal traffic originates

and/or terminates at points that are not served by another railroad. This should lay to rest any notion that solely served coal shippers are without competitive alternatives that effectively constrain rail rate levels (a point developed by Mr. Anderson in his separate testimony on behalf of CSXT).

The routing and operating freedoms that the railroads gained as a result of the 4-R and Staggers Acts have also led to remarkable improvements in operating efficiency and service. CSXT, like other railroads, has rationalized its rail network by reducing the number of interchanges with other carriers (and the delays associated with exchange of traffic at such points), closing duplicative or inefficient routes, consolidating freight traffic on high-density main-lines, expanding single-line service, and concentrating joint-line traffic at particular interchange points in order to attain density and reduce operating costs. These efforts have resulted in lower costs (and thus lower rates), and faster and improved service for all shippers.

Our ratemaking and routing initiatives, and other efforts to reduce costs and become more efficient, have translated into significant improvements in our financial performance over time. Our progress can be seen in almost every financial indicator, but I will mention just two. CSXT's operating income (excluding special charges), which was \$428 million in 1981, has trended upward and reached a record of \$857 million in 1995. Nearly as dramatic, CSXT's operating ratio (also excluding special charges) has declined from 91.3 in 1981 to 82.2 in 1995.

(Both sets of figures are based on railroad Form R-1 data.) Although our progress has been substantial, CSXT's returns continue to fall below our current cost of capital, and we are still earning far less than adequate revenues. If we are to cover our full economic costs of service, much more improvement will be necessary.

The improved financial performance we have achieved in recent years, together with the expectation that regulatory rules will allow us (if market conditions permit) to earn a competitive rate of return, have also enabled CSXT and other railroads to invest heavily in plant maintenance and capital improvements. The service improvements and real rate reductions that deregulation has made possible are certainly important chapters in the deregulatory success story, but in my judgment the real story lies in capital investment. Improved earnings and the possibility of achieving adequate revenues have given CSXT and other railroads the ability and incentive to attract the capital funds we need to invest in our infrastructure.

In the past decade, we have plowed much of our additional revenues back into our core rail lines and facilities, and have been able to obtain capital at reasonable cost. CSXT's rail capital expenditures have totaled \$7.8 billion since 1981, with \$814 million in 1995 alone. As Mr. Ward explains in his separate testimony on behalf of CSXT, much of this capital investment has been devoted to maintaining, improving and expanding the capacity of our rail network, including rails, ties, ballast and communi-

cations and signaling systems. We have also purchased hundreds of new locomotives and thousands of new freight cars, which provide better and faster service with lower operating costs.

A significant portion of CSXT's capital budget has been devoted to specific investment projects designed to attract traffic -- both from other railroads and from other modes -- that is highly rate- and service-competitive. These include the construction of new intermodal facilities, bulk distribution centers, yard capacity expansion, not to mention the millions of dollars in capital investment that we have made in information management and freight tracking systems. As I mentioned, attracting new freight traffic to the rail system benefits all shippers; the substantial capital investments we are making in new plant and facilities make it possible for CSXT (like other railroads) to compete successfully for this traffic.

In short, the ratemaking and routing freedoms we have enjoyed, and the promise of competitive returns that they made possible, have given us the ability and the incentive to re-invest heavily in our rail infrastructure. This, I believe, has been the critical ingredient in the railroads' return to financial health. Only through massive injection of capital have CSXT and the other railroads been able to improve service, attract new competitive traffic and make the operating improvements that have translated into the substantial reduction in real rate levels that I described.

This, then, is the answer to the first question I posed. The railroads, including CSXT, have made great progress toward recovery from the perilous financial condition they faced pre-Staggers. Rates and costs have fallen, service has improved, and the railroads are actively investing in the industry's future. While none of the largest railroads (including CSXT) is earning its cost of capital on a consistent basis, the prognosis for the future is good . . . if there are no dramatic changes in the regulatory environment.

The Absence of Any Need For Radical
Change in Existing Regulatory Rules

Given this record, the second question I posed immediately raises itself. Is there some problem or defect in the existing system of rail rate regulation that suggests any need for the Board to adopt the radical changes the shippers are proposing? With all due respect, I have heard no convincing argument that there is. While rail earnings have improved, no railroad (including CSXT) can be said to be earning supra-competitive returns or monopoly profits when it is not even earning its cost of capital. And coal shippers in particular have no cause to complain, for their rates have fallen in real terms along with the rates that other rail shippers pay.

I am thus left with the conclusion that the case for imposition of "bottleneck" rate and routing regulation ultimately comes down to the claim by utility coal shippers that, because they are finally being required to relinquish their government-

protected monopolies and guaranteed returns (which railroads have never enjoyed) and to confront the rigors of competition (which railroads already do), the utilities should be able to obtain regulatory rate relief against the railroads. It is to me a very odd argument to say that, because the utilities are just beginning to experience deregulation, the immediate response should be for the Board to subject one of their input suppliers (the railroads) to massive re-regulation. The railroads' response to deregulation was far different. Our main effort was to change the way we do business, operate more efficiently and compete aggressively.

But even if we indulge these claims, the case for change in the regulatory rules still has not been made. In contrast to the electric utility industry prior to the recent "open access" initiatives, railroads have always been subject to regulatory rules requiring mandatory interchange and transportation on reasonable terms. Shippers do have access to alternative sources, and the right to rail transportation from those sources. If the railroad or railroads involved in a through movement charge an excessively high rate, the Board's maximum rate rules provide a remedy. And if a railroad seeks to deny participation in a movement to another railroad that can provide more efficient service, existing competitive-access rules also provide an effective remedy.

If these tools were not effective, one would have expected Congress to have addressed the matter in the recent ICC

Termination Act. But I understand that, far from imposing affirmative new regulatory burdens, the Congress had before it and specifically declined to enact proposals that would have enacted into law the very "bottleneck" rate and routing rule that the coal shippers are asking the Board to impose here.

**The Damage That The "Bottleneck" Proposals
Would Do to the Railroads' Ability to
Maintain Capital Investment, Improve
Service and Reduce Rates For All Shippers**

This leaves us with the third -- and perhaps most important -- question I initially posed. What impact will the "bottleneck" rate and routing proposals raised by the shippers and the Board have on the railroads and the successes we have achieved under deregulation since Staggers? There are several, I think clear, answers to this question.

Unquestionably, the first and most immediate impact that adoption of the shippers' "bottleneck" rate and short-haul routing proposals would have on the railroads would be a very significant, although at this point difficult to quantify, reduction in railroad revenues and earnings. It is not hard to see why. Under the coal shippers' proposal, railroad rates would be capped at stand-alone cost only for the so-called "bottleneck" portion of the movement. For the non-bottleneck segment, the shippers would allow rivalry between the rail carriers capable of serving that portion of the movement to establish the applicable rate. This head-to-head rivalry could be expected to yield a rate for the non-bottleneck segment closer to the level of

variable costs. It thus seems clear that application of the coal shippers' proposal would yield a lower rate ceiling than when the stand-alone cost test is applied to the through rate for the entire end-to-end movement.

This is especially true when, as I understand is commonly the case on CSXT, the so-called "bottleneck" portion of a movement (the segment between a solely served origin or destination and the nearest junction point with another railroad) is relatively short in comparison with the total length of a line-haul movement. Although many of the origin and destination facilities that CSX serves are not also served directly by another railroad, in most instances another railroad (notably Norfolk Southern or Conrail) operates lines located only a relatively short distance away, and that railroad could provide service beyond that junction to the same or an alternative point.

The Board's proposed "intermediate" approach is only slightly less damaging than that urged by the shippers. The "intermediate" approach, unlike the shippers' proposal, would be subject to a requirement that the rate or rates applicable to the entire end-to-end through movement could not be prescribed at a level below 180 percent of variable costs. Where the "bottleneck" segment is a relatively small proportion of the total movement (as will often be true on CSX), the "intermediate" approach would effectively cap a railroad's rate at the jurisdictional threshold. This result would also affect our revenues and

earnings, because a large share of CSX's traffic moves at rates above the jurisdictional threshold.

One might ask why it matters whether the revenues and earnings of CSXT and the other railroads are reduced as a result of the "bottleneck" rate and routing proposals under consideration. After all, it might be tempting to conclude that any reduction in railroad rate levels and earnings must necessarily benefit shippers, and that any increase in railroad earnings (particularly the record earnings that a number of railroads have reported in recent times) must necessarily be a bad thing for shippers.

This kind of thinking is wrong and dangerous. It is critical that the Board understand that improved railroad revenues and earnings are the key to the railroads' ability to obtain ready access to investment capital. In these times, when U.S. shippers are placing ever increasing demands on our rail infrastructure and when expansion in capacity and improvement in service is essential to the continued growth of our economy, additional capital investment is the very lifeblood of our industry. Our future depends on it. If we want to compete effectively with other transportation modes and deliver the kind of high-quality transportation and logistics services that our shippers are increasingly demanding, we will have to invest -- and invest heavily -- in expanded rail line capacity, in new information and communications systems, in better and more

efficient motive power and rolling stock, and in expanded capacity at yards and terminals.

If either of the "bottleneck" rate and routing proposals under consideration in these cases were adopted by the Board, there is no question that our ability to make service-enhancing, pro-competitive capital investments will be seriously threatened. With less revenue and lower returns, we will have fewer funds to invest in our plant and facilities and increased costs to obtain externally generated capital funds. What investments would be sacrificed? The first to go would be the more discretionary projects in CSXT's capital budget and, in particular, proposed capital improvements designed to benefit more competitive freight traffic (such as new intermodal terminals, double-stack clearances, bulk distribution terminals, etc.). Because our margins on this traffic are generally smaller than for less competitive traffic, capital projects intended to support and attract such competitive traffic would be sacrificed first if available capital were to shrink.

The likely effect would be to restrict our ability to compete successfully for highly competitive traffic and to cause some traffic to leave the rail system. This, in turn, would leave CSXT with less freight traffic to defray its substantial fixed and common costs, and greater burdens on the remaining shippers, which would then also seek other transport alternatives. In sum, the "bottleneck" rate and routing proposals would threaten to reintroduce to the railroads the very downward spiral

of lower revenues, less maintenance and capital investment, deteriorated service, and further revenue depression that characterized the woeful condition of the rail industry prior to the 4-R and Staggers Acts. I recall all too vividly that difficult period, and the Board would do well to reflect seriously before adopting any change that might return us to those days.

At CSX we can acquire and justify the expenditure of funds for capital projects only if we can reasonably expect to earn a competitive rate of return, by which I mean a return that includes our current cost of capital. We carefully evaluate each proposed capital project to assess whether it will yield such a return, and our corporate policy (which is set forth in our annual report to stockholders) is that each of CSX's business units must earn returns on capital expenditures at least sufficient to cover our cost of capital, or else we will not make the investment and ultimately consider sale or disposition of the underlying business or asset.

This is not just some idle threat fashioned for this proceeding; it is our established corporate policy and, quite frankly, a simple, and unavoidable, economic fact of life. Unless railroads are permitted to earn a competitive return, and to charge shippers demand-based prices, investment capital will begin to dry up, and the investment-driven renaissance that we have seen in the railroad industry during the past decade will be threatened. Already, even the possibility of dramatic regulatory

change has become a very hot and disturbing topic of conversation among those on Wall Street who follow the railroad industry.

The proposals to allow shippers to compel interchange at points of their choosing would also have other unfortunate effects, notably in our ability to conduct rail operations efficiently. By allowing a shipper to designate virtually any junction between two railroads as a point of interchange of traffic, and creating an incentive for the shipper to designate a junction that is located as close as possible to the solely served origin or destination (so as to confine stand-alone cost analysis to the smallest segment possible), the proposals would create a multitude of new joint-line routes.

This would have a number of consequences for CSXT and its shippers. For one thing, it would introduce many additional interchanges for long-haul movements. The proliferation of interchanges results in significant delays in the delivery of freight, and introduces substantial additional costs to the provision of service. The mandatory short-haul proposal would also result in fragmenting freight traffic over these additional routes and interchange points. Today, CSXT strives to consolidate traffic on high-density main lines, and to concentrate joint-line traffic at particular interchange points with specific carriers, in order to obtain economies of density, thereby lowering costs for all users of our network. The shippers' proposal would prevent us from doing this, or at least doing it

efficiently (as Mr. Nichols explains in his separate testimony on behalf of CSXT).

The final effect that I see caused by adoption of the "bottleneck" rate and routing proposals is re-regulation of the railroads. The Board will become enmeshed in the thorny details of deciding when and where railroads will interchange traffic with one another, and how revenues from joint-line movements will be divided between the participating carriers. These issues are difficult enough to deal with at the business level, but injecting regulatory oversight into the details of these business decisions would be a recipe for regulatory micro-management of the industry. We already tried that system, and it did not work. In my judgment, we would do well not to repeat that hard lesson.

Conclusion

In sum, the answers to my three questions yield the unequivocal conclusion that the various "bottleneck" rate and short-haul routing proposals under consideration are a bad idea. They are unnecessary, because existing regulatory rules provide an effective remedy for shippers whose rates for the entire service between origin and destination are excessive, and because shippers are already enjoying the benefits of effective competition, improved service and lower rates that come from the rate-making and routing freedoms that railroads have thus far enjoyed. And the radical changes in regulatory rules proposed by the coal shippers here would undermine the progress we have made, at CSXT

and in the railroad industry generally, in moving toward financial health and creating the rail infrastructure that our Nation and its shippers will need in the years to come.

John W. Snow
Chairman, President and Chief Executive Officer
CSX Corporation
Richmond, Va.

Date Employed by CSX (or Predecessor) - May 1, 1977
Date of Birth - Aug. 2, 1939
Place of Birth - Toledo, Ohio

Education - Kenyon College, University of Toledo, B.A., 1962
University of Virginia, Ph.D. in Economics, 1965
George Washington University Law School, LL.B., 1967

Honorary Degrees - Kenyon College, LL.D., 1993

Chronology of Employment

1965 to 1967 - Assistant Professor of Economics, University of Maryland
1967 to 1972 - Wheeler & Wheeler, Law Firm, Washington, D.C.
1972 to 1973 - Assistant General Counsel, U.S. Department of Transportation
1972 to 1975 - Adjunct Professor of Law, George Washington University Law School
1973 to 1974 - Deputy Assistant Secretary for Policy, Plans and International Affairs
1974 to 1975 - Assistant Secretary for Governmental Affairs, U.S. Department of Transportation
1975 to 1976 - The Deputy Undersecretary, U.S. Department of Transportation
1976 to 1977 - Administrator, The National Highway Traffic Safety Administration
Spring 1977 - Visiting Professor of Economics, University of Virginia
Spring 1977 - Visiting Fellow, American Enterprise Institute
May 1977 to 1980 - Vice President-Government Affairs, Chessie System Inc.
1980 to 1984 - Senior Vice President-Corporate Services, CSX Corporation, Richmond
1984 to 1985 - Executive Vice President, CSX Corporation, Richmond
1985 to 1986 - President and Chief Executive Officer, Chessie System Railroads, Baltimore
1986 to 1987 - President and Chief Executive Officer, CSX Rail Transport, Jacksonville
1987 to 1988 - President and Chief Executive Officer, CSX Transportation, Jacksonville
1988 to April 1989 - President and Chief Operating Officer, CSX, Richmond
April 1989 to 1991 - President and Chief Executive Officer of CSX
Feb. 1991 to present - Chairman, President and Chief Executive Officer of CSX

Civic, Religious and Social Affiliations - Episcopalian • Country Club of Virginia • Commonwealth Club • Augusta National Golf Club • Metropolitan Club • Chevy Chase Club • Several university honor societies

Business and Professional Affiliations - Director: CSX Corporation; Bassett Furniture Industries Inc.; Circuit City Stores, Inc.; NationsBank Corp.; Textron Inc.; USX Corporation; U.S.-Japan Business Council; Association of American Railroads • **Board of Trustees:** The Johns Hopkins University; University of Virginia Darden School Foundation • **Member:** Business Roundtable; Executive Committee, The Business Council; Virginia Business Council; National Coal Council

Distinctions and Past Affiliations - Distinguished Fellow, Yale University School of Management; U.S. Department of Transportation, Secretary's Outstanding Achievement Award, the department's highest award; President Ford's Domestic Policy Review Group; Governor Reagan's four-man advisory group on regulatory policy during the 1980 presidential campaign; Vice Chairman-Transportation Transition Team, appointed by President-elect Reagan; White House Conference for a Drug Free America; Services Policy Advisory Committee of U.S. Trade Representative; Co-Chair of National Commission on Financial Institution Reform, Recovery and Enforcement; National Commission on Intermodal Transportation; National Commission on Economic Growth and Tax Reform; Trustee, Virginia Museum of Fine Arts; Member, Richmond City School Board

Family - Wife: Carolyn Kalk Snow • **Children:** Bradley, Ian and Christopher

CSX Corp

VERIFICATION

COMMONWEALTH OF VIRGINIA)
) SS:
CITY OF RICHMOND)

JOHN W. SNOW, being duly sworn, deposes and says that he has read the foregoing verified statement, knows the contents thereof, and that the same are true to the best of his knowledge, information and belief.


John W. Snow

Subscribed and Sworn to
Before Me This 14th Day
of October, 1996.


Notary Public

My Commission Expires: 8/31/99

VERIFIED STATEMENT

OF

DAVID R. GOODE

My name is David R. Goode. I am Chairman, President and Chief Executive Officer of Norfolk Southern Corporation. Before assuming my present position in 1992, I held a succession of management positions with Norfolk Southern and its rail carrier predecessors. I have had more than 31 years of experience in the railroad industry.

The purpose of this verified statement is to underscore the importance to Norfolk Southern of the issues raised in these consolidated coal rate reasonableness proceedings, and to describe the potentially serious adverse consequences -- both for Norfolk Southern and the shippers it serves -- that could result if the Board were to adopt the short-haul (or so-called "bottleneck") rate and routing proposals advocated by the complaining coal shippers. As I understand it, the coal shippers seek to compel a railroad that provides exclusive rail service at a particular origin or destination to establish a separate "local" rate to apply just between that exclusively-served point and a nearby junction point with another railroad that theoretically could provide alternative rail service beyond the interchange (which the Board refers to as a "bottleneck" segment), whether or not such an interchange would be efficient or result in short-hauling the railroad. The shippers also seek regulatory prescription of a maximum rate for the "bottleneck" portion of the movement without regard to

whether the total rate applicable to the entire end-to-end through shipment is above a maximum reasonable level.

In these days, when electric utilities are just beginning to experience partial deregulation and when railroads are finally making great strides toward significantly improved customer service and long-run financial viability, it might be superficially tempting for the Board to embrace new rules promising potentially large rate reductions for some utility coal shippers (as the shippers' proposals no doubt would accomplish). Sober analysis of the shippers' "bottleneck" rate and routing claims reveals, in my judgment, that they are unnecessary, short-sighted and, ultimately, dangerous. They would undermine, if not reverse, the dramatic progress that Norfolk Southern and other railroads have achieved in financial health, service quality and competitive ratemaking since the deregulatory reforms of the 1970's and early 1980's. They would frustrate the railroads' ability to make additional, pro-competitive capital investments needed to maintain and improve service. And they would re-create intrusive government regulation of the minute details of railroad rates, routes, divisions and operating practices -- a regulatory system that, with remarkable success, Congress acted to dismantle more than 15 years ago.

It bears repeated emphasis that the deregulatory initiatives of the 4-R Act and Staggers Act, and the ICC decisions implementing those legislative reforms, gave railroads the opportunity to compete effectively with other transportation modes for freight traffic, to reduce operating costs and improve service, and to improve the financial health of the

industry. At Norfolk Southern, we have taken full advantage of these ratemaking and routing freedoms for the benefit of the shipping public.

The ratemaking freedoms, for example, have allowed us to adjust our rates for particular commodities and shippers on the basis of the individual market conditions affecting them. This has enabled us to compete aggressively -- and successfully -- for traffic that otherwise would not move by rail. The enormous growth in rail intermodal traffic, which by far is the fastest growing segment of Norfolk Southern's business, is only the most obvious example of traffic that we have been able to attract to the rails because of our ability to offer flexible rates reflecting the specific demand conditions of the particular traffic. Most of the freight traffic that we carry is highly cost and service competitive. Our ability to differentiate rates on the basis of demand has meant increased volumes of traffic on our system, thus increasing traffic density and defraying the substantial fixed and common costs that otherwise would have to be borne by less competitive traffic (or not at all).

We have also rationalized our physical network and route structure to become more efficient. We have eliminated, or transferred to lower cost short-line operators, duplicative or low-density line segments, while concentrating as much traffic as possible on high-density trunk lines. Increased traffic density on our main lines means lower costs (and thus rates), and faster service, for all shippers. Similarly, we have acted to close inefficient joint-line routes, and to concentrate interline traffic with our railroad connections at high-volume, efficient interchange points. Freed of the duty to maintain interchanges with other

carriers wherever our lines intersect, we have eliminated the delays associated with unnecessary interchanges and have increased the average length of haul, including more single-line service favored by shippers. We have consolidated interchange traffic at points which make the most sense from the standpoint of service quality and operating efficiency. For example, Norfolk Southern and Conrail have recently redesigned their joint automotive network, replacing multiple interchange points with a single, highly efficient interchange at Cleveland. The rate and routing flexibility that we have enjoyed encourages us to seek out the most efficient route, because by doing so we can compete more effectively for traffic and enjoy the fruits that improved service and enhanced efficiency bring.

Rate and routing flexibility has also enabled us to improve direct service to our shippers. Longer hauls translate into increased ability to control the timing and coordination of shipments, thereby ensuring prompt delivery of freight and increased equipment utilization. Through the use of unregulated rail transportation contracts, we have been able to tailor service to the specific needs of our customers, including imposition of reciprocal service commitments that benefit both parties by reducing costs. Transportation contracts are especially important for unit-train coal movements. The economics of such service depend on tight control over the movement, loading and unloading of the trains. When large-volume, unit-train coal shipments must be interchanged between two carriers, the need for tight control is all the more important. The freedom to enter into transportation contracts, which specify the respective duties of the participating carriers and the customer, makes such control and coordination possible.

We have also taken advantage of our rate and routing freedoms to invest in capital maintenance and improvements that allow us to improve service, expand capacity and achieve operating efficiencies. The ability to set rates on the basis of market conditions has enabled us to justify capital investments in reliance on an expectation that we will be able to earn a competitive return on such investments.

By any objective measure, these rate and routing initiatives have been spectacularly successful, not only for Norfolk Southern but for all of our shippers.

Service Quality. The quality of the service we provide to our customers has increased remarkably over the past 15 years. In part because of the competitive markets in which we operate, we are more responsive to the service needs of our shippers. We are providing faster and more timely service, with less incidence of loss and damage, than ever before. And, increasingly, we are becoming intimately integrated into the logistics needs of our shippers, helping them ensure not only that their goods arrive on time, and in one piece, but in arranging and sequencing deliveries to facilitate just-in-time inventory practices. That is what our Customized Logistics System is all about. To fulfill its promise will require massive new investment in communications and freight-tracking information systems.

Safety. Increased revenues and the additional capital investment (especially in roadway, which directly affects the safety of operations) they make possible have also translated into significant improvements in our safety record. Safety is our number one

priority at Norfolk Southern, not only because our employees are our most valuable asset (though that would be sufficient), but because our customers will not accept anything less. I am proud that Norfolk Southern is a recurrent winner of the coveted Harriman award, emblematic of the rail industry's best safety record. It is probably not a coincidence that the safest railroad is the railroad with the highest proportionate outlays for upkeep of its right-of-way. We do not intend to rest on our laurels, however, and will continue to make the investments in plant and facilities necessary to improve our record even more.

Rate Levels. Perhaps the most surprising effect of rail deregulation has been the consistently declining trend in the level of rates. The facts speak for themselves. Since the enactment of the Staggers Act, rail revenues per ton-mile on an inflation-adjusted basis have fallen more than 50 percent. Norfolk Southern's rate structure has experienced similar declines, as Mr. Watts explains in his separate testimony. Revenues per ton-mile, again on an inflation-adjusted basis, have dropped 38.9 percent since 1982. This pattern is reflected across all of the commodities and markets we serve, including coal shippers whose traffic originates or terminates at a point where Norfolk Southern is the exclusive provider of rail service. The vast preponderance of the coal origins and destinations we serve are not directly served by another competing railroad. And yet our coal rates have consistently fallen in real terms over the past decade. This is compelling evidence that our rates even for "captive" coal shippers are effectively constrained by competition.

Financial Performance. Norfolk Southern has dramatically improved its financial performance over the past 15 years of deregulation. Our operating ratio has consistently declined over time, from 79.8 in 1985 to 73.5 last year. Net return on average stockholders' equity, which was 10.8 percent in 1985, has also gradually improved, and was 15.0 percent in 1995. Although our return continues to lag behind other comparable industries, and we are not consistently earning revenues sufficient to cover our long-run cost of capital, we have made considerable progress toward recovery of our full economic costs of service.

Capital investment. Improved financial performance, and ability to generate working capital, has also translated into increased availability of investment capital and specific investments in line maintenance and capital improvements. With enhanced revenues and reduced operating costs, Norfolk Southern has greater ability to finance additional capital investment out of internally generated funds -- the source of capital that we have traditionally relied on in preference to higher cost borrowing. At Norfolk Southern, we have always believed that a high level of investment in plant and facilities (particularly roadway assets such as rail, ties and ballast) is the best foundation for safety and success in serving our customers. Indeed, we are proud that Norfolk Southern has been an industry leader in this regard, as measured by total capital expenditures per route-mile. In recent years we have also invested heavily in new facilities -- such as bulk distribution terminals, double-stack tunnel clearances, intermodal yards, coal transloading facilities, freight cars and locomotives, and information systems -- that improve service to our existing shippers and attract new

traffic to our system. In all, we have spent nearly \$7.5 billion in capital investments over the past 11 years, a significant increase over the levels that we experienced before deregulation took effect. This capital investment, which has been a boon to shippers, was possible only because of our ability to earn greater revenues following deregulation.

By all measures, therefore, deregulation has been a remarkable success, benefitting not only the railroads but the shipping public. In light of this success, one might reasonably question whether there is any affirmative justification for abandoning the current system and introducing the kind of intrusive "bottleneck" rate and routing regulation that the coal shippers propose in this case. From my vantage, I can see no justification for a return to comprehensive regulation, and encourage clarification and procedural streamlining of existing regulatory protections. The back-door re-regulation that the shippers are seeking would threaten to undermine the progress we have made. The shippers' claims, if adopted, would result in lower revenues and higher costs -- a sure recipe for less investment, poorer service and higher rates.

On the revenue side, the shippers' "bottleneck" rate proposal would limit our ability to set rates that recover our substantial fixed and common costs to the "bottleneck" portion of rail freight movements. For Norfolk Southern, as for most other railroads, the so-called "bottleneck" segment is usually only a relatively small portion of the total line-haul movement. Coal is a good example. Norfolk Southern's lines blanket the Appalachian coal fields, and in many places intersect the lines of CSX Transportation, which also serves these

areas. Most individual mines, however, are served by only one of these carriers (or by Conrail). If coal shippers were allowed to require Norfolk Southern to short-haul itself by handing off coal traffic at interchange points with other railroads located near the coal mine, we would have no ability to recover our costs for the line-haul portion of the movement beyond the interchange. By restricting our ability to charge a demand-based rate for the entire shipment from origin to final destination, the "bottleneck" rate proposals would result in potentially large reductions in revenues for many of our traffic movements.

Why does it matter that our revenues might be adversely affected? The answer, in short, is capital investment. Our ability to develop our capital plant and facilities and improve service to shippers has been dependent on improved revenue performance and, importantly, the promise of competitive returns. Railroads will continue to invest (and obtain investment capital) only if they have a reasonable expectation that they will be able to recover their costs, including current cost of capital. Any significant reduction in our operating revenues resulting from the "bottleneck" rate and routing proposals would translate directly into reduced funds for capital investment. The first investments to go would be those capital projects with lower anticipated rates of return. These would normally involve investments designed to maintain and attract more competitive traffic (such as intermodal). Depressed investment would make it more difficult for the railroads to retain this traffic, or gain new traffic, thus increasing the burden of cost recovery on the railroad's less competitive traffic (including coal). In addition, even investments in safety related projects and service improvement related projects for coal and other shippers could eventually be

imperiled. Clearly, at this point, when railroads are relatively healthy and traffic is growing, the needs for capital are paramount. Capital must be available if the railroads are to take advantage of new technology in areas related to safety and improved customer service. The shippers' proposal threatens to return us to the days of downward spiraling capital investment, diversion of traffic away from the railroads and deterioration in service.

The shippers' "bottleneck" rate and routing proposals would also unnecessarily increase costs and impair efficiency. As I explained, one of the great benefits of deregulation has been the stimulus it has provided railroads to rationalize their route structure by eliminating inefficient routes and costly interchange points and consolidating traffic on long-haul, high-density routes. The shippers' proposals would return us to the days when shippers could demand that traffic be routed over every conceivable joint-line routing, regardless of efficiency. Under the coal shippers' proposed rule, any shipper originating or terminating traffic at an exclusively served rail shipment point would have strong incentives to demand routing via the nearest possible junction with another carrier, so as to confine maximum rate analysis to the shortest possible segment. This approach will fragment traffic over a multitude of joint-line routes, and undermine the service benefits and cost efficiencies we have achieved. Although a few shippers may secure substantial rate reductions under such an approach, they will do so only at a substantial cost to the efficiency of our transportation network, with long-term harm to the quality of service and cost of transportation for all shippers.

In sum, the "bottleneck" rate and routing proposals offered by the complaining coal shippers in these cases represent a significant -- and unnecessary -- threat to the railroads' ability to earn adequate revenues, make the capital investments that our shippers need to maintain global competitiveness and improve service for all shippers. I urge the Board to reject these proposals and adhere to the successful path of deregulation that we have followed since Staggers.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
) SS:
CITY OF NORFOLK)

DAVID R. GOODE, being duly sworn, deposes and states that he has read the foregoing Verified Statement, knows the facts asserted therein and that the same are true as stated.


DAVID R. GOODE

Subscribed and sworn to before me,
a Notary Public in and for the
State and City aforesaid, this
8th day of October, 1996.

Carole K. Johnson
NOTARY PUBLIC

My commission expires:

My Commission Expires May 31, 1998
I was commissioned Carole M. Kingery

[SEAL]

VERIFIED STATEMENT

OF

RICHARD K. DAVIDSON

My name is Richard K. Davidson. I am the President and Chief Operating Officer of Union Pacific Corporation ("UPC") and the Chairman of the Board of its railroad subsidiary, Union Pacific Railroad Company ("UP"). I began my railroad career as a brakeman/conductor with Missouri Pacific Railroad Company in 1960. Thereafter, I rose through the ranks in the Operating Department of that company, becoming Vice President-Operations in 1976. In 1986, four years after the UP/MP/WP consolidation, I was promoted to Vice President-Operation of UP, and in 1989 I became Executive Vice President-Operation of UP. In 1991 I became Chairman and Chief Executive Officer of UP and in 1994 I assumed additional responsibilities as President of UPC. In late 1995, I became Chief Operating Officer of UPC and relinquished the position of Chief Executive Officer of UP.

I am deeply troubled that the Surface Transportation Board appears to be giving serious consideration to destroying the deregulated environment that fostered the railroad industry's rebirth. I am so troubled that I am fearful for the future of our industry. Before the Staggers Act of 1980, this industry was in financial distress, and the primary cause of its unhealthy condition was the heavy hand of outdated and unnecessary federal regulation. By removing excess regulation and giving the railroads the opportunity to price their services in accordance with market conditions and earn reasonable revenues, Congress and the Interstate Commerce Commission allowed our industry to recover and prosper. Now, the Board is being urged by shippers who are enjoying lower rates and improved service as a direct result of deregulation to turn back the clock to the bad old days.

Apparently some shippers think they can drive their rates even lower through re-regulation of the industry.

UP strongly opposes these changes in rate regulation. As I will explain, these changes will guarantee that the railroads cannot earn the cost of replacing their physical plants. They will force the railroads to fail to invest in infrastructure that this country needs. There is nothing wrong with America's rail regulatory system that needs to be fixed. The regulatory changes now under consideration will undermine the future of our industry and will, without any doubt, undermine the quality and cost of rail transportation for all our customers.

I was present in the Surface Transportation Board's Hearing Room A on July 3, 1996, when Commissioner Owen, after voting to approve the UP/SP merger, made an unusual statement, quite unlike anything I have heard from any other regulatory official. He pointed out that

"there is an interest group that rarely is recognized but is essential to making our capitalist system function. They are the investors who make possible more efficient transportation, American competitiveness in world markets and more secure jobs. It is the investors who spend less than they earn and lend the difference -- their savings -- to companies such as railroads so that they might build, renew and expand and become more efficient."

It is those investors -- and the savings they commit to our industry -- who will be driven from this industry if the Board proceeds down the road charted for it by certain shippers.

UP in the Age of Regulation

The images of UP in the mid-1990s are images of physical and financial health, lean efficiency and dedication to service. Those images include more than 100 trains per day on a four-track main line in western Nebraska, 25 trains of coal moving each day (for declining freight rates) from the Powder River Basin to America's utilities, improved financial performance reported to Wall Street for many consecutive years and, of course, the historic merger with Southern Pacific that we are now beginning to implement. Those images might create the impression that UP is immune to the effects of the regulatory climate. That impression would be mistaken.

In the late 1960s, with Penn Central in bankruptcy along with several other northeastern railroads, UP's earnings fell below those of other industries and regulation left it little room to maneuver. Whether the railroad made money depended on whether the Interstate Commerce Commission was willing to grant general rate increases, and on how many commodities the ICC excepted from the increases. All railroads were required to charge equal rates for transporting the same commodities between the same points over a wide array of possible interline routes and service levels. Market conditions and demand for transportation played little role in setting freight rates, and differential pricing was discouraged. Railroads were unable to respond to the flexible pricing offered by other modes. There was little incentive to reduce costs, because the ICC would reduce rates if costs declined, and it might raise rates if costs increased. With our maximum rates capped at modest levels for all traffic, regardless of shipper demand for rail service, we could not

afford to use lower rates to attract merchandise traffic to our rails. We were steadily losing market share to motor carriers because of this rate structure.

In that environment, UP's senior management concluded that it could not responsibly discharge its obligations to its shareholders by continuing to invest only in the railroad business, with its inadequate returns. As a result, in 1969, UP created a holding company structure under UPC for the primary purpose of facilitating investments in non-railroad enterprises. The ICC became concerned about these diversifications into other lines of business, fearing that they might impair the railroads' ability to provide common carrier service; but it was ICC regulation (much of it required by Congress) that had made continued high levels of new investment in railroading unsustainable. Although UP continued to invest to maintain its physical plant, perhaps at a higher level than justified by the revenues it earned, it could not justify to its shareholders ignoring higher returns on investment available in other businesses.

UP management was also concerned about the possibility that the entire railroad industry might decline to such depths that the federal government would nationalize the railroads and make them wards of the state. UP management knew that most railroads were in financial trouble and many were already in bankruptcy. Predictions for the future of railroading were not optimistic. Some experts predicted that the industry might not survive until the year 2000. Many others said it would be relegated to carrying coal, grain and other bulk products. Although many people think of our railroad as perennially strong, UPC in

the early 1970s positioned itself to exit the railroad business quickly with as many of its assets protected from confiscation as possible.

So when we watch all those UP trains crossing the Nebraska prairie today, it is important to keep in mind that history might have turned out differently. Crippling rate regulation might have remained. The railroads might have continued to decline, or have been limited to hauling coal and other bulk freight. Or they might all be controlled by some quasi-government entity like Amtrak, drawing annually on public funds to stay afloat. Instead, thanks to the wisdom of Congress in 1980 and the commitment of the ICC in the years that followed to let market forces set rail rates whenever possible, the railroads experienced a renaissance. That is why UP is able to create the dynamic images it offers today.

Effects of Deregulation on UP and Its Customers

In many ways, deregulation merely gave the railroads the opportunity to behave like other businesses. By far the most important of many Staggers Act changes in the regulatory environment was that railroads gained the ability to set freight rates in response to market conditions and transportation demand, instead of charging equalized rates determined by a government agency. That gave it something that other businesses take for granted, but that U.S. railroads had not experienced in decades: the opportunity to earn reasonable profits and to maintain and even expand investment in physical plant. Railroads also gained freedom to make their routes more efficient. Gone were the days when railroads were

required to serve all plausible routes, whether they used multi-track main lines, Lake Michigan car ferries, or inefficient junctions.

Staggers Act ratemaking and routing freedoms thrust the railroad industry directly into the mainstream of competition. This had a number of effects on our industry. We were forced to drive down costs to a highly efficient level, because we faced much stronger intramodal competition and we knew that more efficient rail carriers would be more successful in attracting traffic. With those freedoms, railroads enthusiastically pursued lower-margin business, such as intermodal business. That traffic could make a contribution to fixed costs, to the advantage not only of the intermodal shippers but also of all other shippers. The same freedoms allowed us to charge comparatively higher rates to those customers whose demand for our services was stronger than to those whose demand was weak, so that we could move toward recouping the remainder of our fixed costs. Most importantly, they gave us — and the investment community — the hope that we might be able to approach revenue adequacy so that we could be viewed as a viable, permanent part of the marketplace that deserved the continued commitment of the capital necessary to maintain and expand our rail network.

The Staggers Act provided no guarantees that the railroads would succeed, but for the most part the industry rose to the challenge of deregulation. Railroads have learned to compete with each other and other modes of transportation, and to respond to other competitive forces. We have become financially stronger. We are more efficient providers of transportation service. We operate more safely. With the opportunity to achieve a

reasonable return on our investments, we have made enormous capital investments in the future of our business. We have accomplished all of this while simultaneously reducing the rates we charge our customers. That is a powerful testimonial to the success of deregulation and in favor of a limited government role in fixing railroad rates and routes.

Another testimonial is a complete turnaround in the perception of railroading at Union Pacific Corporation. Reversing the judgments of the late 1960s, UPC is spinning off its last non-transportation entity, Union Pacific Resources Group. UPC is once again only a transportation company. In the current regulatory environment, UPC is confident about the future of railroading, and so is the investment community.

Financial performance. By every measure, UP is financially healthier as a result of 15 years of deregulation and consolidation. Between 1983 and 1994 (I use these years for comparisons, because 1983 is the first full year after the UP/MP/WP consolidation and a time when the Staggers Act changes really began to take effect, and 1994 is the year before our CNW acquisition), UP's operating revenues increased from \$3.6 billion to \$5.2 billion, with less than \$250 million of that increase attributable to the MKT acquisition in 1988. Net railway operating income increased from \$256 million to \$681 million over the same period. Our revenue ton-miles more than doubled from 116 billion in 1983 to 236 billion in 1994.

The clearest indicator of our improved financial performance is that UP, for the first time, recently was declared "revenue adequate" for 1995 by the Surface Transportation Board. Of course, that means only that we temporarily achieved revenues

sufficient to replace our assets at their book value. A company that wants to stay in business for the long term needs to earn adequate revenues for a sustained period, and must be able to replace its assets at their replacement costs. Nevertheless, this Board declaration reflects continuing financial improvement. UP achieved this distinction, of course, just in time to lose it. On September 11, 1996, UP acquired Southern Pacific, with all of its liabilities, unmet financial needs, and service difficulties. As we undertake the massive job of integrating these railroads, it is clear that our visit to revenue adequacy was temporary.

Operating efficiency. Deregulation and competition forced UP, like all other railroads, to move aggressively to reduce costs. Our operating ratio, a standard measure of railroad operating efficiency, stood at 90.4 in 1983, after acquisition of MP and WP. By 1994, we had reduced the operating ratio to 79.2. On a cost-per-ton-mile basis, UP reduced its operating expenses by more than a third from 1983 to 1994, from 2.8 cents to 1.7 cents. Employee productivity on UP improved remarkably by over 180 percent during the same period.

We achieved operating cost reductions in every part of the business, including more efficient use of train crews, improved freight car utilization, more effective allocation of locomotives and superior maintenance-of-way techniques. We were able to achieve cost reductions of this magnitude in part because of the mergers and consolidations UP has pursued since 1980, including the UP/MP/WP consolidation, the MKT acquisition, and, to a lesser extent, the CNW acquisition, which we are only now completing. As Mr. King explains in his statement, many of the efficiencies, whether merger-related or not, are linked

to route rationalization. This technique, facilitated by deregulation, is used on virtually every U.S. railroad -- and supported by substantial capital investments -- to concentrate more traffic on fewer route miles in order to improve productivity.

Capital investment. Among the many benefits of deregulation and improved railroad earnings, few rival the increased ability and commitment of the railroads to reinvest in the future of the railroad business. UP had a tradition of investing more liberally than many railroads to begin with, and UP's capital expenditures have continued to trend upward for well over a decade. UP's annual capital investment was \$607 million higher in 1986 than in 1983. Annual capital spending increased by almost \$200 million from 1990 to 1994, before the CNW acquisition. Between 1983 and 1994, UP's total new capital expenditures exceeded \$7.7 billion. In addition, of course, UP spent many billions of dollars during those years to acquire other railroads.

Many of these capital expenditures led directly to improved service. When we added dozens of miles of second and third mainline to our route between Topeka and North Platte, Nebraska, we improved service for Powder River Basin coal to the South Central states and the Southeast. The Harriman Dispatching Center in Omaha was created in 1989 to control train movements systemwide, and we established a National Customer Service Center to provide a single point of expert contact for all our shippers. Other investments, such as investments in employee severances to reduce non-agreement positions, allowed us further to reduce operating costs. Still other capital dollars are devoted to keeping our rail, ties, signals, bridges and other physical resources in good shape for tomorrow's traffic.

Unless the regulatory environment changes significantly, I foresee continued heavy capital spending. Apart from the UP/SP merger, UP has just launched another massive investment of capital to handle coal from the Powder River Basin. UP expects to spend over \$850 million to add coal capacity to its lines in the next several years.

Over the last two years, UP and BNSF have transformed the Powder River Basin joint line from a mostly single-track railroad, where trains had to run in fleets to avoid gridlock, into a double-track railroad with segments of triple track. We will add 50 additional miles of third main track over the next five years. Even larger investments are scheduled for UP lines east of the joint line. We plan to spend some \$187 million to upgrade the line from the Powder River Basin to North Platte; \$25.8 million in North Platte itself; \$113.7 million to add third main track east of North Platte to Gibbon, Nebraska; \$225 million on our route from Gibbon to Chicago; and over \$250 million between Gibbon and the Kansas City area and on lines beyond Kansas City.

As the Board is already aware, the UP/SP merger creates the need for enormous additional capital investment. In our application, we proposed to spend \$1.3 billion, over and above our existing capital budgets, over a four-year period to integrate UP and SP, to expand capacity, to connect UP and SP line segments into new single-line routes, to expand intermodal facilities, and to link and improve our properties in many other ways.

Reduced rates. None of these improvements in UP financial health, operating efficiency or investment came at the expense of our shippers. Exactly the opposite occurred: Our shippers benefitted from a stronger, more efficient railroad with greater capacity and

more extensive facilities, and from reduced freight rates. From 1983 to 1994, UP's revenue per ton-mile of freight carried declined by almost 30 percent in nominal dollars, from 3.061 cents per ton-mile to 2.153 cents per ton-mile. If these figures were converted into constant dollars, the reduction would be much greater, approximately 50 percent. How many American businesses have reduced prices by half in only a dozen years while improving the product? This reduction means that as UP has improved, it has passed on substantial savings to its customers. As Mr. Sansom witness explains, exclusively-served coal receivers are among the beneficiaries. The marketplace, with not only intramodal competition but also intermodal, product and source competition, leaves railroads no choice but to do that.

Re-regulation of Rail Freight Rates: A Giant Step in the Wrong Direction

UP and other railroads have prospered under the current regulatory framework because it is designed to give railroads the opportunity to recover the fixed costs of their extensive physical plants. The ICC achieved this sensible result by requiring shippers who demand lower rates through regulatory intervention to show both that the railroads serving them are not constrained by competitive factors such as transport and source alternatives, and that the railroads' rate for the service the customers consume exceeds the rate that would be charged by a highly efficient new railroad replacing the existing rail carriers under the SAC test. As the courts have found, this latter protection, maximum rate regulation using the stand-alone cost test, provides complete protection against the possibility of monopolistic rates. The changes in rate regulation proposed by shippers in this proceeding, as well as by the Board, would serve no purpose other than to eliminate that opportunity to earn adequate

revenues. In fact, the object of the changes is to prevent the railroads, by federal regulation, from recovering all of the fixed costs necessary to keep their existing route networks in business.

I urge the Board to reject such regulatory changes. If railroads cannot recover the full costs of replacing their existing network of facilities, those facilities will not be replaced. Railroads will be forced to disinvest in the industry, just as they did before deregulation. The railroad network will shrink, railroad service will decline, and not only the railroads, but the entire national economy, will be adversely affected.

I want to explain what would happen if these proposals were adopted. The first thing that would happen, of course, is that the railroads' revenues would decline. This would have an immediate and direct impact on UP's investments in rail facilities, beginning the first day after the Board's decision. Based on the Board's decision, we would calculate the expected lost revenue, and we would curtail our investment in physical plant accordingly.

We would be forced to do this, because our capital investment, whether internally or externally generated, must be covered by cash flow from ongoing earnings. Lenders and investors are insistent that we earn sufficient cash to cover their investments, or they will not lend UP money or buy UP equity at attractive prices. As UP's revenues declined, our ability to generate sufficient cash to fund needed investments would also decline, so we would reduce those investments.

We would first cut off investment dollars to those discretionary investment opportunities that generate the lowest rates of return. That is the same process we use each

year in allocating investment dollars. We look at all of the opportunities available to us and fund those that we expect to generate the highest and most certain returns on investment. We do not fund those that have the lowest returns on investment or are less likely to recover the costs of making the investment.

In the railroad industry, one type of traffic -- intermodal traffic -- stands out as most likely to feel the brunt of reduced investment. Intermodal service has been a bright spot in railroading's rebirth -- as well as environmentally friendly -- because it has allowed railroads to recapture large volumes of traffic lost to the highways during the regulation era. But intermodal traffic is highly truck-competitive, and subject to intensely competitive rate pressures. It makes a helpful but comparatively modest contribution to railroad-fixed costs. In recent years, UP has been able to make substantial capital expenditures to improve intermodal service, such as our \$20 million Lathrop facility near Stockton, California. But even today, we often do not fund many needed intermodal projects because their earnings potential is inferior to other opportunities. Many of those involved in intermodal transportation, including ports and shippers, complain that the railroads do not invest enough in intermodal transportation. However, the rates of return do not justify more investment.

The regulatory changes being considered by the Board would impair our ability to earn adequate revenues. If they were adopted, UP's Board of Directors could not approve continued investments for this type of business. As intermodal facilities require replacement, they would not be replaced, except to support limited traffic flows that generate

strong rates of return. Over time, UP/SP would abandon intermodal business in those traffic lanes and business segments that are comparatively less profitable. I have used intermodal as an example, but other categories of traffic such as perishables and lumber generating relatively low contributions would be similarly affected. For example, if UP had less money to invest, we would not replace rail cars for some business that today might support new equipment purchases.

I understand that statements such as these may sound overreactive and extreme. They are not. My message is both urgent and realistic. As a railroad manager, I will have no choice but to reduce investment in our railroad if earnings decline. I do not like that prospect any more than any shipper or the Board will like it. But the Board must understand that if it curtails our ability to earn the funds to replace assets, we must slash our investment in those assets so that the remaining investments can earn sustainable returns. The alternative is to spend ourselves out of business.

Some people believe that the railroads could maintain their expensive network infrastructures under the proposals before the Board, because the proposals would not apply to very many customers or because the railroads would still earn SAC-based returns on the so-called "bottleneck" segments. Both of those beliefs are wrong. A large percentage of our shipments are served by only one railroad at one end or the other and could be regulated under these proposals. And the "bottleneck" segments to an interchange point will usually be a short portion of the total haul. We will not be able to recover enough of our fixed costs on those short segments to maintain and renew all the infrastructure that shippers like

MidAmerican and Central Power & Light use, including not only our tracks but also our Harriman Dispatching Center, our National Customer Service Center, our computer networks, our signal systems and all other commonly-used assets.

The reduced ability to invest, especially in low-margin intermodal traffic, would force us to scale back the investment program for the UP/SP merger. In many respects, UP sought SP in order to develop intermodal markets. For example, the I-5 Corridor between California and Seattle/Tacoma is primarily an intermodal opportunity. Similarly, we saw an opportunity to compete head-to-head with BNSF intermodal service between Chicago and Southern California by upgrading, at great cost, SP's lines between Kansas City and El Paso and between El Paso and Los Angeles. In the Memphis-Southern California corridor, we expected to spend well over \$100 million to upgrade UP and SP line segments, again primarily to carry intermodal business. If our revenues were substantially reduced by the proposed re-regulation, we would be forced to allocate remaining cash resources to support the traffic that brings the greatest contribution -- and that does not include most intermodal traffic.

I also would be forced to instruct our Marketing Department to make every effort to increase rates for any traffic that could possibly absorb a rate increase. Most traffic could not. Most of the traffic we carry is subject to significant price competition, and attempts to increase those prices would drive the traffic away. However, because we would be forced to support a more limited investment base and a smaller rail network, some price increases would be necessary, even though the effect would be to drive away some traffic.

For example, as I have already explained, we would expect to carry less intermodal traffic and we would try to ensure that the traffic we carry is the most profitable traffic. In the bulk traffic area, we would discontinue the process that we have followed in recent years of trying to expand markets for some of our bulk shippers, such as Powder River Basin coal shippers, by providing highly attractive rates into the Southeast and the Upper Midwest. It would no longer make sense for UP/SP to devote limited capital and limited capacity to such low-margin, developmental projects. Over time, coal customers whose rates are not regulated would face upward pressure on rates at contract negotiation time. This would be an unavoidable effect of an artificial reduction in railroad ratemaking freedom and the loss of the contributions to fixed costs that we currently receive from both high and low-margin traffic.

All of these undesirable trends would be accentuated if the shippers' proposal were adopted, requiring railroads to route traffic over every conceivable interchange point. Mr. King's verified statement explains not only how UP has worked to develop more efficient routes and concentrate its traffic and investments on those routes, but also how the shipper proposal would undermine the progress we have made. Our reduced capital investment would be used less efficiently, as traffic dispersed to less efficient routes and junctions. We would be forced to rely more heavily on interline traffic, with all of its disadvantages that the ICC has observed for many years in describing the virtues of single-line service.

The proposals before the Board threaten to recreate what was happening in the United States prior to deregulation in 1980. The railroads were disinvesting in the rail

system on a large scale, because investments in railroading were not profitable. What the shippers believe they want in this case, and what the proposals raised by the Board would accomplish, is a return to the era of disinvestment.

Every category of shipper would be hurt by the proposed changes in the regulatory environment. All the benefits of deregulation and rail consolidation that I discussed earlier in this statement would be turned on their head. Instead of expanding rail traffic, we would be forced to contract it, which would reduce efficiency. Instead of improving earnings so that we can make more investments and carry more traffic, we would suffer reduced earnings which would restrict our ability to carry more traffic more efficiently and safely. Instead of reducing rail rates, as we have for 15 years, we would be forced to attempt to increase them.

Finally, the pending re-regulation proposals would bring all of these disadvantages at an additional counter-productive cost. The railroad industry and its shippers would once again find themselves devoting huge amounts of time and resources to regulation and litigation. Only lawyers and consultants would gain from this development. None of what I have described is consistent with any reasonable definition of the public interest.

Conclusion

The Surface Transportation Board once again holds the future of the railroad industry in its hands. It is too soon after 1980 to have forgotten the disastrous experience of regulation. No legitimate public interest can possibly be served, in the long run, by weakening the railroad industry in order to grant short-term rate concessions to shippers

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whose service and rates have been made more attractive by the deregulated regime they are now attacking.

I understand the desire of shippers to pay less. I would rather pay less for the things that I buy. But these are shippers who, in most instances, are already benefitting from fifteen years of rate reductions and from a greatly improved railroad industry. The government should not intervene to give these shippers a short-term price break at the expense of an entire industry and the nation's economic well-being.

VERIFICATION

COMMONWEALTH OF)
PENNSYLVANIA)
COUNTY OF LEHIGH) ss:

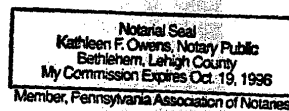
I, Richard K. Davidson, being duly sworn, state that
I have read the foregoing statement, that I know its contents
and that those contents are true as stated.

Richard K. Davidson
Richard K. Davidson

Subscribed and sworn to before me this 10th day of October,
1996.

Kathleen F. Owens
Notary Public

My Commission Expires:



**VERIFIED STATEMENT
OF
CRAIG F. ROCKEY AND JOHN C. KLINK**

We are Craig F. Rockey, Senior Assistant Vice President of the Association of American Railroads (AAR), which has offices at 50 F Street, N.W., Washington, D.C. 20001, and John C. Klick, a Principal of Klick, Kent & Allen, Inc., an economic and financial consulting firm with offices at 66 Canal Center Plaza, Suite 305, Alexandria, Virginia 22314. We have previously testified before the ICC/STB on behalf of the railroad industry on a number of topics of industrywide importance, including Ex Parte No. 347 (Sub-No. 2), Rate Guidelines -- Non-Coal Proceedings. Mr. Klick also has been heavily involved in individual Constrained Market Pricing - Stand-Alone Cost adjudications since those rate standards were first proposed in 1983. Both of us have extensive experience working with the Board's Costed Waybill Sample. A detailed statement of our qualifications is attached as Appendix A.

We have been asked by the railroad industry to provide evidence responsive to the Board's August 27, 1996 decision in this proceeding, which outlined two possible new methods of determining maximum reasonable rail rates. In particular, we have been asked to determine the railroad revenues that would be lost if either alternative were adopted.

Based on the 1994 Costed Waybill Sample, we estimate that the range of revenues that would be lost under the "intermediate" approach is between \$1.5 billion and \$2.4 billion. Under the shipper proposal, we estimate that revenue losses would be even greater than \$2.4 billion.

THE CHANGES TO RATE REGULATION UNDER CONSIDERATION

For much of the last two decades, the principal issue of railroad rate regulation has been how to structure maximum rate reasonableness standards to permit railroads to recover so-called "unattributable" costs (and thereby to recover their full economic costs) without subjecting shippers to "monopoly prices" in markets where competition is inadequate.¹ Early attempts at solving this problem involved the use of "fully allocated" or "fully distributed costs" -- essentially the assignment of fixed costs to individual traffic movements according to arbitrary accounting formulas.

Such approaches, however, fail to recognize the differences in the levels of shipper demand. Demand for rail service by some shippers is simply too weak to allow a railroad to charge rates sufficient to recoup all "fully allocated" costs. Nonetheless, it is sensible for rail carriers to continue serving such shippers so long as they make some contribution to fixed and common costs. By failing to account for differences in demand, any "fully allocated cost" approach will inevitably prevent the railroads from actually covering their full economic costs. Recognizing this problem, the ICC concluded that railroads must be permitted to engage in differential pricing (i.e., charging a higher markup above variable cost for shippers with greater demand and a lower markup above variable cost

¹ These unattributed costs arise because the cost structure of the rail industry is characterized by substantial fixed and common costs. These costs do not vary with changes in the level of activity in an individual market or group of markets and, therefore, are not directly attributable to any particular movement. As a result, railroads exhibit significant economies of scope, scale, and density, and average costs decline as volumes increase.

for shippers with less demand) in order to achieve revenue adequacy as efficiently as possible.²

Once the ICC embraced the concept of differential pricing, it had to confront the issue of what upper limit should be placed on a carrier's ability to recover its unattributable costs through differential pricing. In Coal Rate Guidelines, the ICC adopted constrained market pricing ("CMP") as its regulatory rate standard -- a methodology that encourages railroad pricing flexibility, subject to several constraints.³ First, on a system-wide basis, railroads are prohibited from earning total revenues in excess of their full economic costs. Second, rates for individual movements may not exceed stand-alone costs -- the full cost of providing transportation service to a shipper (or group of shippers) using the hypothetical, most-efficient, competitive transportation operation serving that shipper (or group of shippers).⁴

The Board has now raised the question of whether to alter fundamentally the economic principles underlying its rate reasonableness standards. The Board currently determines whether a railroad rate meets the minimum 180 percent revenue-to-variable cost

²All shippers are better off with differential pricing because under differential pricing more shippers use the rail system and all shippers make the maximum contribution to the railroads' fixed and common costs.

³ Coal Rate Guidelines -- Nationwide, 1 I.C.C.2d 520 (1985), aff'd sub nom., Consolidated Rail Corp. v. United States, 812 F.2d 1444 (3d Cir. 1987). Although the ICC established formal maximum rate reasonableness standards only for railroad rates on coal, it has confirmed that the same economic principles underlying the coal rate standards should govern the evaluation of maximum rate reasonableness on non-coal traffic. See, e.g., McCarty Farms, Inc. v. Burlington N. R.R., 3 I.C.C.2d 822 (1987), rev'd on other grounds and remanded, 985 F.2d 589 (D.C. Cir. 1993).

⁴In addition to these two constraints, the constrained market pricing rules impose a management efficiency constraint and a phasing constraint.

("R/VC") jurisdictional threshold by examining the rate for the full origin-to-destination movement. Similarly, it determines the regulatory maximum rate level by calculating the stand-alone cost of the full origin-to-destination movement. If the traffic at issue is an interline movement, the divisions the railroads have negotiated between themselves are not relevant to the overall rate they can charge their customer.

As we understand it, some shippers have now proposed that: (a) railroads be forced to quote rates for the portion of a through route that is served by only one carrier (the so-called "bottleneck" portion); (b) market dominance (including the 180 percent R/VC jurisdictional threshold) be determined by examining only the bottleneck segment; and (c) the maximum rate for the bottleneck be determined on the basis of the stand-alone cost for the bottleneck alone. The origin-to-destination through rate and the stand-alone cost for the origin-to-destination through movement would not be relevant under the shippers' proposal.

The Board's August 27 decision suggested a possible "intermediate" approach under which it would continue to determine market dominance (including applying the 180 percent R/VC jurisdictional threshold) by examining the entire origin-to-destination movement and would continue to evaluate the rate for the entire origin-to-destination movement, but the Board would calculate the maximum reasonable rate as the sum of (a) the stand-alone cost for the bottleneck segment plus (b) the costs of purchasing rail service from another carrier for the non-bottleneck segment (if sufficient evidence of those costs were available). The decision does not discuss how the cost of purchasing the service over the non-bottleneck segment might be determined or what would happen if evidence of such costs was insufficient.

**ANALYSIS OF THE IMPACT ON RAILROAD REVENUES
OF THE SHIPPER PROPOSAL AND THE "INTERMEDIATE" APPROACH**

Although it was impossible to determine the precise losses that would be suffered by the railroad industry under either the shipper proposal or the "intermediate" approach, we were able to develop a range for the losses that would result under the "intermediate" approach. In addition, we can confidently predict that losses under the shipper proposal would exceed the upper end of that range.

A. Revenue Losses Under The "Intermediate" Approach Would Range Between \$1.5 Billion And \$2.4 Billion; Losses Under The Shipper Proposal Would Exceed \$2.4 Billion.

- 1. The upper bound for potential losses under the "intermediate" approach is approximately \$2.4 billion.**

In order to estimate the upper bound of potential losses under the "intermediate" approach, we relied on the fact that under that approach the 180 percent R/VC jurisdictional threshold would continue to apply to the full origin-to-destination movement. Application of the jurisdictional threshold effectively creates a floor for origin-to-destination rates. Thus, to establish a maximum potential revenue loss if the "intermediate" approach were adopted, we can calculate the amount that would be lost if all rates for rail traffic affected by regulation were driven down to that floor. This is not to say that all rates would, in fact, be driven down to the jurisdictional threshold. As discussed below, actual revenues (and revenue loss) would depend upon the length and density of individual bottlenecks, the stand-alone cost of those bottlenecks, and allowed earnings on the non-bottleneck portions of movements.

In estimating the maximum potential revenue loss, we did not assume that rates for all of the nation's rail traffic would be driven down to the jurisdictional threshold. Much of the railroads' traffic is exempt from rate regulation or beyond the Board's rate jurisdiction. In order to identify the universe of traffic that is subject to loss, we started with the latest available Costed Waybill Sample (1994). We then excluded: (a) all traffic which involved commodities exempted from regulation;⁵ (b) all traffic which moved in car types exempted from regulation; and (c) all traffic which the 1994 Costed Waybill Sample showed had revenue-to-variable cost ratios below 180 percent.⁶ The traffic remaining after these exclusions -- non-exempt and contract traffic with R/VCs exceeding 180 percent -- generated railroad revenues of approximately \$9.4 billion in 1994.

We did not exclude as part of this process traffic that is currently moving under contract. While contracts are exempt from economic regulation, the rates for such traffic would nonetheless be affected by the Board's proposed rate reasonableness regulations. Once a contract expires or is terminated, the traffic it covered would become subject to rate reasonableness regulation, at least until a new contract could be negotiated. This potential for reversion to regulated status and the resulting effect on any rates set in a new contract dictate that contract traffic be considered in analyzing the effects of applying

⁵Attached as Appendix B is a comprehensive list of all commodities and car types that we excluded as exempt.

⁶The Board may or may not, in fact, have maximum rate jurisdiction over traffic with an R/VC above 180 percent, since the railroad may or may not have market dominance over the traffic. There is, however, no practical way at this stage to distinguish traffic for which market dominance would be found and traffic for which it would not. Accordingly, solely for purposes of developing our loss estimates, we assumed the Board could assert jurisdiction over all of this traffic.

the proposed maximum rate regulations. In fact, we understand that in the individual cases which prompted this proceeding, the traffic is moving under contract and the shipper nonetheless filed a complaint.

Having identified the universe of traffic subject to the proposals, we utilized the 1994 Costed Waybill Sample to determine the revenues that would be earned by the railroads on the traffic affected by regulation if those revenues were limited to a maximum of 180 percent of variable costs.⁷ Those revenues were equal to \$7.0 billion.

Thus, if in 1994 the rates for all traffic affected by regulation had been held to an R/VC of 180 percent, the railroads would have received \$7.0 billion in revenue instead of \$9.4 billion, a revenue loss of \$2.4 billion (with no associated reduction in expenses). This loss is equivalent to over 45 percent of the railroads' 1994 pre-tax net revenue from railway operations -- \$5.3 billion.

2. The railroads would suffer losses of at least \$1.5 billion under the "intermediate" approach.

In addition to estimating the maximum revenues the railroads could lose under the Board's proposed "intermediate" approach, we also estimated the minimum. Our estimate was based on a determination of the portion of all traffic affected by regulation that would almost certainly have its rates reduced to the level where R/VC equals 180 percent.

⁷Although contract revenues for some railroads are "masked" in the Waybill Sample available to the AAR, we are confident that at the high level of aggregation we used, such masking did not significantly affect our range of estimated revenue losses.

Our analysis was based on the fact that, under the "intermediate" approach, maximum rates for the traffic affected by regulation would be equal to the stand-alone cost of the bottleneck portion of the movement, plus the cost of purchasing connecting service over the non-bottleneck portion. Thus, the overall revenue that would be earned on any individual movement would be a function of: (1) the stand-alone cost relating to the bottleneck, (2) the cost of purchasing connecting service over the non-bottleneck portion of the movement, and (3) the relative proportion that the bottleneck and non-bottleneck portions of the movement bear to the full movement.

As discussed in Part B., below, we could not determine within the time available the stand-alone costs (and thus carrier revenues) for the bottleneck and the costs for purchasing competitive service for non-bottleneck portions of each of the thousands of movements that comprise the traffic subject to rate regulation. With regard to the non-bottleneck segments, however, we can assume that the cost of purchasing service would be close to the incremental costs of the movement, because, by definition, these are segments where two or more railroads can provide service.⁸ The low rates on the non-bottleneck segments can thus be expected to contribute relatively little towards covering the fixed and common costs of that segment. For purposes of comparison, we note that the average R/VC for all traffic with an R/VC below 180 percent in the 1994 Carload Waybill Sample is just 106.3 percent. This is traffic that is most likely subject to direct rail competition.⁹

⁸See Baumol/Willig V.S.

⁹This figure may even overstate average revenues for directly competitive traffic since some of the traffic with an R/VC below 180 percent has no direct rail competition.

We expect that the revenues the railroads would be permitted to earn on the bottleneck segments would be higher, of course, even though we cannot say precisely how high. Nonetheless, even with a relatively high bottleneck R/VC percentage, if the length of the bottleneck segment is only a small portion of the overall movement, the total R/VC percentage for the movement would remain at or below 180. For example, if the bottleneck distance were 10 percent of the movement's length, even if the R/VC on the bottleneck were 500 percent and the R/VC for the non-bottleneck were 110 percent, the R/VC for the entire movement would be just 149 percent. Therefore, in those cases where the bottleneck is a relatively small portion of the entire movement, we would expect under the "intermediate" approach that the rate would be driven down to the jurisdictional threshold of R/VC equal to 180 percent. Conversely, where the bottleneck is a large portion of the entire movement, we would not expect total origin-to-destination revenues to be driven down to R/VC levels at or below 180 percent.¹⁰

Recognizing the importance of determining bottleneck lengths, we examined the universe of traffic that could be affected by the "intermediate" proposal (discussed in Part A.1.) using the 1994 Waybill Sample in order to determine for each movement the actual bottleneck length as a percentage of total length. The process we used to measure bottleneck lengths is described in detail in the attached Appendix C.

In determining bottleneck lengths, we recognized that stand-alone costs generally are relatively lower for high density lines, such as those used for coal movements,

¹⁰All R/VCs used herein were necessarily determined on the basis of the costs of the current carrier and route for the subject traffic.

as compared to other lines.¹¹ In its published stand-alone cost decisions regarding coal rates, the ICC found that the R/VC of the rates for the stand-alone railroad were less than 300 percent.¹² This is consistent with our own extensive work on coal rate issues. Indeed, between us we have seen just one example of stand-alone costs for a coal rate approaching 300 percent. By contrast, the stand-alone cost of lower density movements could well exceed 400 percent.¹³ Therefore, in order to account for the greater densities of coal movements and their resulting lower R/VCs, we separately determined the percentage bottleneck lengths for coal traffic and all other traffic.

In Table 1 we show revenues subject to loss (i.e., the revenues that the railroads would lose if rates were reduced to an R/VC of 180 percent) by bottleneck lengths as a percent of total movement length. Losses are shown both incrementally and cumulatively. As can be seen by comparing the cumulative losses for bottleneck lengths at low percents and for bottleneck lengths of 100 percent, most of the revenues subject to loss for both non-coal and coal move over routes where the bottleneck segment represents a relatively small percentage of the total route. It is thus reasonable to assume for these

¹¹As we testified in Ex Parte No. 347 (Sub-No. 2), in the case of small movements of traffic, the density of the line is likely to be relatively low.

¹²No. 41191, West Texas Util. Co. v. Burlington N. R.R., slip op. (decision served May 3, 1996); Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada ("Nevada Power"), 10 I.C.C.2d 259 (1994); Arkansas Power & Light Co. v. Burlington N. R.R., 3 I.C.C.2d 757 (1987); Omaha Public Power Dist. v. Burlington N. R.R., 3 I.C.C.2d 123 (1987). In other coal rate cases it was not possible to determine an R/VC of the rates for the stand-alone railroad from publicly available information.

¹³Our discussion of various possible R/VC levels in this statement is not meant to imply that a rate with an R/VC exceeding these levels also exceeds stand-alone cost. As we have repeatedly emphasized, stand-alone costs can only be determined on the basis of the specific movement or movements at issue.

TABLE 1

**REVENUE LOSS FROM MOVEMENTS BY BOTTLENECK LENGTH
AS A PERCENTAGE OF EXISTING MOVEMENT LENGTH
ASSUMING R/V/C CAPPED TO 180%**

ALL VALUES IN DOLLARS

BOTTLENECK LENGTH AS A PERCENT OF TOTAL MOVEMENT LENGTH (ROUNDED UP)	REVENUE LOSS					
	INDIVIDUAL 1% SEGMENTS			CUMULATIVE REVENUE LOSS		
	ALL TRAFFIC	ALL NON-COAL	COAL ONLY	ALL TRAFFIC	ALL NON-COAL	COAL ONLY
1	347,404,352	196,657,217	150,747,135	347,404,352	196,657,217	150,747,135
2	256,482,186	118,999,210	137,482,976	603,886,537	315,656,426	288,230,111
3	175,237,468	83,488,590	91,808,878	779,184,005	399,145,016	380,038,989
4	112,604,189	69,434,774	43,169,415	891,788,194	468,579,790	423,208,404
5	110,988,046	52,129,377	58,858,670	1,002,776,240	520,709,166	482,067,074
6	56,124,958	37,164,818	18,960,140	1,058,901,198	557,873,984	501,027,214
7	80,842,258	44,953,724	35,888,534	1,139,743,456	602,827,708	536,915,748
8	65,546,393	34,874,118	30,672,265	1,205,289,839	637,701,826	567,596,013
9	41,858,475	29,294,710	12,561,785	1,247,146,313	666,996,536	580,149,778
10	78,235,237	28,973,362	49,261,255	1,325,381,550	695,970,517	629,411,033
11	44,568,349	17,922,565	26,645,784	1,369,949,899	713,893,082	656,056,817
12	47,321,454	21,653,978	25,667,478	1,417,271,352	735,547,060	681,724,292
13	48,591,671	17,970,842	30,620,829	1,465,863,023	753,517,902	712,345,121
14	30,668,850	13,557,659	17,111,191	1,496,531,872	767,075,560	729,456,312
15	48,911,151	16,170,191	32,740,960	1,545,443,023	783,245,751	762,197,272
16	37,167,350	16,473,872	20,693,478	1,582,610,373	799,719,623	782,890,750
17	18,796,058	8,772,153	10,023,905	1,601,406,430	808,491,775	792,914,655
18	26,421,837	15,295,024	11,126,813	1,627,828,267	823,786,799	804,041,468
19	43,207,929	14,744,664	28,463,265	1,671,036,196	838,531,463	832,504,733
20	19,110,406	10,746,058	8,364,348	1,690,146,601	849,277,520	840,869,081
21	25,649,137	11,553,899	14,095,238	1,715,795,738	860,831,419	854,964,319
22	18,708,183	10,137,371	8,571,812	1,734,504,921	870,968,790	863,536,131
23	16,712,729	11,748,901	4,962,828	1,751,217,649	882,718,690	868,498,959
24	26,821,125	8,585,234	18,235,891	1,778,038,774	891,303,924	886,734,850
25	13,934,924	7,606,192	6,328,732	1,791,973,698	898,910,116	893,063,582
26	13,526,070	4,916,469	8,609,601	1,805,499,768	903,826,585	901,673,183
27	13,175,281	7,223,729	5,951,552	1,818,675,048	911,050,313	907,624,735
28	12,787,799	6,346,702	6,441,037	1,831,462,847	917,397,015	914,065,832
29	6,036,076	4,837,940	1,198,136	1,837,498,923	922,234,955	915,263,968
30	13,204,443	5,004,750	8,198,693	1,850,703,366	927,239,705	923,463,661
31	17,844,783	4,616,211	13,228,572	1,868,548,149	931,855,916	936,692,233
32	9,949,699	3,355,018	6,594,681	1,878,497,748	935,210,934	943,286,814
33	9,404,741	3,957,319	5,447,422	1,887,902,489	939,168,253	948,734,236
34	8,378,792	6,331,971	46,821	1,894,281,281	945,500,224	948,781,057
35	8,768,247	5,953,843	2,814,604	1,903,049,527	951,453,866	951,595,661
36	2,405,993	1,745,026	660,967	1,905,455,520	953,198,892	952,256,628
37	5,731,085	3,149,850	2,581,215	1,911,186,585	956,348,742	954,837,843
38	5,115,265	3,714,299	1,400,966	1,916,301,849	960,063,040	956,238,509
39	2,933,783	2,584,648	349,137	1,919,235,632	962,647,686	958,587,948
40	4,825,597	3,830,085	995,512	1,924,061,229	966,477,771	957,583,458
41	6,328,011	4,353,434	1,974,577	1,930,389,240	970,831,205	959,558,035
42	7,281,398	3,645,925	3,635,433	1,937,670,598	974,477,130	963,193,468
43	4,752,260	4,225,722	526,538	1,942,422,858	978,702,852	963,720,006
44	5,195,891	3,706,688	1,489,223	1,947,618,748	982,409,519	965,209,229
45	2,907,761	2,907,761	0	1,950,526,509	985,317,280	965,209,229
46	5,520,307	4,070,347	1,449,960	1,956,046,815	989,387,626	968,659,189
47	6,450,568	6,853,144	1,597,424	1,964,497,383	996,240,770	968,256,613
48	4,625,650	4,625,650	0	1,969,123,033	1,000,866,420	968,256,613
49	5,044,202	4,815,972	228,230	1,974,167,235	1,005,682,392	968,484,843
50	2,854,969	1,231,553	1,623,416	1,977,022,204	1,006,913,945	970,106,259

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EXHIBITS

- Exhibit A
U.S. Class I Railroads -- Revenue Per Ton-Mile (1985-1995)
- Exhibit B
U.S. Class I Railroads -- Revenue and Cost Trends (1985-1995)
- Exhibit C
U.S. Class I Railroads -- Freight Service Revenue Per Route Mile (1983-1995)
- Exhibit D
U.S. Class I Railroads -- Revenue Per Employee (1983-1995)
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U.S. Class I Railroads -- Total Operating EBITD (1983-1995)
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- Exhibit K
Stock Price History -- Major Rail Holding Company Index vs. S&P 500
- Exhibit L
S&P 500 Price-to-Book-Value Ratio as Percentage of S&P Railroads Price-to-Book-Value Ratio
- Exhibit M
S&P 500 Price-to-Earnings Ratio as Percentage of Railroad Index Price-to-Earnings Ratio

VERIFIED STATEMENT

OF

ROBERT W. ANESTIS

My name is Robert W. Anestis. I am President of Anestis & Company, an investment banking and financial advisory firm based in Westport, Connecticut, which I founded in 1986. I have had extensive experience with financial matters involving the railroad industry. Among other things, I provided testimony on the financial state of the railroad industry in the proceedings before Presidential Emergency Board No. 219, which led to significant reductions in crew consists. A summary résumé of my experience appears as Attachment 1 at the conclusion of this testimony.

I have been asked by the Association of American Railroads to discuss the current financial condition of the railroad industry and to evaluate the effects on the industry's financial condition of substantial revenue losses which the industry would experience if the Surface Transportation Board adopts certain proposals under consideration in this proceeding. As described in greater detail below, it is my opinion that such revenue losses would have the effect of significantly diminishing the industry's access to capital and impairing its ability to invest to maintain the rail transportation system. This has the potential to inflict catastrophic damage on the railroad industry.

I. INTRODUCTION AND SUMMARY

A. Past and Current Financial Condition of the Rail Industry

Rail transportation requires vast quantities of capital investment for track, other facilities, and equipment, as well as investment in technology. The rail industry requires more than twice as much investment to support a revenue dollar as the typical S&P Industrial company, and it has far higher capital requirements than trucking, its chief competitor. In part because of its capital intensity, the industry operates with a very narrow free cash flow. As a result, the industry is particularly vulnerable to fluctuations in cash flow. Even small reductions in revenue, without a commensurate reduction in costs, can result in a severe impact on availability of cash to the rail industry. Such a reduction can seriously impact the industry's ability to make capital investments and provide returns to shareholders.

The financial performance of the railroads has improved significantly since enactment of the Staggers Act. In the 1960's and 1970's, in the period prior to deregulation, the financial condition of the railroad industry was poor. Rail carriers were unable to cover all their costs, including the cost of capital. As a result, much of the industry lost its access to capital. Managers, acting on behalf of stockholders seeking appropriate returns on their capital, curtailed investment in their rail operations through the 1960's and early 1970's and chose to diversify into non-rail businesses. By the early 1970's, much of the industry lay in disrepair. By the end of the 1970's, more

than 20% of the industry's route mileage was owned by companies in bankruptcy or under government ownership subsequent to bankruptcy.

The Staggers Act and the subsequent period of deregulation have resulted in great improvements in the financial health of the nation's rail carriers, providing benefits for shippers and carriers alike. One of the principal objectives of deregulation was to ensure that the railroad industry would enjoy access to capital.¹ As a practical matter, this meant that rail carriers had to be provided with an opportunity (not an assurance) to cover all of their costs, including the cost of capital.

The freedom provided to rail carriers by deregulation has allowed them to price their services competitively, to reduce their unit costs, and to operate in an environment where they have the opportunity to earn a compensatory return on capital. This prospect of profitability in a predictable, deregulated environment has attracted capital and investors to the industry. This in turn has allowed the carriers to step up significantly levels of capital investment relative to plant size and to improve productivity. Physical plants have been brought to a much improved state of repair. The results for shippers have included improved service levels and lower average unit prices.

¹ See Pub. L. No. 96-448, § 2, 94 Stat. 1895, 1896 (1980) (finding rail earnings insufficient to generate funds for necessary capital improvements and projecting capital shortfall of \$16 to \$20 billion for rail industry); id. § 3, 94 Stat. 1897 (purpose of Act "to provide for the restoration, maintenance and improvement of the physical facilities and financial stability of the rail system"); id. § 101(a) (adding Rail Transportation Policy at 49 U.S.C. § 10101a), 94 Stat. 1897-98.

With all these changes, Class I rail carriers have markedly improved their operating ratios, return on investment, and cash flow in recent years. In 1995, exclusive of special charges, the average operating ratio for the Class I railroads dropped to 81.0, and the carriers earned 9.7% on their rail investment. See pages 15-17 below. This is as close to earning their cost of capital (determined by the Board to be 11.7% for 1995) as the railroads have been in recent memory. Cash flows are stronger, providing a pool of capital for stepped-up capital expenditures. In short, deregulation has been a clear success, permitting the railroads to make significant improvements in their financial performance.

However, the financial performance of the rail industry continues to lag behind that of the industries with which it competes for capital. Return on investment for the Class I railroads is far below that of the average U.S. industrial corporation. Rail stocks are currently underperforming the broad market, and the market continues to trade rail equities at multiples of book value and earnings below those of the average common stock. There is still some distance to go before the rail industry reaches genuine, sustained financial health.

B. Effects of Revenue Loss Due to Re-regulation of Rates

The Board has under consideration two possible new approaches for regulation of rates for traffic of shippers served by only one railroad. Messrs. Rockey and Klick, in their testimony in this proceeding, have calculated that if the less severe of these alternatives, referred to as the "intermediate" approach, were adopted, the railroads

would experience a loss of revenue in the range of \$1.5 to \$2.4 billion per year. Because there would be no offsetting reductions in cost accompanying this loss of revenue, the entire difference in revenue would be reflected dollar for dollar in reductions in pre-tax operating profit (Net Revenue from Railway Operations) and in all pre-tax cash flow measures.

A loss of this magnitude would result in a serious depletion of the narrow discretionary cash flow available to the railroads and a significant reduction in their access to capital. In fact, as this testimony will demonstrate, if rail industry revenue were reduced by \$1.5 billion or more, much of the post-Staggers Act progress described above would simply be reversed. Clearly, the industry's free cash flow would no longer support (and returns would no longer justify) capital expenditures in amounts approaching recent levels. Unless the railroads could rapidly identify major new sources of cost savings, the benefits of which could be retained by the railroads (as opposed to being passed on to customers), profitability would dramatically decline. Dramatic cost reductions and productivity increases are unlikely prospects, particularly given the likely decline in capital investment that would result if the proposals were adopted.

As a result of such a decline in profitability, the railroads' access to capital would be impaired. Internally generated capital would decline sharply, and the capital markets would punish the industry severely.

Rail carriers as a group gradually have come closer to the objective they ultimately must achieve (as all economic entities must) -- the expectation that they will be able to earn their cost of capital year in and year out, on average. It is critical that their progress not be reversed. Otherwise, the capital life-blood of the industry will drain away again, as it did in the years prior to enactment of the Staggers Act.

II. FINANCIAL CONDITION OF THE RAILROAD INDUSTRY -- BACKGROUND

A. Capital Intensity of the Railroad Industry

In evaluating proposals for new limitations on rates, it is critical to understand the extraordinary level of capital intensity of the rail industry and the implications of that capital intensity for profitability requirements.

When compared with American industry in general, the railroad industry is extremely capital intensive. The comparison with the trucking industry, the railroads' primary competition, is particularly striking.

TABLE I
CAPITAL INTENSITY IN CLASS I RAILROADS

	Total Net <u>Investment</u> ² (000,000)	Total Railroad <u>Operating Revenue</u> (000,000)	Ratio Net <u>Investment/Revenue</u>
1993	\$50,312	\$28,825	1.75
1994	52,746	30,809	1.71
1995	<u>57,716</u>	<u>32,280</u>	<u>1.79</u>
Average	<u>\$53,591</u>	\$30,638	1.75

As Table I indicates, from 1993 to 1995 the Class I railroads required an average of \$1.75 in net investment in rail assets and related working capital to produce \$1.00 of total railroad operating revenue. As shown below in Table II, this is 2.46 times as much capital investment per gross revenue dollar as the trucking industry and more than twice the average of S&P Industrials.

² Total Net Investment includes (a) rail property, plant and equipment less accrued depreciation and amortization and (b) a Board allowance for rail-related working capital.

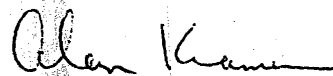
Unless otherwise indicated, tabular data concerning the rail industry is derived from material filed by the Class I railroads with the Interstate Commerce Commission or the Surface Transportation Board (as compiled by AAR).

FURMAN SELZ
LLC

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Verification

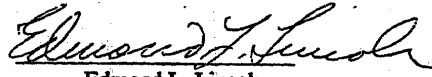
I, Alan Kramer, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement. Executed on October 10, 1996.



Alan Kramer

Verification

I, Edmond L. Lincoln, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement. Executed on October 9, 1996.


Edmond L. Lincoln

analysis reflects the fact that the railroads could lose up to \$226 million in revenues for such traffic if rates were capped at R/VCs of 180 percent.¹⁰ This traffic is listed on the "Additional Revenue Loss" line at the end of Table 1.

C. Calculating The Bottleneck Percentage

We calculated the bottleneck percentage by dividing each bottleneck length by the total distance of the existing origin-to-destination movement. Where a non-coal movement contained two bottlenecks, we calculated each bottleneck percentage separately and, as discussed below, we assigned one half the potential revenue loss for that movement to each bottleneck.

D. Calculating Minimum Potential Revenue Loss

As explained in our statement, to estimate the minimum revenues the railroads would lose under the "intermediate" approach, we assumed that under that approach rates would be capped at R/VCs of 180 percent only where bottleneck lengths of non-coal movements were 10 percent or less of total movement length and bottleneck lengths of coal movements were 20 percent or less of total movement length. We calculated minimum revenue losses by subtracting the revenues that would be earned on this traffic under a 180 percent R/VC cap from the revenues actually earned on this traffic.

In order to develop this estimate, we determined the revenue losses associated with movements of different bottleneck lengths as a percentage of total movement length

¹⁰This revenue loss was included in our maximum estimate of revenues at risk, but not in our minimum estimate of revenue losses.

(e.g., the revenue losses associated with movements that have a bottleneck length of two percent). The results are presented in Table 1, both incrementally and cumulatively.

In those cases where movements had two bottlenecks (and thus two bottleneck percentages),¹¹ so that revenue losses could not be associated with a single bottleneck, we assigned one half the dollar loss to each.¹² Assigning the total value of the movement to each bottleneck would have double-counted the revenue losses for these movements, and choosing between the two bottlenecks¹³ would have required us to predict which bottleneck the shipper would more likely challenge, which we could not do outside the coal area.

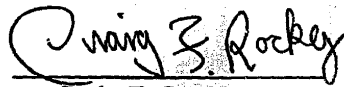
¹¹This issue does not arise for coal since we treated each coal movement as having only one bottleneck.

¹²We similarly assigned one half the dollar loss to each bottleneck for purposes of calculating the median bottleneck lengths (non-coal and coal) cited in our statement.

¹³Rather than challenging both bottlenecks, we believe most shippers would challenge just one bottleneck. If shippers were to challenge both bottlenecks, the railroads, of course, could argue that under the "intermediate" approach they must receive stand-alone cost for both bottleneck ends of the movements.

VERIFICATION

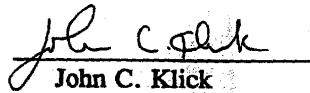
I, Craig F. Rockey, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement. Executed on October 11, 1996.



Craig F. Rockey

VERIFICATION

I, John C. Klick, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement. Executed on October 11, 1996.


John C. Klick

**VERIFIED STATEMENT OF INVESTMENT BANKERS
AND SECURITIES ANALYST**

This verified statement is provided in connection with the Surface Transportation Board's proceeding to consider proposals that would increase the regulation of rail rates for traffic of shippers that are served by a single railroad. We are investment bankers and a securities analyst with responsibilities and expertise in rail industry matters. Our positions and backgrounds are described in Exhibit 1 to this statement. We have been asked by the Association of American Railroads to discuss the likely consequences if the Board were to adopt a regulatory approach that significantly restricted the level of rail rates for traffic to and from exclusively-served shippers, and had the effect of reducing the overall level of rail revenues.

In summary, the Board's current approach to regulating rail rates has worked extremely well in allowing the rail industry to function competitively and approach genuine financial health. A move toward re-regulation that would cause a substantial reduction in rail revenues would sharply curtail the railroads' access to capital on reasonable terms, and would be a most unwise and short-sighted decision. Even apart from the precise revenue impact, the sheer uncertainty introduced by changing the fundamental rules governing railroad rate regulation is certain to impede the railroads' access to capital. The railroads' progress toward improved efficiency and earnings

under deregulation has allowed the industry to gain increasing access to capital on reasonable terms, permitting the rail industry to maintain and improve its facilities and equipment, with corresponding benefits to shippers and the public. If rail rates are more heavily regulated, significantly curtailing the railroads' ability to obtain adequate revenue, the industry's access to capital for investment in plant and equipment will be sharply restricted, and its cost of such limited investment capital as is available will sharply increase. The ultimate result will be that shippers and the public will suffer.

We are confident that the Board does not intend such a result, and that it will choose to preserve the market-based regulatory approaches that have played such an important role in restoring the vitality of the rail transportation system. We offer the following comments to emphasize the real-world capital-market impacts of a regulatory change that would jeopardize the continuation of this success story.

BENEFITS FROM DEREGULATION OF THE RAIL INDUSTRY

The Staggers Rail Act of 1980, and the market-oriented regulatory policies implemented since that time, have been effective in moving the rail industry toward financial health. In particular, during this period, the railroads have gained greater freedom to price their services in accordance with demand, which in turn has generated opportunities to make rail transportation more competitive and attract more traffic. With

Staggers Act freedoms, railroads have been able to improve historically inadequate profitability, and to make the investments needed for improved efficiency and service quality. Investors, confident that the new regulatory regime gave railroads the opportunity to earn a competitive return on capital, have been willing to supply investment funds to the industry.

Thus, thanks to deregulation, railroads have been able to acquire capital on competitive terms -- something that was more difficult for most railroads before the Staggers Act. These investments in turn have allowed the railroads to enhance productivity, cut costs, and, as a result, reduce rate levels overall. At the same time, investment has allowed railroads to improve their service levels and to attract more traffic from other transportation modes. The increased ability of the railroads to invest has brought important benefits to shippers and the public.

The market-oriented policies followed by the Interstate Commerce Commission and this Board, including the freedom for railroads to establish rates in response to market demand, have worked well. Today, railroads as a group are gradually moving toward the ability to earn returns equal to their cost of capital. Capital access for railroads has improved significantly during this period.

More needs to be achieved. Rail industry earnings are still low in comparison with the returns realized in many other industries with which railroads compete for capital. Moreover, a

great deal of additional investment is needed in order to put railroads in a position to provide high levels of service to all shippers and to bring the rail system up to its full potential. But the signs are largely positive, and investors can look forward to the prospect of the industry's attaining sufficient earnings to replace its plant over time and provide them a competitive return. The results of deregulation have given investors confidence that they will be able to earn a competitive rate of return from rail investments over the long term.

EFFECTS OF RESTRICTING RAIL RATES AND REVENUES

Any proposal to impose significant new restrictions on railroads' ability to price their services in accordance with demand and to earn healthy revenues entails some very significant risks. A railroad will continue to be able to generate cash from operations in amounts sufficient to fund investment in the rail system and to attract capital from outside sources only if it has the opportunity to earn a competitive rate of return from rail investments. To do this, a railroad must be free to charge rates that, in the aggregate and together with its efforts to maximize operating efficiencies, will yield that return.

We understand that the Board is considering proposals that, if implemented, could have the effect of driving many rail rates down to a level that would cause a significant decline in rail operating revenue. If such proposals were accepted, the result would be to impair the railroads' access to capital, and



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Verification

I, Michael H. Lloyd, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.

Executed on October 9, 1996.


Michael H. Lloyd



ABN-AMRO North America, Inc.

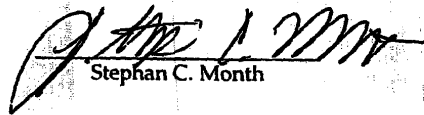
Verification

I, Gerald F. Mackin, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement. Executed on October 10, 1996.

Gerald F. Mackin
Gerald F. Mackin

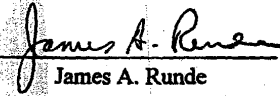
Verification

I, Stephan C. Month, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement. Executed on October 10, 1996.


Stephan C. Month

Verification

I, James A. Runde, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement. Executed on October 8, 1996.


James A. Runde

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New York, New York 10048
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James J. Ryan
Managing Director

Salomon Brothers

October 7, 1996

VERIFICATION

I, James J. Ryan, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.

Executed on October 7 1996.



James J. Ryan

Salomon
Brothers Inc
& Worldwide
Affiliates
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Dallas
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Melbourne
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Tokyo
Toronto
Zurich

Document5

VERIFIED STATEMENT
OF
ROBERT W. ANESTIS

October 15, 1996

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TABLE 1 (cont.)

BOTTLENECK LENGTH AS A PERCENT OF TOTAL MOVEMENT LENGTH (ROUNDED UP)	REVENUE LOSS					
	INDIVIDUAL 1% SEGMENTS			CUMULATIVE REVENUE LOSS		
	ALL TRAFFIC	ALL NON-COAL	COAL ONLY	ALL TRAFFIC	ALL NON-COAL	COAL ONLY
51	2,626,640	1,435,163	1,191,477	1,979,648,844	1,008,349,106	971,299,736
52	1,439,822	944,335	495,587	1,981,088,766	1,009,293,443	971,795,323
53	2,444,504	1,997,913	446,591	1,983,533,269	1,011,291,355	972,241,914
54	4,035,671	3,506,801	528,870	1,987,568,940	1,014,799,156	972,770,784
55	5,323,617	5,106,426	217,391	1,992,892,756	1,019,904,581	972,988,175
56	2,400,250	2,274,044	126,206	1,995,293,006	1,022,178,625	973,114,381
57	5,140,699	4,685,636	455,063	2,000,433,705	1,026,984,261	973,569,444
58	2,464,710	2,020,684	443,826	2,002,898,415	1,028,865,145	974,013,270
59	1,187,193	1,187,193	0	2,004,085,607	1,030,072,337	974,013,270
60	14,583,473	2,542,702	12,040,771	2,018,669,090	1,032,615,039	986,054,041
61	2,736,596	1,438,549	1,298,047	2,021,405,676	1,034,053,588	987,352,088
62	7,808,428	7,036,889	771,539	2,029,214,103	1,041,090,477	988,123,627
63	2,536,569	1,135,260	1,403,309	2,031,752,672	1,042,225,736	989,526,936
64	2,633,742	2,633,742	0	2,034,386,414	1,044,859,478	989,526,936
65	938,281	876,968	59,313	2,035,322,694	1,045,736,446	989,586,249
66	2,908,529	2,098,985	809,544	2,038,231,223	1,047,835,431	990,395,793
67	1,352,151	816,807	535,344	2,039,583,374	1,048,652,238	990,931,137
68	5,187,657	1,126,021	4,061,656	2,044,771,031	1,049,778,239	994,992,793
69	1,169,625	395,164	774,461	2,045,940,656	1,050,173,402	995,767,254
70	1,087,177	965,052	122,125	2,047,027,833	1,051,138,454	995,889,379
71	2,342,426	1,606,390	736,036	2,049,370,258	1,052,744,844	996,625,415
72	862,281	807,729	54,552	2,050,232,539	1,053,552,573	996,679,966
73	852,123	685,978	166,145	2,051,084,662	1,054,238,551	996,846,111
74	3,239,851	3,058,641	181,210	2,054,324,513	1,057,297,192	997,027,321
75	1,937,382	1,144,213	793,169	2,056,261,894	1,058,441,404	997,820,490
76	2,291,838	430,834	1,861,004	2,058,553,732	1,058,872,238	999,681,494
77	3,522,717	1,371,364	2,151,353	2,062,076,448	1,060,243,601	1,001,832,847
78	4,283,175	833,096	3,450,079	2,066,359,623	1,061,076,697	1,005,282,926
79	3,099,089	751,027	2,348,062	2,069,453,712	1,061,827,724	1,007,630,988
80	5,508,134	883,815	4,624,319	2,074,966,845	1,062,711,538	1,012,255,307
81	842,461	842,461	0	2,075,809,306	1,063,553,999	1,012,255,307
82	2,424,845	1,806,945	617,899	2,078,234,151	1,065,160,945	1,013,073,206
83	11,617,422	365,665	11,251,757	2,089,851,572	1,065,526,609	1,024,324,983
84	3,099,086	1,145,475	1,953,611	2,092,950,658	1,066,672,084	1,026,278,574
85	2,488,904	639,555	1,859,349	2,095,449,582	1,067,311,639	1,028,137,923
86	870,242	479,686	390,556	2,096,319,803	1,067,791,324	1,028,528,479
87	1,462,252	620,706	841,546	2,097,782,055	1,068,412,030	1,029,370,025
88	694,978	327,666	367,312	2,098,477,033	1,068,739,696	1,029,737,337
89	1,002,799	938,353	64,446	2,099,479,832	1,069,678,049	1,029,801,783
90	1,824,155	1,502,173	321,983	2,101,303,988	1,071,180,222	1,030,123,766
91	1,890,949	1,689,593	201,356	2,103,194,937	1,072,865,815	1,030,325,122
92	1,453,743	1,408,438	45,305	2,104,648,679	1,074,278,252	1,030,370,427
93	1,663,670	826,587	837,283	2,106,312,549	1,075,104,839	1,031,207,710
94	613,134	508,085	105,049	2,106,925,683	1,075,612,924	1,031,312,759
95	3,323,173	3,101,877	221,296	2,110,248,856	1,078,714,801	1,031,534,055
96	4,778,145	3,116,563	1,661,582	2,115,027,001	1,081,931,364	1,033,195,637
97	12,610,363	3,064,250	9,546,113	2,127,637,364	1,084,895,814	1,042,741,750
98	3,582,463	2,297,029	1,285,434	2,131,219,826	1,087,182,642	1,044,027,184
99	12,082,544	11,605,694	476,850	2,143,302,370	1,098,798,336	1,044,504,034
100	30,904,360	25,737,338	5,167,022	2,174,206,730	1,124,535,674	1,049,671,056
ADDITIONAL REVENUE LOSS *	226,472,520	46,067,386	180,405,134	226,472,520	46,067,386	180,405,134
TOTAL	2,400,679,250	1,170,603,060	1,230,076,190	2,400,679,250	1,170,603,060	1,230,076,190

* TRAFFIC FOR WHICH THE BOTTLENECK AS A PERCENTAGE OF THE EXISTING ROUTE COULD NOT BE MEASURED.

movements that revenues for the full origin to destination movement would be reduced to a level where R/VC equals 180 percent for the full movement, regardless of how high the R/VC may realistically be for the bottleneck segment. In fact, we determined that approximately 50 percent of all the potential revenue losses are associated with movements having bottleneck lengths of less than 6.1 percent of total movement length (for non-coal) and 6.6 percent of total movement length (for coal).

Our next step in estimating minimum losses that would be suffered by the railroads was to establish maximum bottleneck-lengths as a percent of total movement length for the subject traffic at levels where we could be confident that revenues for that traffic would, in fact, be driven down to 180 percent of variable cost under the "intermediate" approach.¹⁴ For the reasons explained below, we chose maximum bottleneck-lengths of 10 percent of total movement length for non-coal movements and 20 percent of total movement length for coal movements. As can be seen from Table 1, this equates to cumulative losses on non-coal traffic of approximately \$696 million and cumulative losses on coal traffic of approximately \$841 million, for total losses of over \$1.5 billion.

We chose these maximum bottleneck-lengths for purposes of estimating minimum revenue losses as a means of assuring that our estimate would not only be a minimum, but a conservative minimum. To understand our logic, consider the extremely high revenues a carrier could earn on the bottleneck segment at such short bottleneck lengths and still not earn above 180 percent of the full movement's R/VC. For non-coal movements

¹⁴This required our judgment as to likely maximum stand-alone costs for bottleneck portions and other costs of purchasing services for non-bottleneck portions of movements.

with bottleneck lengths of 10 percent of total movement length, even with an R/VC on the bottleneck as high as 700 percent, and an R/VC for the non-bottleneck as high as 120 percent (rather than 106.3 percent, which is the average of all traffic under 180 percent R/VC), the overall R/VC would be just 178 percent.¹⁵ For coal, as discussed above, we are unaware of any proceeding in which a significant movement was found to have a stand-alone cost equating to an R/VC of 400 percent. Nonetheless, for coal traffic with a bottleneck length of 20 percent of the movement's length, even assuming an R/VC of 400 percent on the bottleneck and an R/VC of 120 percent on the non-bottleneck, the R/VC for the entire movement would be just 176 percent.¹⁶ Thus, even assuming high bottleneck (and non-bottleneck) rates, under the "intermediate" approach the maximum rate for these movements would be set at an R/VC of just 180 percent.

Moreover, our minimum loss estimate is low because it does not count losses that would result from traffic for which the R/VC for the movement would be driven below current levels, but not all the way down to an R/VC of 180 percent. For example, traffic currently moving at an R/VC of 210 percent could be driven down by the "intermediate" approach to an R/VC of 190 percent. The significant additional revenue losses that can be

¹⁵For both the coal and non-coal movements, the R/VC for the entire movement would be even lower where bottlenecks are a smaller percent of total movement length.

¹⁶Higher loss estimates could easily be produced if one assumed, less conservatively, that the R/VC for the non-bottleneck would be 110 percent, instead of 120 percent. Under that assumption, there would be additional losses of almost \$64 million (for a total of \$1.6 billion). If this assumption were combined with an assumption of lower R/VCs for the bottleneck portions of the movements -- say 600 percent for non-coal and 300 percent for coal -- total revenue loss estimates to the railroads would be increased by yet another \$118 million.

expected from such rate depression have not been included in our conservative estimate of \$1.5 billion.¹⁷

3. Revenue losses under the shipper proposal would be even greater than \$2.4 billion.

The primary difference between the shipper proposal and the Board's proposed "intermediate" approach is that the former would apply a market dominance determination to just the bottleneck segment of each movement rather than to the total movement. Therefore, unlike the "intermediate" approach, under which there is a floor to the rate for the total movement of 180 percent R/VC (the jurisdictional threshold), under the shipper proposal there is no identifiable floor to the rate for the total movement. Thus, we cannot determine a range of losses for the shipper proposal, as we did for the "intermediate" approach, by determining the revenues above the jurisdictional threshold that are at risk and the particular movements for which it is virtually certain (market dominance aside) those revenues would be lost.

Nonetheless, we do know that the shipper proposal would result in dramatically greater revenue losses to the railroads than the "intermediate" approach. First, rate challenges could be brought against thousands of additional movements if the jurisdictional threshold were not applied to (and thus did not act as a rate floor for) the

¹⁷For example, if R/VC were capped at 700 percent and 400 percent for the bottlenecks of non-coal and coal movements, respectively, and at 120 percent for the non-bottleneck portions of those movements, then the railroads would lose over \$210 million in addition to the \$1.5 billion discussed above.

origin-to-destination movement. Second, with respect to each movement challenged, maximum rates would be set at even lower levels than under the "intermediate" approach.

Given the short bottlenecks we observed for large percentages of the revenues at risk, it is evident that, under the shipper proposal, much of the nation's rail traffic would, if subject to market dominance, have rates driven down by regulation to levels well below those yielding an R/VC of 180 percent. Under these facts, we can confidently predict that the shipper proposal would create losses for the nation's railroads that would greatly exceed the entire \$2.4 billion in revenues they earned in 1994 for non-exempt traffic with an R/VC above 180 percent.

B. The Precise Losses That The Railroads Would Suffer Could Not Be Determined In The Time Available Because Doing So Would Have Required Development Of Stand-Alone Costs As Well As The Costs Of "Competitive Rail Service" For Thousands Of Movements.

Within the time available, it was not possible to develop a precise single estimate of the losses the nation's railroads would suffer under the alternative rate standards discussed in the Board's decision. Either of the proposed alternatives would affect thousands of movements,¹⁸ and under either approach the railroads' revenues would depend upon both the stand-alone cost of the bottleneck portion of the movement and the "rate" or "cost" for

¹⁸Under the "intermediate" approach, movements of non-exempt commodities above the jurisdictional threshold (R/VC of 180 percent) would potentially be subject to challenge. In the 1994 Costed Waybill Sample alone, there are over 54,000 such movements (representing 6.5 million carloads) that traverse over 15,000 unique origin-destination routes for different commodities. (Of course, we cannot determine whether there is actually market dominance over any of these movements.) Under the shipper proposal, which would not apply the market dominance test to the full origin-to-destination movement, a far larger number of movements and unique origin-destination routes would be subject to challenge.

acquiring competitive rail service over the non-bottleneck portion of the movement. Determining stand-alone cost for the thousands of bottlenecks at issue would, by itself, be an overwhelming task requiring years of work. Moreover, there was no way for us to determine the actual revenues the railroads would be permitted to earn on the non-bottleneck segments, because the Board has not explained how it proposes to determine those revenues.¹⁹ In any event, it is highly unlikely that any meaningful specific costs could have been developed in the time available for the huge numbers of non-bottleneck segments involved.

Importantly, the Board should recognize that the industry and Board itself would face similarly overwhelming burdens if either the shipper proposal or the "intermediate" approach were adopted. Given the thousands of rates that would potentially be above the new regulatory ceiling under either proposed approach, there is good reason to expect that hundreds or thousands of new rate cases would be filed. After all, the Board should well remember that after the Staggers Act was adopted in 1980, and shippers were given 180 days to challenge the reasonableness of the rates then in effect, over 800 rate complaints were filed. Few of those rates had previously been challenged as unreasonable, and most complaints were apparently filed without regard to whether the rates actually were unreasonable. The shippers ultimately prevailed in only a handful of the cases, while hundreds of claims were eventually withdrawn. This experience serves to demonstrate the

¹⁹The Board may have had existing rates or actual bids in mind. We would be extremely concerned, however, if the Board intended to use rate comparisons -- a procedure that has been repeatedly rejected by the courts and is now thoroughly discredited. See Burlington N. R.R. v. ICC, 985 F.2d 589, 595-99 (D.C. Cir. 1993). See also Baumol/Willing V.S.

voluminous and opportunistic nature of shipper rate challenges that the Board is likely to face if it adopts either of the proposals under consideration.

Neither can the Board take comfort from the fact that in the past there have been relatively few stand-alone cost cases. As indicated by the railroads' continuing failure to reach long-term revenue adequacy, one obvious reason for the dearth of challenges has been that competition now constrains most rates to levels well below origin-to-destination stand-alone cost. These critical economic relationships would completely change under either the shipper proposal or the "intermediate" approach, because both would impose a regulatory ceiling well below the stand-alone cost for the full origin-to-destination movement. Given the tens of thousands of movements that would potentially be affected, the result, if either proposal were adopted, would likely be a flood of rate challenges that would totally overwhelm the resources of both the railroads and the Board.

CONCLUSION

Either of the possible changes to rate regulation suggested in the Board's decision would result in devastating revenue losses to the nation's railroads. Although the precise amount of those losses cannot practically be determined without conducting individual stand-alone cost analyses for each of the thousands of movements involved, we have determined that the so-called "intermediate" approach would result in revenue losses of between \$1.5 billion and \$2.4 billion, while the shipper proposal would cause revenue losses far in excess of \$2.4 billion.

APPENDIX A

Qualifications of Craig F. Rockey

My name is Craig F. Rockey. I am Senior Assistant Vice President of the Policy, Legislation and Economics (PL&E) Department for the Association of American Railroads (AAR), with offices located at 50 F Street, N.W., Washington, D.C. 20001. The Association's PL&E Department, among other responsibilities, serves as a central agency of the railroad industry for the collection and analysis of economic data related to railroads and their economic environment. One of my principal duties is conducting and supervising economic, financial, statistical and cost studies dealing with various aspects of the rail industry.

During my employment with the AAR, I have presented testimony before the Interstate Commerce Commission/Surface Transportation Board, Public Service Commission of Indiana, New York Department of Transportation, Ohio Public Utilities Commission, Pennsylvania Public Utility Commission, West Virginia Public Service Commission and the Illinois Department of Revenue, among other public agencies and courts. I routinely prepare and provide rail industry financial and cost data and serve as the AAR's representative on the industry's Cost and Economic Analysis Organization.

Preceding my employment with the AAR on April 1, 1978, I was Senior Associate with the Washington, D.C.-based economic consulting firm of Snavelly, King and Associates,

Inc. In that capacity I was responsible for various feasibility studies, special reports, and submissions to federal, state, and private organizations.

I hold a Bachelor of Science degree in Transportation Economics for the University of Maryland and have undertaken related course work subsequently. I have articles published in transportation journals, have co-authored a book entitled Small Railroads, am a member of various professional organizations, and have consulted for railroads in Africa, Asia, and North America.

Statement of Qualifications

Of

John C. Klick

My name is John C. Klick. I am a Principal of the economic and financial consulting firm of Klick, Kent & Allen, Inc. The firm's offices are located at 66 Canal Center Plaza, Suite 305, Alexandria, Virginia 22314.

I am a 1970 graduate of Bates College, from which I obtained a Bachelor of Science degree in Mathematics. I also have taken graduate courses in finance and accounting, and operations research. Since 1970, I have been involved continuously in the economic and financial analysis of transportation.

Throughout my career, I have organized and directed economic and financial studies for railroads, motor carriers, pipelines, telecommunications companies, state governments, and other public bodies dealing with transportation and related economic problems. Examples of studies I have participated in include (1) organizing and directing traffic, operational and cost analyses in connection with the valuation of northeastern rail property transferred to the Consolidated Rail Corporation, (2) developing the cost of railroad handling grain movements in multiple car and trainload service, (3) estimating the cost of unit train operations for coal and other commodities, (4) developing the marginal, incremental costs and stand-alone costs for various services performed by a major petroleum products pipeline company, and (5) other studies dealing with transportation by different modes of various commodities from both eastern and western origins to various destinations in the United States and Canada. In the course of conducting these studies, I have become familiar with

the operating and accounting procedures utilized in the normal course of business by the major transportation companies.

I have performed numerous cost calculations utilizing the various formulas employed by the Interstate Commerce Commission ("ICC") for the development of variable costs for virtually all of the nation's Class I railroads, with particular emphasis on the basis and use of Rail Form A and the Uniform Railroad Costing System ("URCS").

I frequently have presented both oral and written testimony before the Interstate Commerce Commission, the Federal Energy Regulatory Commission, arbitration panels, and the federal courts. This testimony has related to subjects such as the development of variable cost of service, marginal costs, incremental costs, stand-alone costs, the economic principles concerning the maximum and minimum level of rates, and procedures for implementing these maximum and minimum rate principles.

APPENDIX B

Service and Commodity Exemptions From Economic Regulation

Service Exemptions

Box car movements (AAR car type A, B, R, and L_4_, L_7_).
Intermodal movements (AAR car type P, Q, S, U, Z)

Commodity Exemptions

STCC 01 (except 0113, 01144, 0114940)
STCC 09
STCC 141, 142, 14411, 14412, 14715
STCC 20 (except 2032, 2033, 204, 206, 208, 20911, 20914,
2092, 2093, but including 2042127, 2091425)
STCC 214
STCC 22
STCC 23
STCC 24
STCC 25
STCC 26 (except 261, 26211, 26212, 26213, 26214, 26218,
26471, 266, but including 26613)
STCC 27
STCC 28133, 2819522, 2819523, 2819527, 2819528, 2819529,
2819530, 2819568, 2819569, 2842337, 28991
STCC 29914
STCC 29915
STCC 30 (except 30111)
STCC 31
STCC 32 (except 32741, 324 from the Dacotah Cement plant, 3295, but including
3295215)
STCC 33
STCC 34 (except 346, 3491940)
STCC 35 (except 3511, 3585)
STCC 36 (except 3621, 3612)
STCC 3711, 3714
STCC 38
STCC 39
STCC 40211
STCC 41118

Non-Exempt Recyclables (overrides commodity exemptions listed above)

STCC 2051118, 22941, 2297315, 2297325 - 2297368, 22994, 24293, 303, 3229924,
33312, 33322, 33342, 33398

APPENDIX C

PROCEDURES FOR DETERMINING BOTTLENECK LENGTHS AND ASSOCIATED REVENUE LOSSES

This appendix explains the procedure used to identify and measure bottlenecks¹ and describes how we calculated the potential revenue loss associated with each movement.

Beginning with the traffic movements in the 1994 Costed Waybill Sample that we had identified as being affected by the rate regulation proposals discussed by the Board (non-exempt or contract traffic moving above an R/VC of 180 percent), we calculated the bottleneck percentage for each movement as follows: first, we identified which end (or ends) of the movement contained a bottleneck; second, to determine the bottleneck length, we measured the distance on the route between the bottleneck endpoint and the nearest interchange point with another railroad; and third, we divided the bottleneck length by the total distance of the movement. For each movement with a bottleneck length that was sufficiently small for us to be confident that the railroads' rates for that movement would be constrained to an R/VC of 180 percent under the "intermediate" approach,² we calculated the railroad revenue loss by determining the difference between the actual revenues that were

¹We understand for purposes of this proceeding that a "bottleneck" is generally defined as a line segment from the facility of a shipper with exclusive railroad service to the first junction with an alternative railroad.

²As discussed at footnote 6 of our statement, we could not determine the amount of traffic for which market dominance would be found, so we assumed for purposes of our estimate that market dominance exists for all of this traffic. This assumption, however, is not meant to imply that market dominance would, in fact, be found for all traffic with an R/VC above 180 percent.

earned and the revenues that would be earned if rates were constrained to an R/VC of 180 percent.

The details of each of these steps and our reasoning and assumptions are discussed below.

A. Identifying Bottlenecks

Our first step was to determine for each movement with an R/VC above 180 percent whether a bottleneck existed at the origin, at the destination, or at both endpoints. Given the large number of movements involved, we could not perform an on-the-ground study to determine whether a bottleneck exists at every movement endpoint. As discussed below, this problem was relatively easy to overcome for coal. For all other movements, however, bottlenecks had to be identified with the assistance of ALK Associates, Inc. (using the 1994 Costed Waybill Sample and the Princeton Transportation Network Model) based on an examination of the 6-digit SPLCs (Standard Point Location Codes) containing the endpoints of the movement.

The SPLC database is designed to provide each point originating or terminating freight with a unique code that identifies the point as a geographic location. The SPLC system is a nesting system, where the first two digits of the SPLC code identify the state, the second two identify the county, and the last two identify the city or subdivision. The 6-digit SPLC is the most detailed geographic nesting system currently used by the rail industry.³ Nonetheless, because SPLCs can encompass more than one shipper facility, even

³Using SPLCs also had the advantage of allowing us to use the ALK Network Model.

when a SPLC is served by multiple carriers, there may be, in fact, a bottleneck at a specific shipper facility within that SPLC.⁴ For example, there are probably over one hundred shippers in Oklahoma City, many of them exclusively served, yet only a single main 6-digit SPLC covers Oklahoma City. As explained below, recognizing this limitation is important to identifying bottlenecks for certain non-coal traffic.

For every non-coal movement, we reviewed each endpoint SPLC to determine whether it showed only one railroad. Where we found that either the origin or destination of a movement was at a solely-served SPLC and the other endpoint was at a SPLC served by multiple railroads, we concluded that there was a bottleneck at the solely-served end of the movement. Where both endpoints of a movement were at solely-served SPLCs, we treated both ends as having bottlenecks.

Finally, where neither endpoint was located within a solely-served SPLC we recognized that this did not actually demonstrate that there was no bottleneck on the movement. As discussed above, SPLCs often cover broader geographic areas than a single shipper facility and, therefore, will not always indicate when a shipper facility is actually exclusively served. In fact, we know from experience that traffic almost never moves at an R/VC above 180 percent where there is direct rail-to-rail competition for the entire movement.⁵ The competing carriers tend to drive each other down to much lower R/VC percentages in such circumstances. See Baumol/Willig V.S. Thus, in situations where the

⁴A carrier serving a facility within a SPLC via reciprocal switching will be shown as serving that SPLC.

⁵This is confirmed by the testimony of railroad marketing officers. See, e.g., Anderson V.S.; Sammon V.S.; Peters V.S.

SPLC analysis was insufficient to identify a specific bottleneck, knowing that all of this traffic has an R/VC greater than 180 percent, we assumed that a single bottleneck did, in fact, exist. Moreover, given the fact that another carrier served the very same endpoint SPLC, we determined that the bottleneck existed within the SPLC itself. For our purposes, it did not matter whether we assumed the bottleneck was at the origin or destination, because, as explained in Part B., we assigned a constant length to all intra-SPLC bottlenecks.

With respect to coal traffic, we were able to use a more direct approach to determine the location of bottlenecks for measurement. For coal shipments to utilities, we know from experience that for traffic moving at rates resulting in an R/VC above 180 percent there is almost certainly a bottleneck at the utility end of the movement. Thus, rather than rely on less accurate SPLCs in this instance, we treated all coal movements to utilities with R/VCs above 180 percent as having a bottleneck at the utility end. On the other hand, based on our experience, we treated export coal movements as having bottlenecks solely at the origin.⁶

⁶We identified export coal movements by reference to the following destination SPLCs: Port of Wilmington, DE, SPLC 22100; Bayside (Curtis Bay), MD, SPLCs 234013, 234015 (half export); Consol, MD, SPLCs 234055, 234033, 234039; Lamberts Point, VA, SPLC 261021; Dominion Terminal, VA, SPLC 256800; Pier IX, VA, SPLC 256808; Shipyard, SC, SPLCs 447851, 447857; McDuffie, AL, SPLC 479810; Burnside, LA, SPLC 645168; Long Beach, CA, SPLCs 883660, 883020; Los Angeles, CA, SPLCs 883140, 883021; Toledo Dock, OH, SPLC 323112 (half export); Ashtabula, OH, SPLC 341231 (three-quarters export). Where a SPLC is followed by a proportion in parentheses, in accordance with our judgment, only that proportion of movements to the SPLC was treated as export coal, the remainder was treated as domestic coal.

B. Measuring Bottleneck Lengths

We used the Princeton Transportation Network Model to measure the lengths of the bottlenecks (both coal and non-coal). With the assistance again of ALK Associates, Inc., we measured the distance over the current route between the 6-digit SPLC containing the bottleneck endpoint and the nearest AAR Rule 260 junction.⁷ In identifying the nearest Rule 260 junction on the current route of movement, we ignored possible interchanges between railroads that belonged to the same corporate family (e.g., SP and DRGW) as well as possible interchanges between a railroad and a "captive" shortline (a shortline railroad that connects with only one railroad). Because we were using the 1994 Costed Waybill and 1994 routings, we used corporate identities as of 1994 in determining corporate families. However, because the ALK Network Model had been "recalibrated" to include the effects of the Union Pacific - Chicago and North Western merger, we treated CNW as part of the UP family.

Notably, neither the shippers' proposal nor the Board's proposed "intermediate" approach limits traffic to being interchanged at Rule 260 junction points. This means that in actual rate cases, shippers could attempt to define bottlenecks that are shorter than the ones we used.⁸ Thus, our use of the nearest Rule 260 junction to define a

⁷A Rule 260 junction is a physical location where two railroads have agreed, at least for some traffic, to interchange cars and that has been published as an interchange point by the AAR as part of Freight Mandatory Rule 260.

⁸As the Board is aware, in recent stand-alone cost cases the shippers' stand-alone network configuration has included "interchange points" with the stand-alone railroad at locations where no interchange points currently exist (for example, Donkey Creek, Wyoming).

bottleneck segment will tend to overstate the bottleneck distance for movements and therefore understate the number of movements with short bottlenecks. (This, in turn, may result in an understatement of our estimated minimum revenue losses under the "intermediate" proposal.)

Our measurement also overestimates bottleneck lengths because we examined only those Rule 260 junction points that were on the current route of movement (as shown by the Princeton Transportation Network Model). Other Rule 260 junction points may be closer, even though they do not lie along the exact route currently used.⁹

In two cases we could not use SPLCs to measure the bottleneck distances. The first was in the case of movements between multiply-served SPLCs, where, as explained above, we treated the movement as having a bottleneck within one of the endpoint SPLCs. In those instances, we assigned a bottleneck length of five miles based on a conservative estimate of the distance between the lines of two carriers both within the same SPLC.

The second case was when no Rule 260 junction point was on the current route for the traffic. As noted above, we did not measure bottlenecks that might be created using off-line junctions. It was too complex for us to determine where such bottlenecks might be created or to measure those bottlenecks. Nonetheless, rates for traffic with no on-route junction could be driven down under the "intermediate" approach based on a junction point off the existing route that could be used to define a bottleneck for such traffic. Our

⁹To take a simple example, where a movement originates in the Powder River Basin on the northern portion of the line solely served by Burlington Northern and then moves north, a Rule 260 junction point might not appear on the current route for quite a distance. If, however, the traffic were first to move south, it would soon come upon a BN-UP interchange point. If a shipper were to challenge the rate for such a movement under either of the proposed alternatives, the shipper would surely seek to set a route over the short bottleneck portion south of the origin, not the far longer bottleneck portion north of the origin.

to increase the railroads' borrowing costs. If investors perceived that railroads could not earn returns equal to their cost of capital in the long run, investor confidence in the rail industry would be undermined. As a result, rail equity capital could not be raised on competitive terms as it can now, and railroad credit ratings would decline. While railroads might be able to borrow at higher spreads, as they did before the Staggers Act, this would increase their costs; and heavier reliance on borrowing would drive up the railroads' debt-to-equity ratios. Even significant uncertainty as to the stability of the regulatory regime that has allowed the railroads to approach financial health would constrain the railroads' access to capital and increase their costs for the limited debt and equity capital that they could secure.

With reduced cash flow and restricted access to capital sources, railroads would be curtailed in their ability to invest to maintain and improve plant and equipment. Instead of the service improvements, increasing productivity, declining rail rates, and increased rail traffic that the economy has witnessed thus far in the post-Staggers Act era, service and productivity would deteriorate as they did in the era of pervasive rate regulation, and rates would eventually rise as the railroads became less efficient. As a result, over time, some shippers would be forced to turn to other transportation modes, and the railroads would lose much of the traffic they gained during the 1980-1996 period. Loss of traffic would lead to further revenue

losses and further reductions in investment. As history has demonstrated, the rail industry would find it more and more difficult to attract investors. Shippers and the public would be the ultimate losers. In short, the success story of the last 15 years would be jeopardized.

CONCLUSION

Railroading is a capital-intensive industry. The market-oriented policies that the Board and the ICC have followed to date have reflected a recognition that railroads must have the opportunity to earn a competitive rate of return in order to continue to attract the capital that is their life-blood. In our view, any regulatory proposal that would restrict the railroads' opportunity to receive sufficient revenues to earn such a competitive rate of return would be short-sighted and dangerous. Such a move would reverse the railroads' progress toward financial health and would severely hamper their ability to make investments to maintain and improve their facilities and equipment. Shippers and the public would suffer. On the other hand, the current approach to rail rate regulation, which allows railroads to price so as to generate cash needed to fund continuing investment and to earn a competitive rate of return, gives the rail industry a real prospect of reaching the goal of full financial viability, and gives shippers the benefits of a high-quality rail transportation system.

Exhibit 1

INVESTMENT BANKERS AND ANALYST SIGNING STATEMENT

Francis M. Cox, III

Francis M. Cox, III is a Vice President and the Railroad Industry Executive within the Transportation Group of the Chase Manhattan Bank, located at 270 Park Avenue, New York, New York. In this capacity since 1987, he is responsible for the coordinated delivery of corporate finance products and services to the Bank's railroad industry clients. Chase is currently the number one lender to the U.S. railroad industry.

Mr. Cox joined Chase in 1960. He has had over 35 years of experience in a variety of relationship banking, corporate finance and marketing assignment servicing major U.S. and multinational corporations.

Mr. Cox received his B.S. degree from Georgetown University and his M.B.A. degree from New York University.

James L. Hamilton, Jr.

James L. Hamilton, Jr., is a Vice President in the Transportation Group of J.P. Morgan & Co., Inc., located at 60 Wall Street, New York, New York. Mr. Hamilton's responsibilities include corporate finance, strategic advisory, and mergers and acquisition work for the transportation industry.

covering shipping, shipbuilding, railroad, trucking, air-freight, logistics, warehousing and distribution industries. Mr. Hamilton's clients have included American President Companies, Norfolk Southern, Ryder System, Union Pacific, Consolidated Freightways, Santa Fe Pacific Corp., Stena AB, Conrail, Overseas Shipholding Group, and J.B. Hunt.

Prior to joining Morgan in 1985, Mr. Hamilton was with Gulf Oil Corporation and was an Assistant Professor of Marine Transportation at the U.S. Merchant Marine Academy. He is a licensed merchant marine officer and has over fifteen years experience in worldwide transportation and shipping, including five years as a seagoing officer for Gulf Oil.

Mr. Hamilton received a B.S. degree from the U.S. Merchant Marine Academy and earned an M.B.A. in Finance from New York University Graduate Business School.

Alan M. Kramer

Alan M. Kramer is a Managing Director at Furman Selz LLC, located at 230 Park Avenue, New York, New York. He is a member of the Transportation Group and heads up the Investment Grade Capital Markets Group.

Prior to joining Furman Selz in 1995, Mr. Kramer covered the transportation industry for over 20 years as a member of the investment banking groups at Merrill Lynch & Co. and Salomon Brothers. He has spoken at numerous

transportation and leasing conferences and has provided expert testimony before the Interstate Commerce Commission. He is currently a contributing editor for Progressive Railroading Magazine, writing a column on railroad finance.

Mr. Kramer received a B.A. in Economics from Brooklyn College and an M.B.A. from New York University.

Edmond L. Lincoln

Edmond L. Lincoln is a Managing Director in the Investment Banking Division of PaineWebber Incorporated, located at 1285 Avenue of the Americas, New York, New York. He is in charge of PaineWebber's investment banking activities for surface transportation companies, principally in the railroad and marine industries. He has been an investment banker for more than 20 years working chiefly with surface transportation companies, first with Kidder, Peabody & Co. Incorporated and then with PaineWebber following the purchase by PaineWebber of portions of Kidder, Peabody in December 1994.

During the past ten years, Mr. Lincoln has been personally involved in the management of about \$7 billion of transactions for public and private corporations in the U.S. railroad industry. In this period, Mr. Lincoln has represented such clients as Atchison Topeka & Santa Fe,

Burlington Northern, Southern Pacific, Union Pacific, Conrail, CSX, Norfolk Southern and Amtrak.

Mr. Lincoln received a Bachelor of Arts degree from Harvard College and a Masters in Business Administration from Harvard Business School.

Michael H. Lloyd

Michael H. Lloyd is First Vice President and Senior Railroad and Trucking Industries analyst at Merrill Lynch, located at World Financial Center, North Tower, New York, New York. He joined Merrill Lynch in May 1995. Mr. Lloyd has followed equities since 1972 at H.C. Wainwright & Co., Woolcott Research Associates, Salomon Brothers, and NatWest Securities.

Mr. Lloyd has been analyzing railroads in particular since 1974. He is ranked first in Bloomberg's 1995 Analyst Scoreboard for stock pricing skills in transportation and is currently ranked by Institutional Investor as a runner up in railroads. Mr. Lloyd is a Chartered Financial Analyst.

Mr. Lloyd received a B.S. degree from the U.S. Air Force Academy and an M.B.A. degree from Harvard University.

Gerald F. Mackin

Gerald F. Mackin is Vice President of the Surface Transportation Group and Director of ABN AMRO North America.

Inc., a commercial bank located at 135 South LaSalle Street, Chicago, Illinois. Prior to joining ABN AMRO, Mr. Mackin was Vice President and Senior Banker of the Transportation Division of The First National Bank of Chicago, where he was responsible for clients in the rail, trucking, shipping, airline and aerospace industries. Mr. Mackin has been involved with the transportation industry since 1982 and has completed transactions involving recapitalizations, asset securitizations, debt agency, project finance, commercial paper, medium term notes and public debt issuance.

Mr. Mackin earned his B.A. degree from Fordham University and received an M.B.A. in Finance from Columbia University's Graduate School of Business.

Stephan C. Month

Stephan C. Month is a Managing Director in the Mergers and Acquisitions department of CS First Boston Corporation, located at 55 East 52nd Street, New York, New York. During the past two years, he has been CS First Boston's account officer for railroad mergers and acquisitions.

Mr. Month joined CS First Boston's Mergers and Acquisitions department in September 1986 and has been with CS First Boston since then, except for the period September 1991 to July 1993 when he was a Vice President at Lazard Freres.

Mr. Month has been personally involved in the following matters involving railroad clients for which CS First Boston has acted as financial advisors: the Union Pacific/Southern Pacific merger; Union Pacific Corporation's acquisition of Chicago and North Western Transportation Company; Union Pacific Corporation's offer to acquire Santa Fe Pacific Corporation; Kansas City Southern's terminated sale to Illinois Central; various financing and advisory assignments for other railroad clients such as CSX and Canadian National; and various railroad privatizations worldwide, including the Mexican railroad.

Mr. Month received both a J.D. and an M.B.A. degree from Harvard University in 1986.

James A. Runde

James A. Runde is a Managing Director of Morgan Stanley & Co. Incorporated, located at 1585 Broadway, New York, New York. Mr. Runde joined Morgan Stanley's corporate finance department in May 1974. In 1979 he was promoted to the position of Vice President and in 1982 to the position of Principal. In 1985, he became a Managing Director of Morgan Stanley. Since 1983 Mr. Runde has been the head of Morgan Stanley's transportation corporate finance department within the firm's Investment Banking Division.

During his tenure with Morgan Stanley, Mr. Runde has worked on a broad range of financial transactions for public and private corporations. While these transactions have involved companies in many industries, the focus of his work has been, and continues to be, transportation companies. Among other matters, Mr. Runde has participated in organization of a group of investors to buy Conrail from the government and co-management of the initial public offering; representation of Southern Railway in its merger with Norfolk and Western; and advice to Burlington Northern on restructuring and co-management of the spin-off of Burlington Resources.

Mr. Runde received a Bachelor of Science degree from Marquette University in 1969 and a Masters in Business Administration from George Washington University in 1973.

James J. Ryan

James J. Ryan is a Managing Director of the Transportation Group at Salomon Brothers, located at 7 World Trade Center, New York, New York. He heads Salomon's worldwide rail finance practice. Previously a Director at First Boston, Mr. Ryan has worked in transportation finance for more than 17 years, raising funds and doing advisory work for such clients as CSX, Union Pacific, Norfolk Southern, Kansas City Southern, Conrail and others. Prior to joining

First Boston, Mr. Ryan was employed in the corporate finance division of Smith Barney.

Mr. Ryan holds a bachelor's degree from Colgate University and an M.B.A. degree from Columbia University's Graduate School of Business.

VERIFICATION

STATE OF NEW YORK)

ss:

COUNTY OF NEW YORK)

Francis M. Cox, III, being duly sworn, deposes and says that he has read the foregoing statement, that he knows its contents, and that those contents are true as stated.



Francis M. Cox, III

Subscribed and sworn to before me this 7th day of October, 1996.



Notary Public

My Commission Expires _____

ELIZABETH IACOVIELLO
Notary Public, State of New York
No. 31-4338391
Qualified in New York County
Commission Expires June 30, 1998

JPMorgan

James L. Hamilton Jr.
Vice President

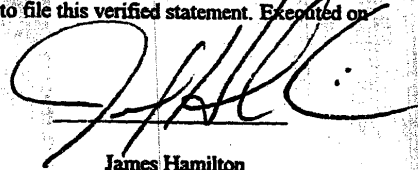
J.P. Morgan & Co.
Incorporated

60 Wall Street
New York NY
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Tel: 212 648-7801

Verification

I, James Hamilton, declare under penalty of perjury that the foregoing is true and correct.
Further, I certify that I am qualified and authorized to file this verified statement. Executed on
October 11, 1996

A handwritten signature in dark ink, appearing to read 'J. Hamilton', is written over a horizontal line.

James Hamilton

TABLE II
AVERAGE NET ASSETS/REVENUE³

	<u>Average</u>
Trucking	.71
Standard & Poor's Industrials	.86

As these figures confirm, railroads require high capital investment -- much greater than industry in general and a multiple of their trucking competitors' requirements. This is a fundamental fact of life for the railroad industry and an essential element of the financial analysis. High capital investment requirements per dollar of gross revenue mean that railroads must earn more on each revenue dollar (*i.e.*, their profits must be greater as a percentage of revenue) to provide an adequate return on investment. It also means that railroads will have high fixed costs, increasing the industry's vulnerability to downturns in the economy. Moreover, because rail carriers compete head-to-head with lightly capitalized truckers, in truck-competitive markets they have the burden of capital intensity without the usual corresponding advantage of a barrier to entry by competitors.

³ Data for trucking are taken from the 1993-1995 annual reports of four representative publicly held truckload carriers. Data for S&P Industrials are averages taken from the Standard & Poor's Industrial Manual for 1992-1994, the latest available years. Net assets figures include total assets less current liabilities (exclusive of short-term debt and current maturities of long-term debt), that is, property, plant and equipment and working capital to provide comparability to the rail investment figures shown in Table I.

In order to make the capital expenditures necessary to maintain the infrastructure of the rail system, it is essential that railroads generate substantial earnings on a continuing basis. This is required to generate the sizable cash flows required to fund ongoing investments. Moreover, in order to be assured of having continuing access to capital, the railroads must be able to earn a competitive rate of return for their shareholders. The railroad industry must compete for access to capital in the capital markets, which match risk and return. Capital migrates away from poor returns and toward good ones, and it moves with the impersonal and unforgiving laws of economics as water follows the laws of gravity. The verdict of the capital markets is harsh but clear -- if competitive returns are not earned, access to capital is impaired, and, in the worst cases, ultimately denied.

Access to capital -- either internally generated cash or capital from outside sources -- is crucial to the long-term welfare of the rail industry. If the railroads lose access to capital, they will be unable to invest in the facilities and equipment necessary to maintain current levels of service. If service levels decline, some shippers will begin to switch their traffic to trucks or barges, resulting in reductions in traffic and further reductions in revenue. Without the ability to invest adequately in this capital-intensive business, the railroads necessarily will deteriorate.

It should be emphasized that the prospect of earning the cost of capital is not some abstract, unattainable nirvana -- it is, by definition, a necessity in the long term. Investors must have confidence that railroads will earn at least that level, on average.

or the fickle, impersonal capital markets will simply flow the capital toward industries where the risk-adjusted return is better. This is the minimum acceptable average return level that investors must anticipate over the long-term if the railroads are to continue to attract the capital they need for investment to maintain the rail system.

B. The Transition from Regulation to Competition

In any discussion of the financial condition of the railroad industry, it is important to review the historical context. After well over 100 years of service the rail industry concluded the 1970's in a physical and financial shambles. The failures of the Penn Central, the Rock Island, the Milwaukee, the Boston & Maine and others left more than 20% of the country's mainline route miles in bankruptcy or under government ownership following bankruptcy. Under regulation, the railroads were simply unable to earn a competitive rate of return. They were not permitted to dispose of or abandon unremunerative routes. In addition, rates were heavily regulated, leaving the railroads unable to price their services in response to market forces. Managers of rail carriers could not justify many necessary investments in physical plants that could not earn a reasonable profit. In some cases, managers looked for diversification opportunities that promised better returns. In many cases, the railroads' adverse circumstances simply left these entities "dead in their tracks." Regulation frustrated shippers and carriers alike.

From this crisis came the Staggers Act of 1980, which largely deregulated the railroad industry. The Staggers Act gave carriers much greater freedom in setting rates and

entering into contracts with shippers. It allowed carriers greater flexibility to rationalize their businesses by, for example, withdrawing from money-losing routes. The carriers were given the tools they needed to cope with a newly competitive transportation marketplace.

Rail carriers now exist in a highly competitive environment in which they must compete among themselves, as well as with trucks and barges. The competition has been intense. Large shippers have used their buying power to bring rail rates to ever lower levels. At the same time, shipper service expectations have increased dramatically. Despite improvements in service and declining rates, the rail industry's share of intercity freight transportation, in terms of both tons and revenues, has continued to fall following deregulation, with only a slight recovery in revenue ton-miles in the past few years.

The result of all this intense competitive activity has been to place great pressure on rail rates and revenues. Since deregulation, there has been a relentless decline in revenue per ton-mile, or "yield."⁴ Beginning in 1982, average freight revenue per ton-mile (in current dollars) for the Class I railroads in the U.S. has come steadily downward, at a compounded rate of 2.2% per year, as shown in Table III. In constant dollars, the decrease has been at a compounded rate of 5.4% per year.

⁴ Note that these figures are not the same as a price index, because they include the effects of changes in mix. On an index basis, rail rates have also fallen sharply. See, e.g., Rockey, Railroad Freight Rates Since Deregulation (AAR 1994).

TABLE III
CLASS I RAILROADS -- FREIGHT REVENUE/TON-MILE⁵

	Revenue Ton-Miles (MM)	Freight Revenue (\$MM)		Freight Revenue/ Ton-Mile (cents)	
		Current	Constant	Current	Constant
1982	797,759	25,627	25,627	3.212	3.212
1983	828,275	25,836	24,777	3.119	2.990
1984	921,542	28,472	26,337	3.090	2.855
1985	876,984	26,688	23,832	3.043	2.717
1986	867,722	25,344	22,075	2.921	2.594
1987	940,630	25,797	21,799	2.743	2.309
1988	996,182	27,092	22,080	2.720	2.216
1989	1,013,841	27,059	21,187	2.669	2.088
1990	1,034,160	27,471	20,603	2.656	1.995
1991	1,038,819	26,949	19,457	2.594	1.869
1992	1,066,781	27,507	19,310	2.579	1.812
1993	1,109,309	27,991	19,146	2.523	1.725
1994	1,200,701	29,931	20,024	2.493	1.667
1995	1,305,685	31,356	20,475	2.401	1.568
Change 1982-1995	+63.7%	+22.4%	-20.1%	-25.2%	-51.2%

As illustrated, although there has been a 63.7% increase in freight activity from 1982 to 1995, there has been a decrease of 51.2% in unit revenue in constant dollars (i.e., dollars adjusted to reflect the effect of inflation) over that period. It is significant that, although rail carriers are, in a sense, now doing 63.7% more work, in constant dollars they are receiving 20% less revenue.

⁵ The time frame for this table was selected to emphasize the effect of Staggers Act deregulation -- 1982 was the high-water mark for freight revenue per ton-mile.

The competitive nature of the business that remains to the rails is illustrated in Exhibit A,⁶ which shows revenue per ton-mile for the Class I railroads for the period 1985 to 1995, declining at an annual rate of 2.2% per year in current dollars and 5.4% per year in constant dollars. Exhibit B contrasts, in constant-dollar terms, the extraordinary reductions in unit revenues, in terms of revenue per ton-mile, with the trend in railroad input costs (i.e., costs of materials purchased by the railroads). The simultaneous increase in current dollar costs (largely tracking inflation) and decrease in both current and constant dollar unit revenues has placed continuing and significant financial pressure on the railroads, creating a "revenue-cost gap." The only way to close this gap on the cost side and to assure continuing profitability as unit revenues continue to fall is through productivity improvements, that is, by reducing unit costs through making better use of resources.

The rail carriers have responded to the competitive environment by dramatically increasing efficiency and cutting their unit costs. Among other things, they have abandoned some lower-yielding resources and sharply enhanced output and productivity. Much of this improvement entailed changes that resulted in one-time savings. During the period 1983 to 1995, route miles decreased from 171,000 to 125,000, a drop of 27%. Employment dropped from 322,000 in 1983 to about 188,000 in 1995, a reduction of more than 41% during a period when revenue ton-miles increased by 57%. As a consequence, during this period the Class I rail carriers

⁶ Exhibits referenced herein appear at the end of this statement.

sharply reduced their unit costs and improved their productivity. Exhibits C, D and E graphically depict these improvements in productivity:

- Revenue per route mile in 1995 was 1.7 times the level in 1983;
- Revenue per employee was 2.1 times the 1983 level; and
- Revenue ton-miles per employee were 2.7 times the 1983 level.

The railroads have also implemented service innovations, such as doublestack intermodal service, that have allowed them to win additional traffic and revenue. In addition, they have invested in new equipment (e.g., better locomotives, doublestack equipment, new grain cars), which in turn has attracted more traffic to rail.

These enormous increases in productivity have been necessary simply to allow rail carriers to stay in this highly competitive game. By improving efficiency and productivity, the railroads have been able to keep rates low, winning substantial increases in traffic. Most of the savings have been claimed by the customer, the real winner of all this competition. This is the competitive reality of deregulation.

III. IMPROVEMENTS IN RAILROAD FINANCIAL PERFORMANCE FOLLOWING DEREGULATION

Deregulation has resulted in major improvements in the financial performance of the railroads. In addition, the rail industry has gained improved access to capital, allowing it to fund important capital investments. However, railroads continue to lag behind other industries with which they must compete for capital.

A. Measures of Financial Performance

The advances in productivity and relative rate freedom permitted by the Staggers Act have translated into substantial improvements in most railroad financial measures.

This includes operating ratios, net revenue from rail operations, return on investment, return on equity, measures of cash flow, and stock market performance.

(1) Operating Ratios

Operating ratios (the ratio of operating expenses to operating revenue) are a common measure of efficiency and potential for profitability in the railroad industry. Operating ratio is a measure of profitability of the "pure" railroad business, without regard to the "Other Income" that may flow to a railroad.⁷ It is the basis (before adjustments for return on working capital, equity in other rail operations, transfers of certain rail assets, and taxes) for the Board's computation of return on investment.

As indicated in Exhibit F, the trend since deregulation has been gradually improving industry operating ratios. Exclusive of special charges, the average operating ratio for Class I railroads has improved from 90.2 in 1983 to 81.0 in 1995.⁸

⁷ These "Other Income" elements have averaged \$1.33 billion per year in the period from 1983 through 1995. Although they provide valuable cash and improve reported return on equity (see Table V), they are not valid indicators of the profitability of the rail business as such.

⁸ Exhibit F also illustrates the trend with special charges through the relevant period. These special charges, totalling more than \$10 billion over the course of 1986 and subsequent years, should not be ignored in evaluating the railroads' financial condition because they represent very substantial cash requirements for severance and other cash costs. Computation of operating ratios without special charges, however, illustrates "normalized" trends.

Note that periods prior to 1983 used Retirement-Replacement-Betterment accounting, which is inconsistent with depreciation accounting mandated for 1983 and subsequent years. Because profit and capital expenditure figures for pre-1983 and post-1983 are non-comparable, illustrations of these elements in this testimony are limited to 1983 and later.

(2) Return on Investment

As shown in Table IV, there has been a corresponding improvement in the rail industry's return on investment as well.

TABLE IV
U.S. CLASS I RAILROADS --
AVERAGE RETURN ON INVESTMENT

	<u>Industry Average Return on Investment</u>	<u>Industry Cost of Capital⁹</u>
1983	4.3%	15.3%
1984	5.7%	15.8%
1985	4.6%	13.6%
1986	1.3%	11.7%
1987	4.8%	11.6%
1988	6.7%	11.7%
1989	6.3%	11.5%
1990	8.1%	11.8%
1991	1.3%	11.6%
1992	6.3%	11.4%
1993	7.1%	11.4%
1994	9.4%	12.2%
1995	7.0%	11.7%

As indicated in Table IV, the average return on investment for the Class I railroads is still significantly lower than the industry cost of capital determined by the ICC and the

⁹ As determined annually by the ICC/STB.

Board. Even when special charges are removed, the 1995 figure for return on investment was 9.68%, substantially short of the cost of capital.¹⁰

(3) Return on Equity

Rail carriers must achieve a return on investment in rail assets that justifies the capital invested in those assets. Another common measure of the financial performance of an economic entity is return on equity, which includes earnings from all sources within the entity, rail and non-rail. By this measure, the rail industry has improved its returns as well. However, as shown in Table V below and in Exhibit G, rail industry returns on equity continue to lag well behind typical American industrial corporations, such as those comprising the S&P Industrials.

TABLE V
COMPARATIVE RETURN ON EQUITY

	<u>Class I Railroads¹¹</u>	<u>S&P Industrials¹²</u>
1988	9.1%	19.1%
1989	8.4%	18.5%
1990	8.2%	16.2%
1991	1.2%	10.8%
1992	7.9%	13.4%
1993	9.4%	16.0%
1994	12.7%	21.9%
1995	7.9%	22.8%

¹⁰ These special charges totalled \$1.742 billion in 1995.

¹¹ This column shows return on equity for the railroad entities, as opposed to the holding companies. Comparisons of returns at the holding company level are distorted because they include a variety of non-rail businesses. However, the holding company returns also persistently trail the average S&P Industrials by a substantial and widening margin.

¹² The 1988-1994 data are taken from the 1995 Standard & Poor's Analyst Handbook. The 1995 data are taken from Compustat.

Exclusive of special charges, the return on equity for Class I railroads would have been 11.7% in 1995.

These computations of return on equity are a less reliable measure of railroad financial health than some of the other measures because they include large amounts of "Other Income" -- returns that did not come from rail investment but were generated in significant amounts (averaging \$1.33 billion per year between 1983 and 1995) from sales of real estate, fiber-optic easements, rents, etc. Although it may be appropriate to judge the effectiveness of a manager of an enterprise by the results of all elements in his charge, it is not appropriate in the long term to cross-subsidize the rail operation with earnings from unrelated operations (or vice versa).¹³ Moreover, unlike income from an ongoing business, much of the "Other Income" really represents the proceeds of a liquidation -- it is not sustainable. Once sold, a piece of land cannot be sold again.¹⁴ Nevertheless, examination of return on equity facilitates comparison between railroads and other industries and thus serves as a useful point of reference.

Even with non-rail income included in the calculation, rail carriers still have not managed to generate competitive returns on equity. In fact, in 1994, the industry's

¹³ In addition, much of the "Other Income" comes from sales of real estate with very low historical basis (because the land sold has typically been owned for many decades -- sometimes for more than a century). Booking a large, one-time gain from disposition of an asset that has been appreciating for many decades gives a misleadingly inflated impression of income for a period.

¹⁴ Although the "Other Income" stream is typically 25 to 50% of Net Revenue from Rail Operations (a pre-tax figure), the average level of "Other Income" during the period 1983-1995 actually exceeds the figure for cash flow from rail operations after taxes and interest (see Table VI, lines 14 and 12 respectively). Thus, the "Other Income" has caused the return on equity figure to be considerably higher than it would have been if the computation could have been confined to rail operations alone.

best year for return on equity in recent history, the difference in return on equity between the rails and the S&P Industrials actually widened.

(4) Cash Flow

Because measures of financial performance such as return on equity or return on investment are somewhat abstract, it is useful to examine rail industry profitability by reference to cash flow -- a more tangible measure of financial performance. Cash flow from operations provides rail carriers with the means to renew their physical plant and facilities. Moreover, cash flow supplies the returns the industry's capital providers require in the form of interest and dividends.

Exhibit H tracks the progress in a common measure of cash flow generation, Operating EBITD (Earnings from rail operations Before Interest, Taxes, and Depreciation), for Class I railroads from 1983 to 1995. Before special charges, this measure of cash flow, in current dollars, rose from \$4.46 billion in 1983 to \$8.83 billion in 1995.¹⁵ This was an increase of 98% over the twelve-year period. See line 7 in Table VI below. In constant dollars, there was an increase of 35% during this period.

As Operating EBITD has grown, so also has the level of capital expenditures, from just under \$3.0 billion in 1983 to \$5.7 billion in 1995, in current dollars. See line 8 of Table VI. Exhibit I shows capital expenditures in constant dollars for this period. Capital expenditures grew from 11.2% of revenue in 1983 to 17.7% of revenue in

¹⁵ The 1995 figure was \$7.67 billion after special charges that were not asset write-offs and therefore did not affect cash.

1995, as rail carriers saw improved prospects for returns from capital investment. See lines 7 and 8 of Table VI. The railroad carriers' willingness and ability to increase their commitments to capital expenditures is even more evident when it is measured against route mileage, which reflects the large-scale plant rationalization in the post-Staggers period. As shown in Exhibit J, current dollar capital expenditures per route mile increased from \$17,460 per route mile in 1983 to \$45,730 in 1995, an increase of 162% in current dollars and 78% in constant 1983 dollars.

Not all of Operating EBITD is available to fund capital expenditure requirements. Along with higher levels of profitability have come much higher levels of cash taxes. Line 11 of Table VI shows that cash taxes consumed close to \$1.2 billion of 1995 EBITD.¹⁶

Exclusive of special charges, available cash generated from rail operations after taxes, fixed charges and capital expenditures (line 12 of Table VI) increased from \$527 million in 1983 to \$930 million in 1995.

Even without reduction to reflect special charges,¹⁷ this available cash figure represents only 10.5% of EBITD and less than 3.0% of gross revenue. Given the very

¹⁶ The purpose of Table VI is to illustrate "normalized" cash flow trends, and, for that reason, special charges that exceeded \$10 billion pre-tax in that time frame are excluded from the table. If those special charges had actually not been incurred, taxes would have been substantially higher during this period. Therefore, Table VI understates the *pro forma* taxes that would be payable on the *pro forma* rail income stream illustrated here before special charges.

¹⁷ From 1986 through 1995 railroads incurred more than \$10 billion of special charges, much (perhaps most) of them involving the payment of cash. Exhibit H and Table VI, which are intended to show "normalized" cash flow, do not reflect the cash requirements represented by special charges.

high investment requirements in the rail industry, the competitive pressure on yields, and the continuing increases in the costs of inputs used by railroads, this figure of \$930 million represents a thin and vulnerable level of cash flow.¹⁸ As can be seen from the detail in Table VI below, only the availability of the rail carriers' "Other Income" stream has permitted the carriers to fund stock buybacks, dividends and other uses of cash flow essential to retain the interest of the capital markets.¹⁹

The cash flow trends for the Class I railroads are summarized in Table VI below.

¹⁸ To illustrate this point, the average price paid for a gallon of diesel fuel dropped from \$.69 per gallon in 1990 to \$.60 in 1995. With 3.5 billion gallons consumed in 1995, the difference represented \$315 million of improvement in pre-tax cash flow. This single commodity component of variable cost can cause a very large percentage swing in free cash flow, a swing that is largely a function of external factors beyond the control of the rail carriers. This exposure is even more dramatic if comparison is made to the price levels prevailing in the early 1980's, \$.80-\$.90 per gallon. A return to those levels could cost the industry \$1.0 billion per year.

¹⁹ As explained above, cross-subsidy of this kind over any extended period is inappropriate.

TABLE VI

CASH FLOW TRENDS - CLASS I RAILROADS

(\$000,000)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1) Total Revenue	26,729	29,453	27,586	26,204	26,455	27,934	27,956	28,370	27,845	28,349	28,835	30,809	32,280
2) Total Expenses	24,106	25,800	25,225	24,896	23,702	24,811	25,038	24,652	28,061	25,325	24,517	25,511	27,897
3) Net Revenue from Railway Operations	2,623	3,653	2,361	1,308	2,753	3,123	2,918	3,718	(216)	3,024	4,308	5,298	4,383
4) Plus: Depreciation ¹⁾	1,933	1,897	2,192	2,200	2,245	2,208	2,225	2,295	2,345	2,320	2,386	2,458	2,705
5) Operating EBITD	4,456	5,550	4,553	3,508	4,998	5,331	5,143	6,013	3,129	5,344	6,694	7,756	7,088
6) Special Charges	---	---	---	1,716	620	792	728	3	3,713	1,164	5	---	1,742
7) Operating EBITD Before Charges	4,456	5,550	4,553	5,224	5,618	6,123	5,871	6,016	5,842	6,508	6,699	7,756	8,830
8) Less: Capital Expenditures	2,984	4,121	4,480	3,645	3,062	3,546	3,865	3,591	3,440	3,680	4,504	5,035	5,720
9) Free Operating Cash Flow	1,472	1,429	73	1,579	2,556	2,577	2,006	2,425	2,402	2,828	2,195	2,721	3,110
10) Less: Interest	989	989	933	901	900	931	1,102	1,226	1,163	1,015	911	923	1,010
11) Less: Cash Taxes	(44)	255	294	490	681	527	453	648	484	562	770	1,105	1,170
12) Cash from RR Opera- tions After Taxes and Interest	527	185	(1,154)	188	975	1,119	451	551	755	1,251	514	783	930
13) Cash Dividends	1,049	1,039	1,406	1,339	1,221	1,409	1,534	1,277	903	824	940	953	1,278
14) Other Income	1,285	1,521	1,337	1,502	1,422	1,575	1,453	1,254	1,431	1,335	979	1,260	970

¹⁾ In order to avoid double counting in this table, depreciation for 1986, 1991 and 1995 has been normalized in line 4 to take account of special charges that involved changes to depreciation accounts.

(5) Stock Market Performance

As previously discussed, many of the large, publicly traded railroad holding companies include a variety of businesses besides the rail carriers themselves. Therefore, even more than the return on equity calculation previously reviewed,²⁰ any review of stock market performance must be qualified by the fact that it is not a "pure" reflection of the performance of the rail business.

With that caveat, performance of the composite of the leading rail stocks when compared with the S&P 500 has been mixed in recent years. In most years, rail stocks have underperformed compared with the market as a whole, although there was a brief period in the early 1990's when rail stock performance improved significantly. This temporary improvement resulted primarily from the issuance of the opinion of Presidential Emergency Board 219, which led to substantial work rule relief to the rail industry.

This record of performance is graphically depicted in Exhibit K. It shows that in the period 1986 to 1990 rail stocks underperformed the market. In the period 1991 to 1993, largely as a reflection of the market's anticipation of the beneficial effects of PEB 219, the rail stocks showed above-average performance. Rail stocks have returned to a below-average performance following the post-PEB 219 enthusiasm.

²⁰ The return on equity calculation was based on only earnings from the rail entity, although those earnings typically include well over \$1.0 billion per year from non-rail operations.

Rail stocks have shown a consistent disadvantage in ratio of price to book value, compared to the S&P 500 average, as indicated on Exhibit L. In addition, throughout all but brief intervals during this period, rail stocks experienced a persistent discount from the market average in price-to-earnings multiple, as shown on Exhibit M. This disadvantage reflects the lower growth potential and perceived cyclicity of rail stocks.

Essentially, these exhibits show that, even with vast productivity improvements and considerable financial restructuring (e.g., through spin-offs), stocks that do not earn their cost of capital struggle to achieve even an average performance.

(6) Summary of Financial Performance

The financial performance of rail carriers has improved substantially in the period since deregulation. From a state of serious physical and financial deterioration, the railroads have experienced a remarkable recovery. Deregulation has given railroads the ability to charge market-based rates and to make improvements in efficiency and productivity that have driven down costs. As a result, railroad earnings have improved, and the measures of financial performance discussed above have reflected the enhanced prospects of the industry.

Nevertheless, the industry is only now approaching a state of financial health. Rail carriers continue to face intense competitive pressures. Even with the great improvements in productivity and traffic increases that the industry has experienced, measures of financial performance are still below average, and most railroads are not

yet earning their cost of capital. There is still a way to go before the industry reaches real financial health.

B. Increased Access to Capital and Investment

The improvements in financial performance that the railroads have enjoyed since deregulation have given them better access to capital. Under deregulation, the carriers have been free to take steps to attract traffic, and have had relative freedom to set rates to move the traffic. The ability to price in a way that generates adequate revenues, combined with improved productivity and decreasing cost, has resulted in improved earnings. As is discussed in the preceding section, cash earned from rail operations has increasingly been available to fund rail capital expenditures.

The increased cash flow available to fund capital expenditures has allowed railroads to make substantial investments in facilities and equipment, including major expenditures on innovative technology. For example, rail carriers have recently invested substantial sums in new locomotive technology to purchase 6000 horsepower AC traction locomotives at \$2.5 million per locomotive. Centralized dispatching, such as Union Pacific's Harriman Dispatching Center (a \$54 million investment), and new doublestack container facilities have led to improved productivity and the ability to compete for service-sensitive traffic.²¹ The result of this investment has been

²¹ The rail carriers have directed capital investment toward projects with the best returns. Much more remains to be done to provide improved physical plant. For example, a recent article in the Wall Street Journal (Sept. 19, 1996, at page 1) documents the significant weaknesses in rail infrastructure at ports: "experts say it would cost at least \$4 billion to solve most of the missing links" at the ports. There is still a need for very substantial capital investments to construct facilities capable of handling the large volumes of traffic that move through these crucial centers of commerce. Clearly, much more capital is needed in order to provide adequate service levels for all

improved service for shippers. This in turn has made it possible for railroads to attract more traffic (and thus revenues) and to make continuing improvements in service levels.

The willingness and ability of the rail carriers to make capital investments of this type have been critical to their recent success and will be even more important in the future. The watershed savings that came from one-time major productivity events, such as the post-Staggers massive route rationalization and PEB 219 crew consist reductions, and that facilitated the rail carriers' dramatic post-Staggers "catch-up" will not be repeated. Further productivity improvements will be harder to come by and will be even more dependent upon capital investment

Most importantly, the market-oriented policies followed by the ICC and the Board have given railroads the opportunity to earn a competitive rate of return. The fact that railroads are now approaching the ability to earn returns equal to their cost of capital has given the industry improved access to the capital markets. The improved financial performance of the railroads and the prospect that railroads will earn sufficient amounts to maintain their plant and equipment over time have given investors reason to believe that, in the long run, they will be able to earn a competitive rate of return on rail investments. It is this improved access to capital that ensures that the rail industry will be able to maintain a high-quality rail transportation system.

shippers. But considerable strides have been made.

Again, further financial progress is required for this industry to achieve stable, long-term access to capital -- rail carriers are not there yet. There is no opportunity to "coast" in this business.

IV. EFFECTS OF REVENUE LOSS DUE TO NEW RATE REGULATION

Using 1994 data, Messrs. Rockey and Klick have estimated that if the Board had imposed new rate regulation under the so-called "intermediate" approach in this proceeding, the Class I rail carriers would have experienced a loss in 1994 revenue ranging from \$1.5 billion to \$2.4 billion.²² Such reductions in revenue would bring with them no offsetting reductions in costs and so would (except for reduction in taxes otherwise payable) ripple right down through the income statement and through to cash flows, dollar for dollar. Particularly when the effect on the industry's narrow cash flows (see discussion at pages 2 and 20-21 above) is considered, losses of this magnitude would be devastating to the industry. Such losses would reverse much of the progress made in recent years and interdict the flow of capital into the business.

²² Messrs. Rockey and Klick estimate that the railroads would suffer an even greater revenue loss if the Board were to adopt the proposals put forward by the shippers in this proceeding.

A. Pro Forma Effects of Revenue Loss

The *pro forma* effects of a revenue loss of \$1.5 to \$2.4 billion on the successive elements which comprise cash flow of the industry would be as follows:

TABLE VII

*PRO FORMA EFFECTS OF REVENUE LOSS*²³

	1995 Actual (000,000)	Reduction (000,000)		% Reduction	
		Low	High	Low	High
Gross Revenue	\$32,279.5	-\$1,500.0	-\$2,400.0	-4.6%	-7.4%
Net Revenue From Railway Operations	\$6,124.9	-\$1,500.0	-\$2,400.0	-24.5%	-39.2%
EBITD	\$8,829.6	-\$1,500.0	-\$2,400.0	-17.0%	-27.2%
Free Operating Cash Flow	\$3,110.1	-\$1,500.0	-\$2,400.0	-48.2%	-77.2%
Net Income	\$3,503.0	-\$937.5	-\$1,500.0	-26.8%	-42.8%
Cash Flow From Rail Operations	\$930.0	-\$937.5	-\$1,500.0	-100.8%	-161.3%

As can be seen in Table VII, while the losses reduce gross revenue by 4.6% to 7.4%, the effect on Net Revenue from Railway Operations is a reduction of 24.5% to 39.2%. Even when buffered by the reduction in taxes that would accompany such a loss of revenue, net income would be reduced by an even greater percentage, from 26.8% to 42.8%.

²³ All figures have been adjusted to eliminate special charges. A 37.5% incremental tax rate has been applied in these calculations.

Because 1995 rail revenues were significantly higher than 1994 rail revenues, if Messrs. Rockey and Klick had used 1995 data in their analysis, they might have arrived at even higher estimates of possible revenue loss. For this reason, my analysis in Table VII may understate the *pro forma* effects of implementing the "intermediate" approach.

The effect of cuts of this magnitude is severe on virtually all measures of financial performance, but their deeply destructive consequence is best illustrated by their impact on the various measures of cash flow. Free operating cash flow (line 9, Table VI) would be cut by 48.2% to 77.2%, to levels that would bring it to \$700 million to \$1.5 billion. The danger in that reduced level is obvious. Fixed charges paid by the rail carriers in 1995 (line 10, Table VI) were just over \$1.0 billion and therefore would have consumed most if not all of the rest of free operating cash flow even before payment of taxes. In fact, with the levels of capital expenditures experienced in 1995, cash flow from rail operations after interest and taxes would have been completely eliminated in 1995 with revenue loss of this magnitude.

B. Effects on Measures of Financial Performance

The first order effects of revenue losses of this magnitude would include the following effects on the measures of financial performance discussed in Part III above.

(1) Operating Ratios

The Class I composite operating ratio, 81.0 in 1995 (before special charges of \$1.74 billion, or 5.4% of gross rail revenue), would increase on a *pro forma* basis by 4.6 to 7.4 points, to a range of 85.6 to 88.4. Such a change in this measure would set the industry back by nine years, to operating ratio levels attained in 1986.

(2) Return on Investment

Return on investment, which was 9.68% without special charges (7.0% after special charges) in 1995, would be reduced to a range of 6.3% to 7.6%, reverting to levels achieved in 1988 (see Table IV). Obviously, with a cost of capital of 11.7%, this relapse by the industry in its earnings capability would cause capital to seek its returns elsewhere.

(3) Return on Equity

Return on equity, 11.7% before special charges in 1995, would be reduced by between 3.2 and 4.8 percentage points, to 6.9% to 8.7% on a *pro forma* basis, in a world where the typical S&P Industrial stock earned a 22% return on equity in 1995.

(4) Cash Flow

Table VI (line 12) shows that in 1995 the Class I rail carriers generated \$930 million in free cash flow (without special charges) after taxes, interest and capital expenditures. As shown in Table VII above, a loss of pre-tax operating income of \$1.5 to \$2.4 billion would reduce cash flow, after tax effects, by between \$937 million and \$1.5 billion per year. Thus, loss of revenues even at the low end of the range discussed by Messrs. Rockey and Klick would completely eliminate the free cash flow the industry produced from rail operations in 1995, leaving nothing from rail operations for dividends, which are critical to the appeal of the common equity stocks in this industry.

(5) Stock Market Performance

Changes of this magnitude would dramatically and negatively affect the standing of the rail industry in the capital markets. Because rail stocks trade to reflect an appropriate multiple of earnings, stock market values could be expected to drop by an amount that would at least correspond to the 26.8% to 42.8% drop in net income. These values could decrease even more as the industry's price-earnings ratio contracted further (from its already discounted levels, see Exhibit M) to reflect this new uncertainty and diminished industry prospects.

C. Effects on the Railroads' Access to Capital and on Rail Industry Investment

If the railroads were to experience the magnitude of revenue loss estimated by Messrs. Rockey and Klick, there would be serious consequences for the rail industry's future. Unless the railroads could find very substantial new sources of cost savings (and those savings could be preserved for the railroads themselves, rather than passed on to customers), the industry's profitability would plunge, as described in the preceding sections. It is unrealistic to expect that such new sources of savings could be found in the face of severe revenue losses. Past cost reductions reflecting one-time savings (such as reductions in crew consists and abandonment of inefficient routes) cannot be repeated. Future cost reductions depend heavily on continuing capital investment that will yield new productivity gains. In short, it cannot be assumed that the revenue losses resulting from new rate regulation will be offset by cost reductions.

In addition to and because of the first order effects described in the previous section, the industry's access to capital to maintain its system would be severely diminished. Once it became apparent that return on investment and return on equity were likely to be at levels below a competitive rate of return on a long-term basis, the job of rail managers would shift to the work of withdrawing capital as quickly as possible so that it could be redeployed to higher-return investments outside the railroad industry or returned to shareholders. This is what occurred prior to the Staggers Act with such companies as Penn Central, and it would happen again if new regulation caused the railroads to be seen -- accurately -- as wasting assets.

Such developments would have a devastating impact on investment in the rail transportation system. Capital expenditures by the industry would have to be reduced.²⁴ As an indication of the magnitude of such potential reductions, capital expenditures were only \$3.6 billion in 1987, when the industry's operating ratio was 87.2 (approximately the level to which a revenue loss of \$2.4 billion could drive the operating ratio on *pro forma* 1995 figures). This is approximately half of the level of capital spending by the industry in 1995.²⁵ With capital expenditures cut so substantially, it is easy to foresee the spiral of reduced service quality, followed by further reduction in freight revenue, which such a reduction would entail. Clearly,

²⁴ Recent improvements in cash flow and returns on invested capital have elicited a sharp increase in levels of capital expenditures. For example, capital expenditure levels increased by 58% in current dollars (38% in constant dollars) just between 1990 and 1995. A reversal of the profitability and cash flow trends would force capital expenditure levels downward.

²⁵ In 1995 dollars, the 1987 level of capital expenditures equates to \$3.9 billion, less than 70% of the 1995 capital expenditure level.

revenue reductions of this magnitude have the potential to inflict catastrophic damage on the railroad industry.

Even apart from the projected impact of a reduction in operating profit of \$1.5 to \$2.4 billion, the mere uncertainty that would result from changing the governing principles for rail rate regulation would lead to an immediate significant reduction in access to capital for the rail industry. Current expectations that railroads will be able to earn a competitive rate of return are based in part on a settled understanding of the current regulatory regime, under which railroads have been largely free to establish rates on the basis of market forces. If the Board imposed new rules involving re-regulation of certain rates, even if years of litigation were required to work out all the details, the uncertainty about the effect on rail revenues and earnings would produce an immediate adverse reaction in the markets. Rail stock analysts' judgments promptly reflect any changes, or even possible changes, that may adversely impact the industry. The result would be to reduce the railroads' access to capital and to increase their costs for the limited capital that would be available to them.

V. CONCLUSION

Since deregulation, the railroad industry has experienced a dramatic transformation. Rail carriers, which legally used to establish prices together in rate bureaus, now compete head-to-head with each other and vigorously with other modes. The rail industry has used all of its ingenuity to keep its market share of ton-miles barely even with levels attained twenty-five years ago. The industry has experienced steadily

falling average unit prices following the Staggers Act. Meanwhile, the costs of inputs used by the rail carriers to conduct their business have continued to rise in line with the rate of inflation.

This phenomenon has required that the rail carriers find extraordinary means to bring their costs down, to close the revenue-cost gap (see Exhibit B), and to improve profitability. Fortunately, the post-Staggers period has seen watershed improvements in productivity triggered by certain distinct and "one-of-a-kind" circumstances:

- (i) The carriers were set free by the Staggers Act to eliminate light-density routes, and through sales to short lines and other means they have reduced their route miles by 27% since 1983. While critical to the rail carriers' improvements, this source of productivity gain is not likely to be repeated on any semblance of this scale in the future.
- (ii) The results of PEB 219 for crew consist reductions and other initiatives allowed the rail carriers to reduce their employment levels dramatically. Efforts to improve efficiency will obviously continue, but it is literally impossible to make further reductions on the scale experienced since the Staggers Act.

With the benefit of these productivity improvements and through important capital investment in plant and technology, the rail industry has, in fact, brought its unit costs down very significantly, permitting rail carriers to improve profitability, even as rates have been forced down by the competitive environment.

As a consequence, when compared with the "road behind" -- the industry's woeful financial status of the 1960's and 1970's -- the industry's financial situation now is far better by virtually all measures, such as operating ratio, return on investment and cash flow. These improvements could not have occurred without deregulation, and they have brought the rail industry to a point where the capital markets believe that the prospect exists for earning the cost of capital. Although still not at levels prevailing among typical industrial companies, financial results are better.

Still, further improvement is required. The "road ahead" must allow for returns that will continually direct capital to the railroad industry from the myriad of alternative investment opportunities.

The prospect of revenue reductions of the magnitude that Messrs. Rockey and Klick estimate would flow from the "intermediate" approach, which would reduce net income by between 27% and 42% and virtually eliminate free cash flow from railroad operations, would be deeply threatening to the industry. It is clear that cash flow limitations of such magnitude would require serious curtailments in capital expenditure levels. Diminished investment returns would require managers to redirect any available capital toward other, better earning non-rail alternatives. Such a scenario would threaten all that has been accomplished in the era of deregulation.

ROBERT W. ANESTIS

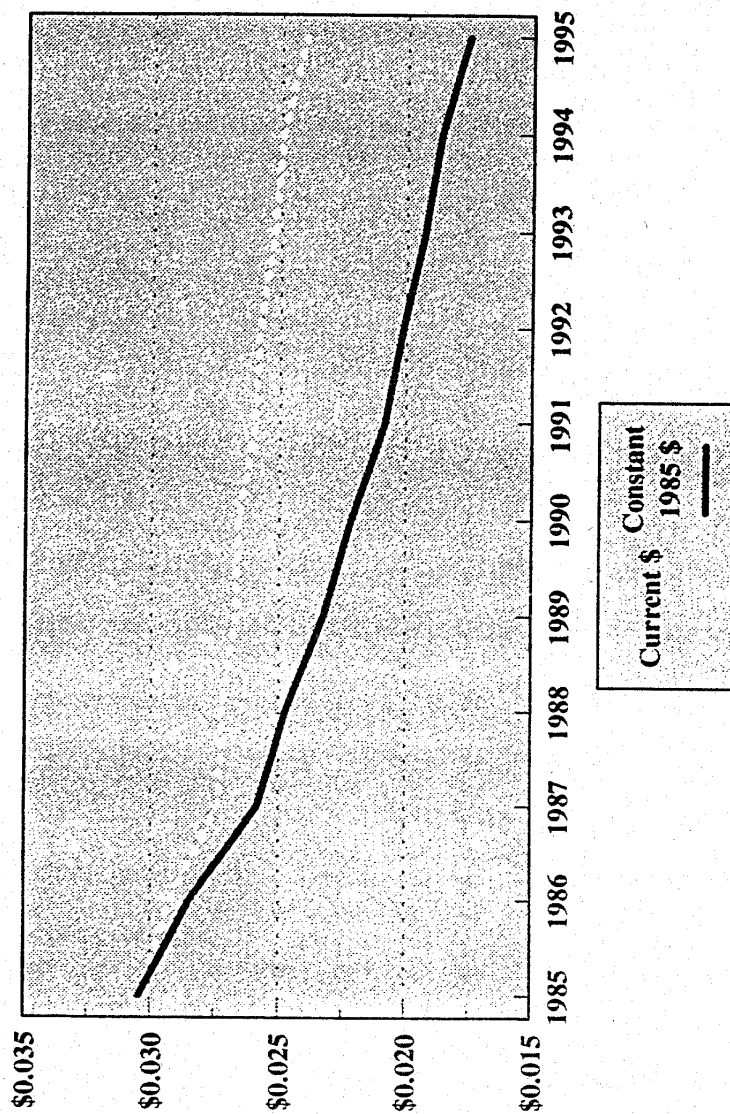
Mr. Anestis is President of Anestis & Company, a Westport, Connecticut based investment banking and financial advisory firm. The firm provides financial advisory services to a group of clients throughout the United States. The firm also has originated and participated as a principal in acquisition and restructuring transactions since its founding in 1986. Mr. Anestis has served on the boards of a number of companies in which he holds investment positions, including Champion Enterprises Inc., Major Realty Corporation, Acceptance Insurance Companies and Vector Distributors, Inc.

The firm has extensive involvement in the railroad industry and has provided advice to nearly all Class I rail carriers in the United States and to the two principal Canadian rail carriers. Anestis & Company acted as financial advisor to and co-investor with the Management Group of CNW in connection with its management-led buyout in 1989. Mr. Anestis has provided economic and financial testimony before nine Presidential Emergency Boards, including Presidential Emergency Board No. 219, which directed significant reductions in crew consists.

Mr. Anestis has been active in the railroad industry for more than fifteen years as an attorney, an executive, a financial advisor and a principal. From 1982 to 1986 he served as Executive Vice President and Chief Planning and Financial Officer and then as President of Guilford Transportation Industries Inc. and as a Director of Guilford and its subsidiary railroads, Maine Central, Boston and Maine and Delaware and Hudson. In that position he was responsible for the financing, negotiation, structuring and clearance through the ICC approval process of a series of acquisitions which created what was then the 16th largest carrier in the U.S. with more than \$300 million in annual revenue. From 1971 to 1982 he practiced law with Kirkpatrick & Lockhart in Pittsburgh, Pennsylvania (becoming a partner in 1977), with a practice centered on acquisitions and mergers.

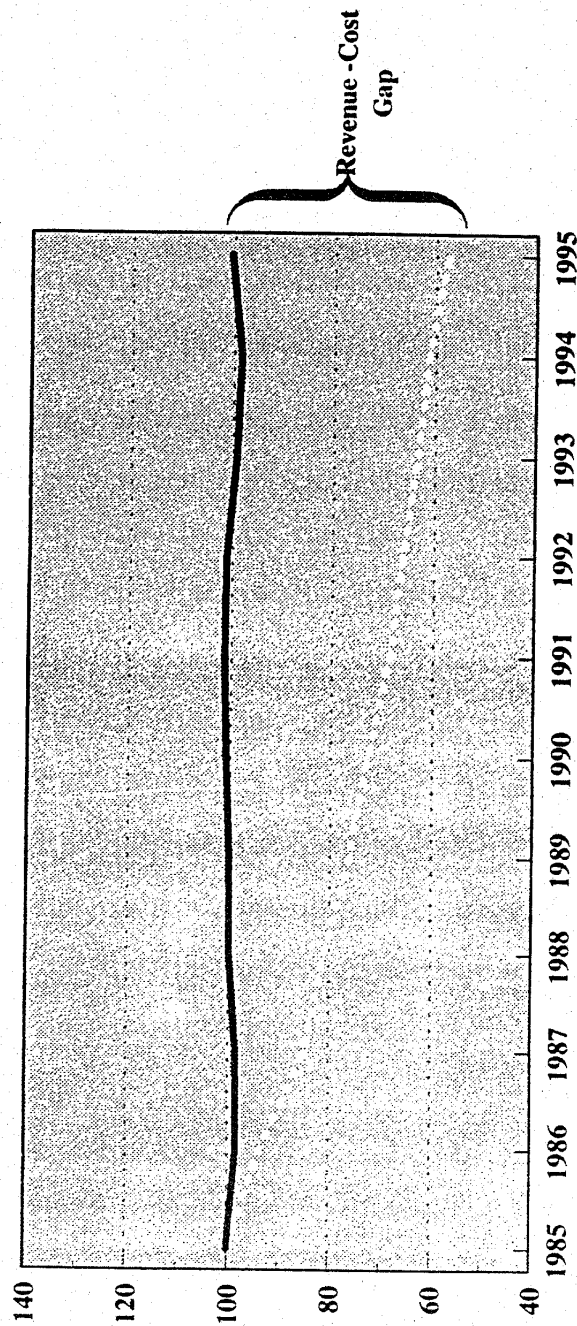
Mr. Anestis received his B.A. degree from Yale University in 1967 and his MBA and J.D. degrees from Harvard University in 1971. He served as a Captain in the U.S. Air Force in 1973 and 1974.

US Class I Railroads -- Revenue Per Ton-Mile (1985-1995)



ANESTIS
Ex. A

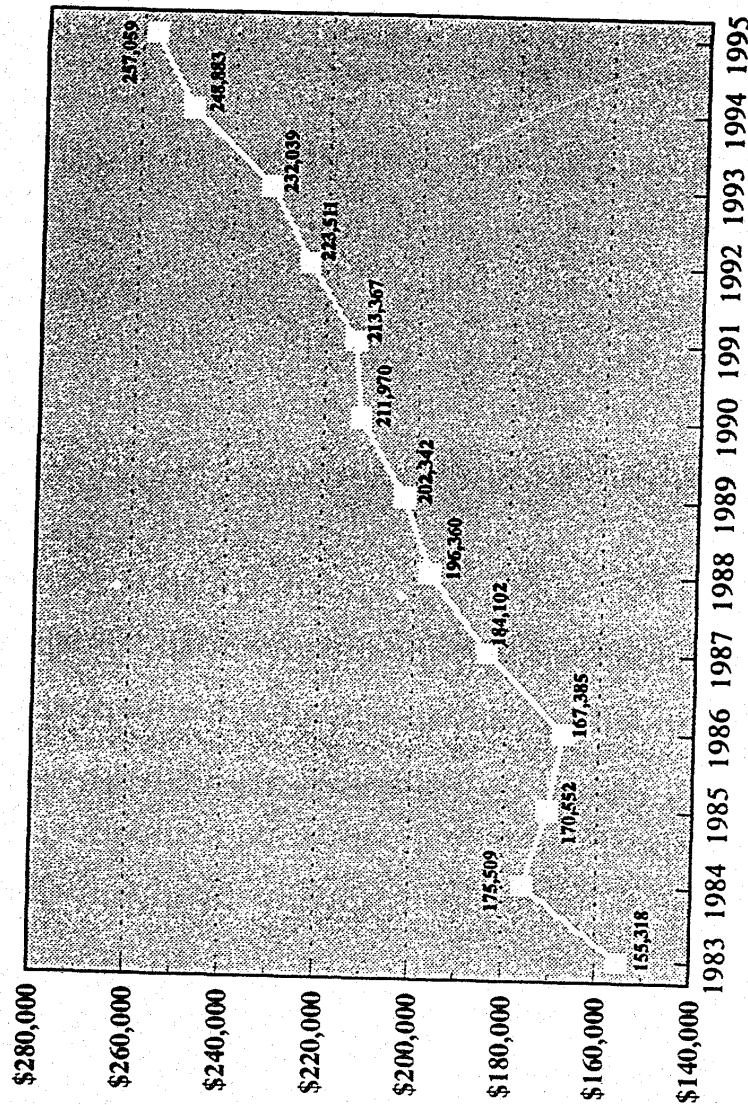
US Class I Railroads Revenue and Cost Trends (1985=100) (1985-1995)



Rail Revenue per Ton-Mile (1985 \$)
Rail Input Costs (1985 \$)

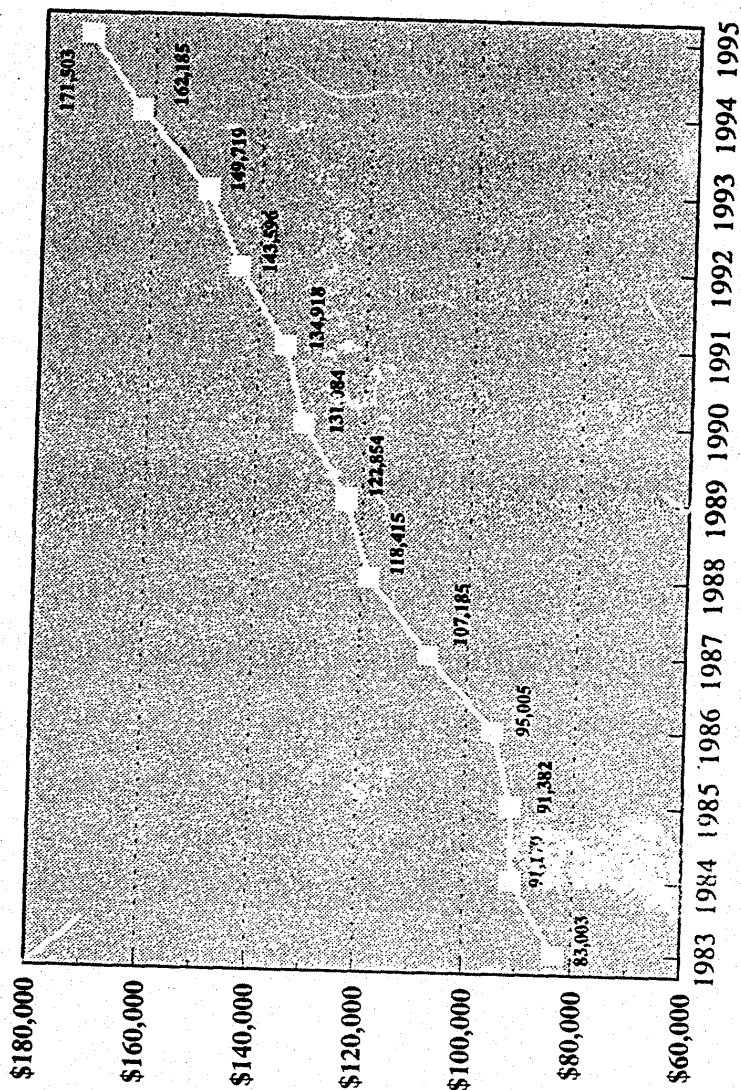
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Ex. B

US Class I Railroads -- Freight Service Revenue Per Route Mile (1983-1995)



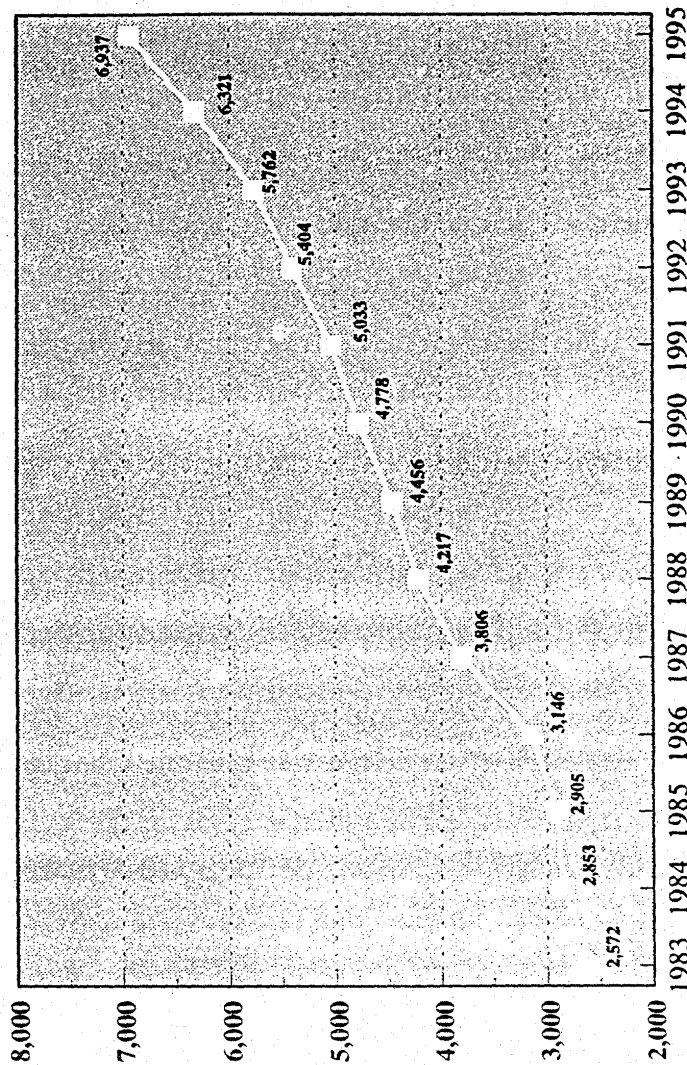
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Ex. C

US Class I Railroads -- Revenue Per Employee (1983-1995)



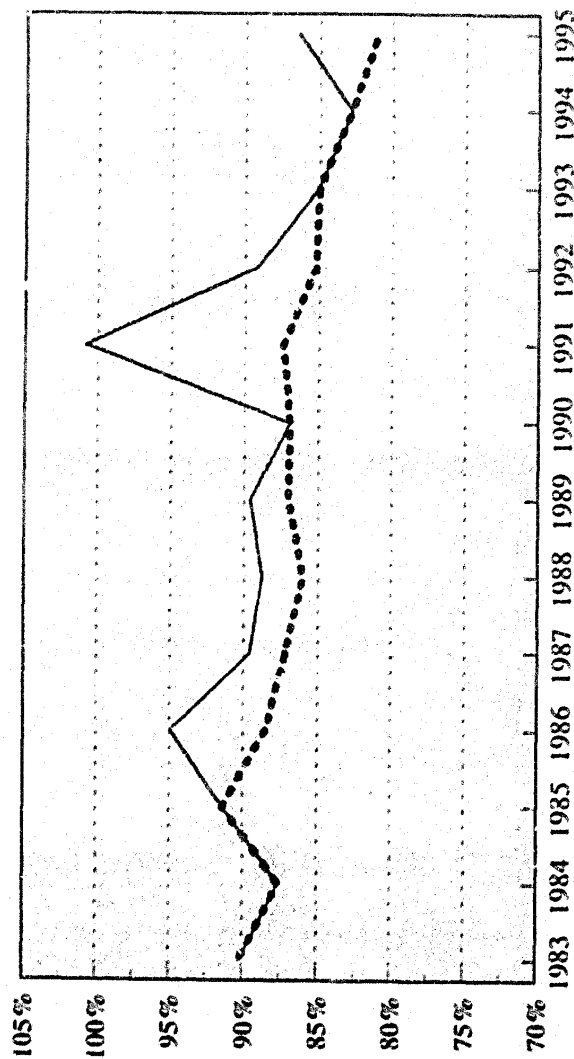
ANESTIS
Ex. D

US Class I Railroads -- Revenue Ton-Miles (000) Per Employee (1983-1995)



ANESTIS
Ex. E

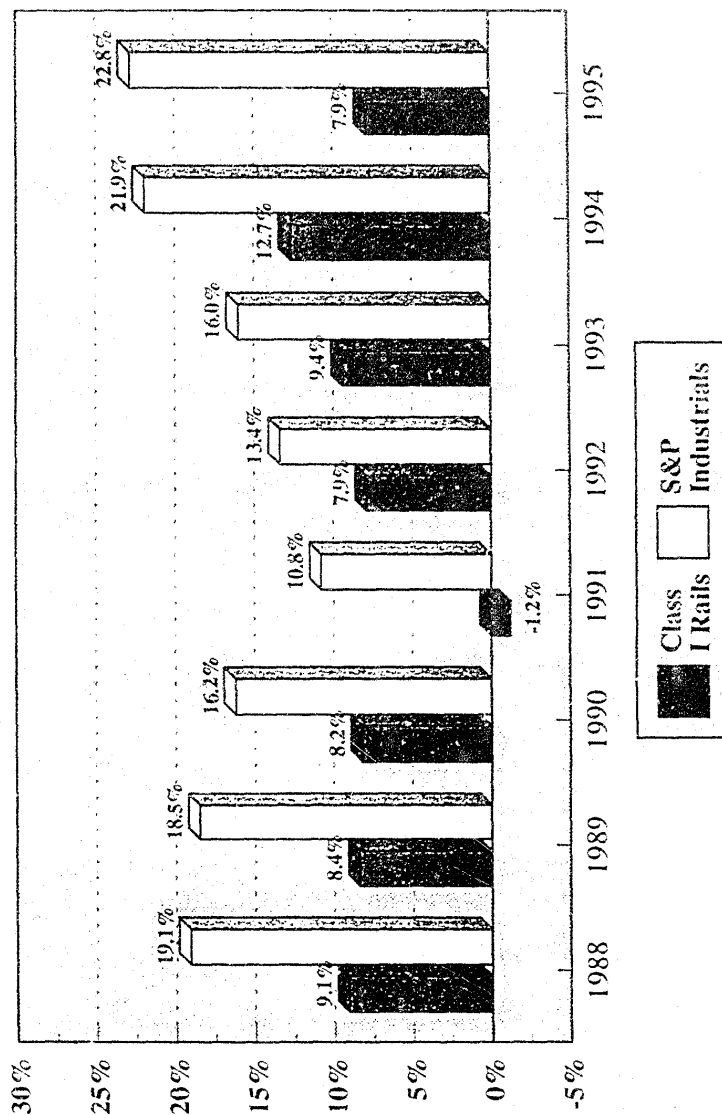
US Class I Railroads -- Operating Ratio (1983 - 1995)



With Special Charges —
Without Special Charges

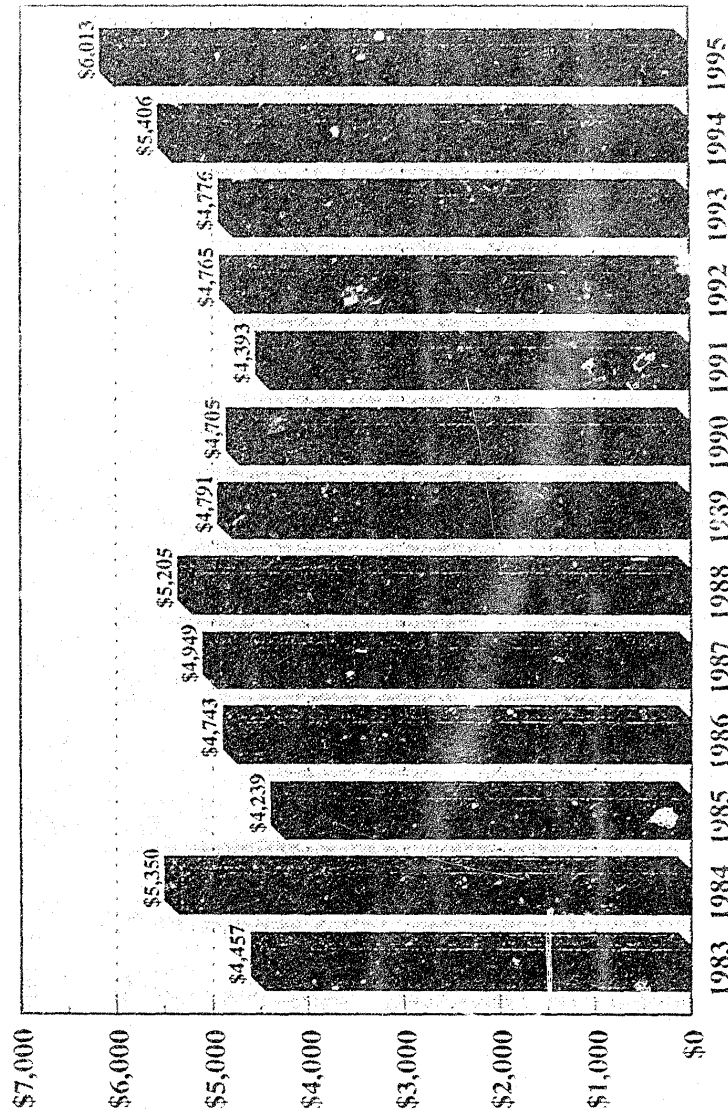
ANESTIS
Ex. F

US Class I Railroads -- Returns on Equity vs. S&P Industrials



ANESTIS
Ex. G

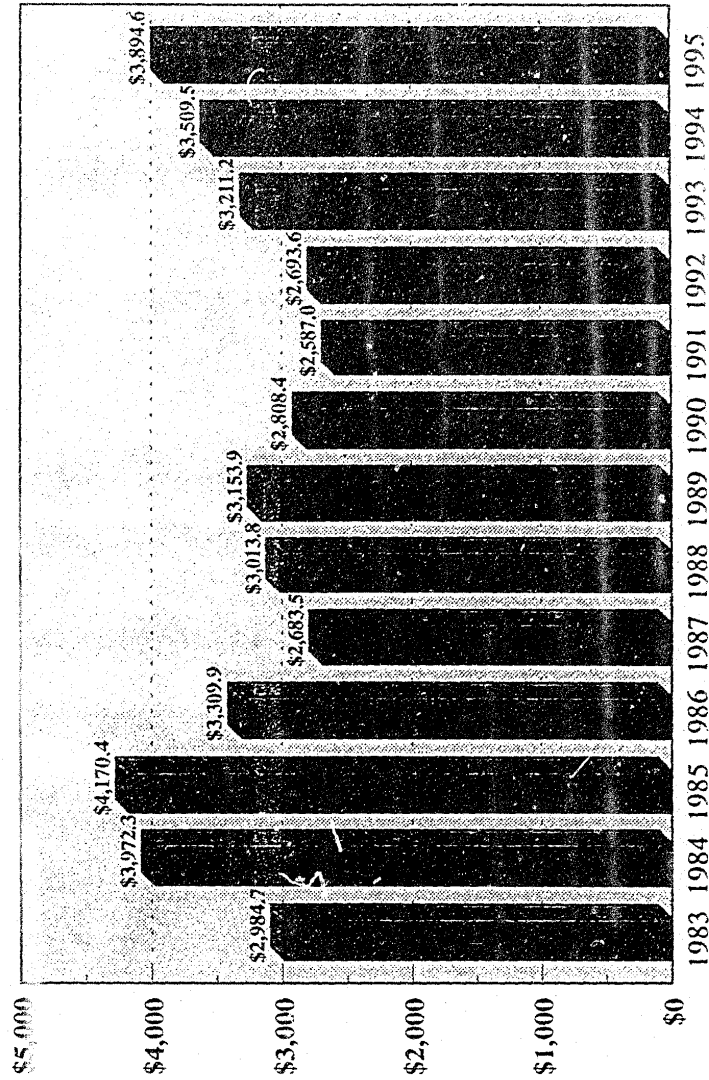
US Class I Railroads -- Total Operating EBITD in 1983 Dollars (000,000)



Special Charges Omitted

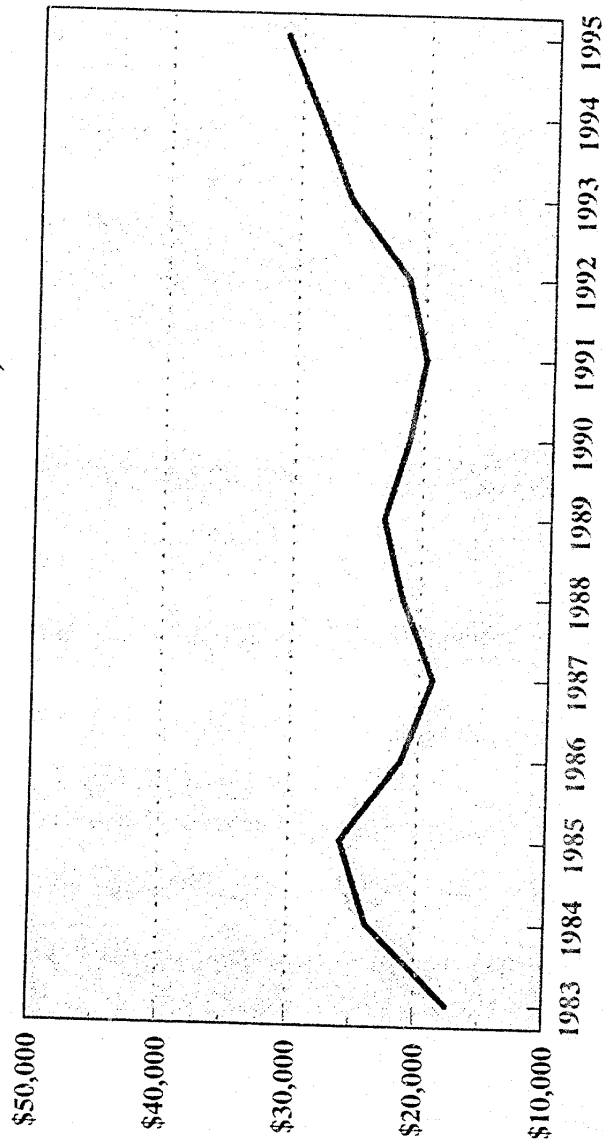
ANESTIS
EX. II

US Class I Railroads --- Capital Expenditures in 1983 Dollars (000,000)



ANESTIS
Ex. I

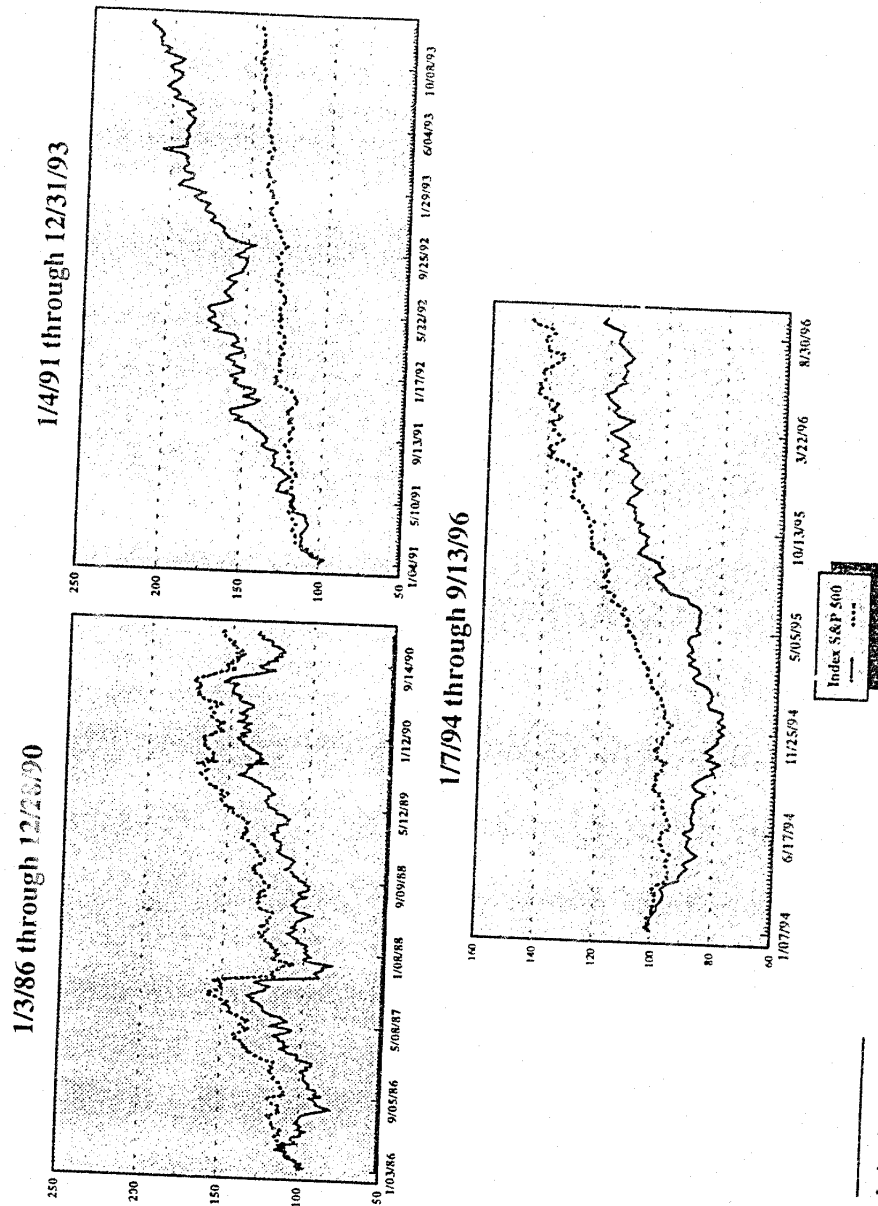
US Class I Railroads -- Capital Expenditures Per Route Mile (1983-1995)



Current \$
Constant 1983 \$

ANESTIS
Ex. J

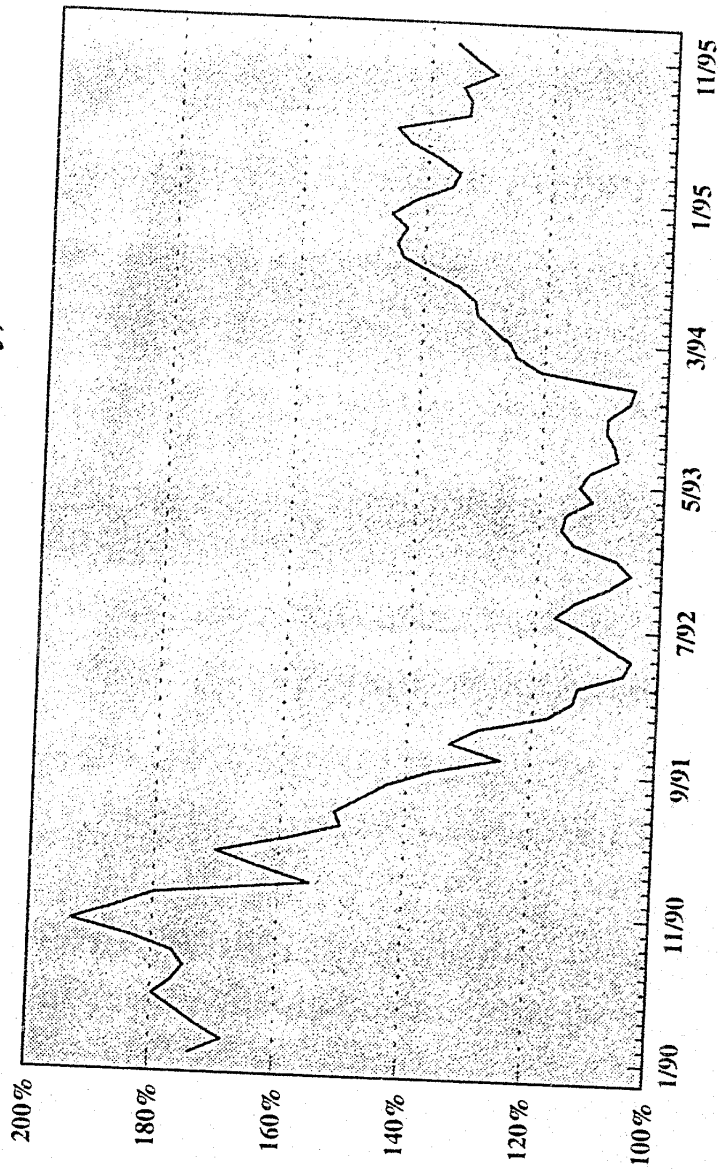
Stock Price History Major Rail Holding Company Index vs. S&P 500 1/3/86 through 9/13/96 (weekly)



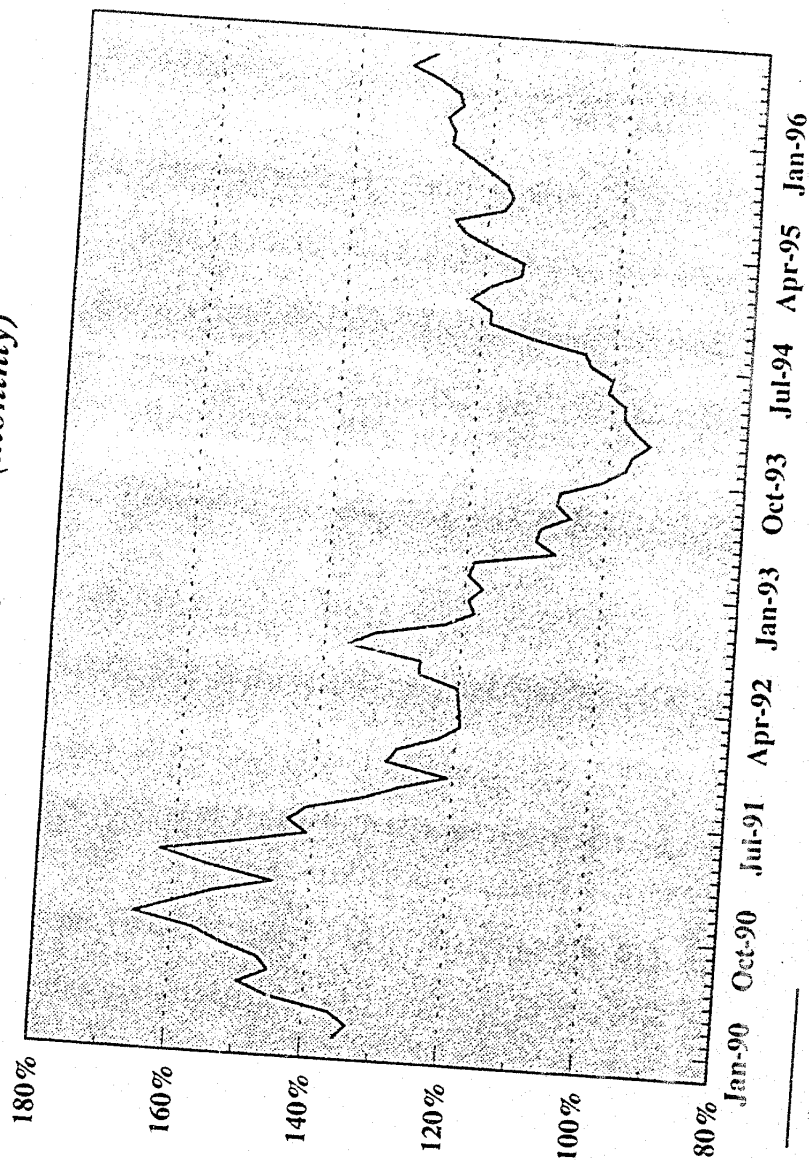
Index includes: Norfolk Southern, CSX, Burlington Northern Santa Fe, Union Pacific and Conrail.

ANESTIS
Ex. K

**S&P 500 Price-to-Book-Value Ratio as Percentage
of S&P Railroads Price-to-Book Value Ratio**
1/90 through 12/95 (monthly)



S&P 500 Price-to-Earnings Ratio as Percentage of Railroad Index Price-to-Earnings Ratio *1/90 through 7/96 (monthly)*

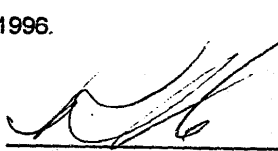


Railroad index includes: Norfolk Southern, CSX, Burlington Northern Santa Fe, Union Pacific and Conrail.

ANESTIS
Ex. M

Verification

I, Robert W. Anestis, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement. Executed on October 14, 1996.



Robert W. Anestis

VERIFIED STATEMENT
OF
WILLIAM J. BAUMOL AND ROBERT D. WILLIG

Our names are William J. Baumol and Robert D. Willig. William J. Baumol is Professor of Economics and Director of the C.V. Starr Center for Applied Economics at New York University and Professor Emeritus at Princeton University. Robert D. Willig is Professor of Economics and Public Affairs at Princeton University, where he teaches in the Economics Department and the economics program at the Woodrow Wilson School of Public and International Affairs. We have previously provided testimony and have written extensively in journals and books on subjects related to the current proceedings. Our qualifications are reported in more detail in Appendix A.

Summary

The proposed modifications of the Board's rules governing maximum rate regulation would seriously undermine the benefits offered by the current system of efficient railroad regulation. Both of the alternative options currently under consideration would halt the progress railroads have been making toward achieving adequate revenues and prevent them from recouping the future investment outlays they will need for maintenance, upgrading and modernization of plant and equipment, as well as expansion of capacity where it will be needed to meet the changing requirements of shippers.

These new proposals appear to be inspired by a pair of suspicions: (1) that railroad earnings on movements that utilize bottleneck facilities have a discomfoting appearance of monopoly returns, and (2) that such earnings violate the valid rule for the

pricing of end-to-end services¹ that forbids those prices to exceed the stand-alone costs of those services. We will demonstrate here that neither of these suspicions has any justification. First, we will show that so long as end-to-end prices do not exceed their stand-alone costs² there can be no monopoly component in the earnings from a movement over a bottleneck. Second, we will show that, in these circumstances, the earnings attributable³ to a bottleneck service⁴ may exceed what could be thought of as the stand-alone cost of the bottleneck but will not exceed what would be required to secure the entry of a stand alone bottleneck entity in an effectively competitive market. This is because, in an industry characterized by substantial fixed and common costs, the very notion of the stand-alone cost of an isolated component of end-to-end service is seriously misleading and, in a sense, meaningless. The only prices that would allow a bottleneck to "stand alone" in conjunction with assets priced to cover their incremental costs⁵ would be prices that covered all the fixed

¹ An end-to-end service is the origin-to-destination service provided by a railroad. It is, for purposes of economic analysis, the railroad's final product.

² The stand-alone cost of a service is the cost that an efficient entrant would have to incur (per unit of output) to supply that service.

³ We say "the earnings attributable to" because the bottleneck service can be part of an integrated end-to-end service provided by one entity and/or a separate service offered in conjunction with non-bottleneck services provided by other entities.

⁴ Bottleneck services are the services of a facility owned by a single firm for which no good substitutes are available and that can be used as the inputs of an end-to-end service by both the bottleneck owner and by its competitors in the supply of end-to-end services.

⁵ The incremental cost of a service is the (per unit) cost, including the incremental capital cost directly imposed on the supplier firm by its provision of the service in question. However, incremental cost never includes any contribution toward the fixed and common costs of the enterprise. That is because a piece of equipment that is needed for each of two services, A and B, would still be required to provide service A even if B were

and common costs of both the bottleneck and the other assets required to provide the service in question. Pricing that covers the overall costs of end-to-end movements also encourages carriers voluntarily to enter into arrangements that utilize the most efficient routes and that promote the efficiency in rail operations that is the hallmark of effective competition. Nothing in the ongoing process of reforming the regulation of electric utilities and telecommunication companies contradicts this analysis.

The basic misconception that seems to underlie the alternative rules under consideration for the pricing of bottleneck services is a false analogy -- the idea that if a stand-alone ceiling is appropriate for end-to-end service, it must be appropriate for bottleneck services as well. This may rest on the notion that if a bottleneck service is priced above its stand-alone cost then it will, by definition, be profitable for an efficient rival to enter and offer competing bottleneck services at the same price or one that is slightly lower. But this is a total misunderstanding. The bottleneck services are clearly worthless to the entrant or to anyone else unless the remaining (competitive) route segments served by the bottleneck remain in operation. But if the price of the end-to-end service overall is below the compensatory level, and the costs directly associated with the bottleneck are covered, it follows beyond any question that the competitive segments cannot be paying their way. The rest of this sad story is obvious. Some or all of the competing providers of non-bottleneck

discontinued or had never been offered. Hence, that equipment is not part of the incremental cost of service B, and it is not part of the corresponding cost of A for exactly the same reason. The incremental cost of a service, which will vary over time and the circumstances under which the service is offered, may be very different from the variable costs measured by the Board's Uniform Railroad Costing System.

services will be driven out of the market. The bottleneck entrant will be threatened with an end to its traffic, and the shippers will suffer along with the insolvent railroads.

Thus, the only viable solution, the only solution consistent with business principles of the free market, is that the railroads *must* be permitted compensatory rates on end-to-end services, including coverage of the fixed and common costs as part of the stand-alone cost of that service. Since any competitive segments of a service could contribute little or nothing above their incremental costs if they had to be priced separately through competition between alternative service providers, the bottleneck segment, if it were priced separately, would have to make up for the shortfall. So long as the end-to-end service price is not allowed to exceed the stand-alone cost of the service, monopoly profits are impossible. That is the "bottom line" of the analysis showing why the current regulatory arrangement serves not only the interests of the nation in an efficient rail network and the interests of the railroads themselves, but the long-run interest of shippers in keeping rail prices at the lowest levels consistent with viability of the railroads that serve them.

Finally, it should also be emphasized from the very beginning of our analysis that the nation's railroads are business firms, with the responsibilities, problems and needs of other business firms. Their special cost structure does, however, raise problems that many other firms do not face, and that lead to their special pricing requirements. Along with other business firms, they and the general public will benefit from as much freedom from regulation as can reasonably be allowed, given their circumstances and the requirements of the public interest.

Introduction

For almost twenty years, we, as well as dozens of other economists,⁶ have been advocating certain basic rules of economic efficiency that we believe should govern regulation of the railroads and other industries in order to serve the public interest. After passage of the Staggers Rail Act of 1980, this Board's predecessor agency, the Interstate Commerce Commission, adopted rules founded on those economic principles, including its rules for measurement of adequacy of revenues, its competitive access rules, and its rules for the regulation of maximum reasonable rates, Constrained Market Pricing (CMP).

Approximately a decade has passed since the ICC completed its basic determination of these rules of efficient pricing for railroads. Quite appropriately, this Board has decided to review those guidelines. The Board has referred to two possible alternatives to the current rules governing the rates that are to be charged for services to or from points exclusively served by one railroad. One alternative would permit shippers to require railroads to interchange traffic at the point nearest the exclusively-served origin or destination and to receive a rate for that part of the through movement that covered only the purported stand-alone cost of the bottleneck service. The other would maintain the current practice of allowing rates to be set on an end-to-end basis but change the rules governing the standard of maximum reasonableness to limit the end-to-end rate to the sum of the purported stand-alone cost of the bottleneck service and an actual or imputed "competitive" rate for the non-

⁶ See, e.g., Ex Parte No. 393 (Sub-No. 1), Standards For Railroad Revenue Adequacy, Economists' Statement in Support of the Staggers Act, attached as Appendix A to Joint Verified Statement of William J. Baumol and Robert D. Willig filed August 4, 1986 on behalf of the AAR.

bottleneck portion of the move. The question posed by both of these proposals is whether it still makes sense to allow railroads to charge rates that cover up to the full economic costs of efficient movements, or whether, in response to shipper requests, full cost recovery should be allowed for only the bottleneck portion of the moves.

With any set of regulatory rules, it is surely desirable to reconsider their performance from time to time and to examine whether some improvement in the arrangements is desirable. In the case of this critical issue, we are confident that it will be found that the proposals identified by the Board are not justified, and, indeed, would be damaging to the long-run interests of the general public, the railroads, and even those shippers who may believe their interest lies in such a change in the rules.

The fact is that, since the Board's efficient pricing rules in question were adopted, railroad service has demonstrably improved. From the deteriorating core rail network of the 1970s, parts of which were near collapse, there has been a dramatic improvement and a transformation into an efficient and effective system for rail transportation of the nation's freight. After correction for inflation, average freight rates have declined dramatically -- by over 50 percent. Simultaneously, productivity has increased dramatically. For example, since 1983 railroad output per employee (measured in revenue ton-miles) has increased 170 percent. While railroad earnings are not yet adequate, they have moved toward that standard. The additional revenues have allowed the railroads to increase their capital investment. The railroads' annual capital investment has almost doubled since 1983. See Verified Statement of Robert W. Anestis. The Board's efficient pricing rules deserve a significant part of the credit, having contributed by offering the

appropriate incentives, and replacing forms of regulation that systematically stultified the industry.

The beneficial role of the Board's rules has not been fortuitous. They were carefully designed on the basis of rigorous analysis, in accord with the competitive market guidelines for economic regulation and the principles for public-interest pricing. That is, the rules were carefully designed to replicate the behavior and outcomes that would occur in a competitive market and satisfy necessary conditions for economic efficiency.

By contrast, the outcome sought by the shippers who advocate the abandonment of these rules would not be the same as a competitive market would bring. They seek to use regulation to limit the rates railroads may charge to levels well below those that would occur in a competitive market. They ask the Board to limit the rates charged on "bottleneck" segments and to force the railroads to set what they term "competitive" rates on "non-bottleneck" segments.

Such rates cannot sustain these "non-bottleneck" segments, which make up much of the rail system and are indispensable parts of the overall railroad network. Consequently, such rates would not occur in competitive markets except in an industry destined for early termination by lack of need for its products or services. In competitive markets, to the extent demand permits, rates allow firms to remain in operation, yet can rise no higher than the stand-alone cost of providing the final product, here, origin-to-destination rail service. If rates are not free to rise to this level, firms characterized by substantial fixed and common costs will not enter those markets because they can never hope to recover their cost of entry, and firms already in the markets will exit as quickly as they can. On the other

hand, if rates were to rise above that level, firms would face new entrants whose prices would descend to the level just sufficient to cover the cost of entry. This competitive-market result is also attained under the present structure of rate regulation. The proposed changes in that structure would preclude the results that competitive markets achieve and would dramatically circumscribe the provision of efficient railroad service.

How, then, can the competitive outcome be retained?

As we have consistently emphasized here and before other agencies, we must begin by recognizing that there is, by definition, no intramodal competition over the bottleneck. By definition, so long as it remains a bottleneck, there cannot possibly be any change in bottleneck pricing that can increase competition in the bottleneck arena. The pertinent question is how competition can best be promoted beyond the bottleneck. The answer, widely espoused by economists and long accepted by this Board, is to ensure that the bottleneck carrier does not price to foreclose efficient routings. Again, this is carried out by the Board's current competitive pricing rules, while the proposed changes now before the Board would have the effect of undermining, rather than promoting, competition by precluding the efficient portions of the rail network from earning adequate revenues.

For these reasons, there is nothing to be gained and much to be lost from the proposed changes in the Board's rules. Under the current rules, we have seen the most dramatic improvement in a regulated industry's performance since modern economic regulation began more than a century ago. The proposed changes promise only to stifle the ongoing process of improvement and turn the clock back to an earlier era of poor service, disinvestment, and inadequate competition.

We urge the Board to reject these proposals.

I. The Basic Requirements for Proper Regulation of Railroad Pricing

The Board's efficient pricing rules are designed to limit the prices of rail services sold in markets in which competition is not strong enough to protect the public interest. The rules are therefore designed to serve as a substitute for the forces of competition and to replicate the results of competition as closely as possible.

That is, the rules constrain the regulated firm to behave as it would if it were, contrary to the facts, operating in an effectively competitive market. However, they also leave the regulated firms with all of the freedom of decision making that would be available to them in an effectively competitive market. The rules follow the competitive market standard because the workings of competitive markets serve to protect fully the interests of consumers as well as the legitimate interests of rival firms.

The regulation of the pricing of bottleneck services should be in accord with the principles underlying these rules; in particular:

- No price for an end-to-end service is to exceed the corresponding stand-alone cost.
- The price for bottleneck services (where they are separately priced) is to be set so as not to foreclose the use of the most efficient route for the end-to-end service.

We will show that consistency with these principles requires that the price for bottleneck services (where they are separately priced) not preclude the ability of the network to recover its forward-looking efficient costs.

In competitive markets, prices for final-products (in the railroads' case, end-to-end services) will at times be as high or almost as high as stand-alone cost, but they cannot exceed that level because at any higher price, by definition, entry by another firm will become profitable and entry will therefore occur, driving prices back down to the competitive range. Thus, under regulation, end-to-end railroad services must supply no monopoly rents to the railroad or railroads providing the service. By monopoly rents we mean long run profits that are higher than the normal profits that a firm would earn in a competitive market. Competitive markets, however, when demand is sufficient, will permit prices to rise to stand-alone cost.

Regulation must allow the same result; to do otherwise would be to prevent survival of the end-to-end service and, before its demise, to condemn the service to deterioration of plant and equipment and markedly inefficient operation. That would seriously damage the efficiency of the economy and even the long-run welfare of the complaining shippers by depriving them of the means of transportation that patently best serves their needs.

Regulation must also ensure that the bottleneck operator does not use its position to foreclose the ability of consumers to choose the efficient service provider beyond the bottleneck. Since bottleneck services can be used both by the bottleneck owner and by its competitors, the bottleneck owner must leave a level playing field in which competitive success depends on the relative efficiency of the rival routes.

While the logic of these requirements is virtually self evident, they have in the past been subject to misapplication -- both by those who may not fully understand the

implications of the logic and by those who seek their own particular and short term advantages at the expense of the public interest. Most critically, there appears to be confusion about two issues: first, which price -- the price for the bottleneck services or the price for the end-to-end service of which the bottleneck is a part -- is the proper subject of regulation and what is the maximum allowable level of that price; and, second, how to ensure a level playing field for competition between routes that utilize the bottleneck. We explore these concepts below and conclude, first, that, in the railroad industry, the proper subject of regulation is the price of a complete end-to-end service, which should be permitted to rise to the stand-alone cost of the end-to-end service, and no higher. Second, we conclude that the best assurance of sustainable competition remains regulation which ensures that bottleneck owners have every incentive voluntarily to enter into relationships with their connections that ensure the use of the most efficient route that requires the use of the bottleneck.

II. The First Specific Requirement for the Regulation of Pricing for Bottleneck Services: Regulation Should Permit Prices To Cover All of The Costs of Efficient End-to-End Services.

A. The Public-Interest In Sustaining Efficient Railroad Services Requires that Maximum Price Regulation Be Limited to Prices for End-to-End Services

The most tempting misapplication of the basic rules governing railroad price regulation is the notion that the pricing rule appropriate for the pricing of final products should be applied to the pricing of bottleneck services. In particular, it is tempting to argue that because the revenues from end-to-end services should not be permitted to exceed their stand-alone costs, the same should be required for the revenues attributable to bottleneck

services. A little consideration of the matter shows that this conclusion is entirely indefensible.

One reason is that such a rule would preclude financial viability of the services in question and the railroads themselves. Let us review why this must be so, that is, why neither the end-to-end services nor the railroads can survive financially if the price of bottleneck services covers only the cost of replacement of the bottleneck facility. Here it is helpful to think of the inputs of an end-to-end service as having three parts: (1) the competitive facilities that are incremental to the service; (2) the fixed and common facilities and (3) the bottleneck facilities. For example, the track of a railroad is largely a fixed and common cost serving simultaneously the many types of freight the railroad carries, and is not part of the incremental cost of any of them. It is clear that such fixed and common costs constitute a substantial share of rail outlays.

As is well known, with vigorous competition in the non-bottleneck portion of an end-to-end railroad service, market forces can be relied upon to drive the prices of that portion of the rail service toward incremental cost. If the revenues attributable to the related bottleneck services are not permitted to cover more than the purported stand-alone costs of the bottleneck(s), it follows inexorably that there would be no source from which to recoup any of the very substantial fixed and common costs of the end-to-end movement. There can be no simpler recipe for rail insolvency and financial disaster.

Bottleneck Services In Effectively Competitive Markets

We know how the market mechanism handles such a problem. Suppose that we are dealing with a totally unregulated industry with cost characteristics similar to those just described, but with absolutely no cost or other impediments to rapid entry and exit. Such an industry is said to be *contestable*. In our example, there is a bottleneck and a competitive input, but the monopoly owner of the bottleneck is forced to operate like a competitor by the constant threat of entry -- the threat that if price is too high a rival supplier of bottleneck services will enter and take away the business.

Now assume first, that as a consequence of actual and potential competition, none of any firm's activities is compensated sufficiently to cover more than (a) the incremental costs of some portions of its operation and (b) the purported stand-alone costs of a few other portions. With little or nothing left over to cover the fixed and common costs of their services, some of the firms will inevitably be driven out of the field, and no firm will have any incentive to enter. Eventually, there will be one or a few firms left in the field, and the price of the final product will move to a level just sufficient to cover all costs, both incremental and fixed and common. If the competitive services remain competitive and continue to cover no more than their incremental costs, as one expects in effectively competitive markets, then the price for the bottleneck services will have to cover fully both the costs of the supply of the bottleneck services and the fixed and common costs. That must be so, because in this competitive scenario there is no other source of the needed revenues.

This, then, is how one expects prices to be set in industries whose competitiveness is ensured by perfect freedom of exit and entry, but which have fixed and

common costs of any substantial amount. Prices will equal the stand-alone cost of the final product. If bottleneck and competitive services are priced separately, the prices for the bottleneck and competitive services will in total cover all fixed and common costs of the final product.

Universally recognized economic analysis shows that exactly the same outcome must emerge where the industry's operations are characterized by significant economies of scale or density, because, in any such case, if each element of a firm's activity receives revenues no higher than its incremental cost, the total revenue of the firm must always be insufficient to cover its total cost. Therefore, in any such case, the competitive market forces will always lead to final-product prices that cover more than the sum of incremental costs and that do cover total costs, with bottleneck services covering the difference. However, because of the constant possibility of entry, no individual final product of any firm will be able to sell at a price that exceeds its stand-alone cost, thereby ensuring that the firm earns no monopoly profit on any one or any combination of its products.

**The Unavailability of Stand-Alone Bottleneck Services As
A Part of Under-Compensated End-to-End Services**

It is tempting to ask why it is that, if the revenue attributable to the stand-alone bottleneck service covers the stand-alone cost of the bottleneck service, no firm will enter to provide just the bottleneck service. This scenario invites a serious misunderstanding particularly threatening to rationality in rate regulation. The reason that no firm will enter the bottleneck service is because the bottleneck provider cannot survive without the availability of a supply of the remaining components of end-to-end service. Otherwise, who will want to buy any bottleneck service? Viability of the supply of remaining components

can be ensured only if the end-to-end service covers all of its fixed and common costs: those of the bottleneck; those in common with the other links of the production chain if the final product is to be produced; and those of the other links. A firm will not enter as a segment provider unless the final product is paying enough to cover all these costs; otherwise, in a perfectly contestable market, it can expect the exit of the other firms in the joint production chain and the failure of its investment in the ostensibly- profitable bottleneck segment.

"Stand-Alone Cost" Is Not The Competitive Entry Price For A Railroad Bottleneck Component Of End-to-End Rail Services

The preceding discussion has another, rather startling implication. It shows that, in general, what might be thought of as the stand-alone cost of a bottleneck portion of an end-to-end route is not the entry price for a bottleneck railroad. Here it should be recalled that the practical purpose of the concept is to determine the price at which it will pay an efficient entrant to come in and compete in the supply of the item in question. However, we have just seen that whether it will pay the entrant to do so depends, in the last analysis, not on the price at which the entrant firm chooses to offer the bottleneck service, but on the price of the final product (the end-to-end transport) upon which the demand for the bottleneck component depends. If the end-to-end price reduces demand or makes it unprofitable to supply the remaining inputs that are needed to provide the final product there may not exist any bottleneck price that permits profitable entry. That is, what might be thought of as the bottleneck stand-alone cost is not itself the entry price for a bottleneck railroad.

Most important, under the rate regulation rules now under consideration, limiting the price of bottleneck services to their purported stand-alone cost would prevent

compensatory pricing of end-to-end service. Thus, the proposed rules would prevent the bottleneck price from making it profitable to enter into the provision of bottleneck service. In short, only end-to-end service has a stand-alone cost that can rationally be used as a ceiling for railroad rates.

The Case of Interline Railroad Service

The principle we have been discussing, that railroad regulation should be concerned only with the price of the final product (railroad end-to-end service), is readily acceptable where there is only one railroad providing the service. It seems less readily accepted in the case of interline service and, indeed, the proposals before the Board directly attack the idea. But under rational regulation, the same maximum rate rules apply to service by one railroad over a single-line route as apply to service provided by two or more railroads over a joint line route. The reason is that, in competitive markets, the prices of two end products will be the same if their costs are the same no matter whether they are produced by one firm or twenty firms each providing a different part of the end product. There may well be negotiations over the division of that revenue among the joint producers, but there will be no question about the overall end-to-end price. Economic efficiency clearly requires that final product prices reflect their competitive economic costs, not the number of firms among which the production process happens to be divided.

Once a defensible and sustainable rate is set for end-to-end service, the only proper role for regulation to protect consumers is to ensure that the apportionment of that rate between segments of the route is consistent with both efficient routing and the economic survival of the efficient route. As we explain in Part III, the Board's current regulations

provide the proper incentives for the apportionment that results from free bargaining between the interlining railroads to meet both criteria.

B. The Proposals Being Considered By The Board Violate The Railroad End-to-End Service Pricing Principle

The Board has sought comments on two proposed alternatives to its current maximum rate regulations, one offered by the shippers in these cases, and one which the Board has termed an "intermediate approach." Both proposals are inconsistent with the public-interest requirement that pricing of bottleneck services be regulated under the railroad end-to-end pricing rule. In this section we discuss why that is so and discuss the pernicious effects that are likely to be caused by the failure to follow this requirement.

It is obvious that the shippers' proposal would not regulate rates on the basis of the price for the final-product. It is only slightly less obvious that the "intermediate" approach suffers from the same defect.

As we understand the "intermediate" approach, the Board would calculate the maximum rate for a movement by adding together the purported stand-alone cost for the bottleneck portion of a move plus "the cost to the [bottleneck carrier] of purchasing rail service over [the non-bottleneck] portion from a connecting carrier (if there is sufficient evidence as to that cost)." August 27 Decision at 8. Apparently, the Board expects to identify the lowest "competitive" rate offered by, or imputed to, a potential interline partner.⁷

⁷ We have great concerns as to how the Board would apply the "intermediate" approach in those cases where there is no evidence of the "competitive" rate quote from a connecting carrier. Much can be lost for the public interest if the Board were to return to the days of regulation by rate comparisons, an indefensible procedure that has long been

The rate for the non-bottleneck portion will almost certainly be below the stand-alone cost of that segment. As is well understood, where there are two (or more) directly competitive routes, rail rates will tend toward incremental cost, which is well below stand-alone cost. The same result occurs where railroads are rivals for a non-bottleneck segment of a move; the rate "offered" by the connecting carrier will approach incremental cost. This can occur not only where the connecting carrier is a direct rival, offering an alternative route from the bottleneck to an endpoint, but also where connecting carrier is an indirect rival, offering a route to an alternative endpoint (for example, a route to a different coal mine).

Thus, like the shippers' proposal, the "intermediate" approach will generally yield results that are inconsistent with revenue adequacy. Under both, the shipper will pay for end-to-end service a rate equal to the purported "stand-alone cost" for the bottleneck portion and a rate approaching incremental cost for the non-bottleneck portion.⁸ Either

disavowed by the Board. We have described the pernicious effects of rate comparisons elsewhere. See, e.g., Ex Parte No. 347 (Sub.-No. 2), Rate Guidelines -- Non-Coal Proceedings, Joint Verified Statement of William J. Baumol and Robert D. Willig filed July 31, 1987 on behalf of the AAR; Docket No. 37809, McCarty Farms, Inc. v. Burlington Northern R.R., Joint Verified Statement of William J. Baumol and Robert D. Willig filed August 7, 1987 on behalf of Burlington Northern Railroad; Docket No. 38239S, Amstar Corp. v. Alabama Great Southern R.R., Statement of Robert D. Willig filed July 28, 1988 on behalf of the defendant railroads; Docket Nos. 38302S and 38376S, United States Department of Energy and United States Department of Defense v. Baltimore & Ohio R.R., Statement of William J. Baumol, filed July 8, 1991 on behalf of the defendant railroads.

⁸ The intermediate proposal would set a regulatory floor at 180 percent of variable costs. Insofar as that ratio also operated as a ceiling, it would, like any constraint based on variable cost, be economically arbitrary and threatening to revenue adequacy.

proposal violates the railroad final-product pricing rule, the competitive market model standard, and the public's interest in the continuing viability of the railroads.

Before we discuss the effects of constraining rates in this fashion, we feel obliged to correct a misimpression about the proposed "intermediate" approach. It may be thought that this approach is simply a different but valid use of the Board's stand-alone cost test. But such use of the rate offered by a connecting carrier over a non-bottleneck segment yields an erroneous calculation of stand-alone cost.

Stand-alone cost is the cost that a new entrant would have to incur if it were to offer the service in question. This cost must be calculated over the lives of the assets, for it is only if an entrant can expect to cover its lifetime costs that it will, indeed, decide to offer the service.

While it is correct to conclude that where it is more efficient to do so, the stand-alone carrier (the bottleneck carrier) will choose to purchase the remainder of service from a connecting carrier rather than build the line itself, in calculating stand-alone cost, the cost of purchasing the service must be calculated over the lives of the assets. It will do our hypothetical entrant stand-alone carrier no good if the price of the connecting carrier's services today is low enough to permit the entrant to recover part of its investment, but the price of those purchased services will rise so much in the future that further recovery of investment will be impossible. In that case, contrary to the implicit assumption, it would not be more efficient to purchase the service rather than to duplicate the facilities itself. It will also do our stand-alone railroad no good if the connecting carrier ceases operating altogether because it earns insufficient revenues.

Thus, entry into the bottleneck segment of a route may temporarily appear to make sense if competition forces the rates of the connecting carrier down to incremental cost. But with rates equal only to incremental costs, a railroad cannot earn sufficient revenues to cover its costs of operating the non-bottleneck part of the line. The connecting carrier will be forced to close down or be forced to charge rates that, together with the earnings of the bottleneck owner are, sufficient to cover the stand-alone costs of the entire route. Thus, when stand-alone costs are correctly calculated, we arrive back at stand-alone cost for the service as a whole, not those for an isolated segment.

C. Regulation That Ignored the Railroad End-To-End Pricing Rule Would Have an Immediate and Continuing Substantial Adverse Effect on the Quantity and Quality of Railroad Services.

The two proposals being considered by the Board would have a dramatic adverse effect on the quantity and quality of railroad services. The reasons are brought out by a simple illustration. Assume that a railroad operates a mainline that currently does not quite earn adequate revenues, so that if new revenue sources are not found, the line will deteriorate and eventually will cease operation. One day, a new shipper appears whose demand for rail service is very high, and who could contribute to the common costs of the mainline. To serve this shipper, however, the railroad must build a 10-mile branch line, which will connect with its mainline at the same point as a rival railroad connects with the mainline. If the railroad does build the branch line, the two alternative proposals would allow the railroad to earn the stand-alone cost of the branch line but no more. The rate the railroad could charge for the non-bottleneck portion of the movement would be limited to the rate being offered by its rival, which will equal the mainline's incremental costs. The

railroad would not be permitted to charge a rate that would contribute one dollar to the common costs of its mainline, even though it is clearly appropriate for the shipper to make the contribution, and the shipper is willing to do so rather than forgo the service. With its rates so restricted, the railroad will not build the branch line to serve the shipper (unless it can predict with sufficient certainty that in the long run it can obtain the stand-alone-cost of the two segments together). For the same reasons, the rival railroad cannot be expected to build the branch line either. Thus, although it desires service, and although it is willing to pay for service, the new shipper may well never receive it.

More generally, if railroads are not permitted to charge rates that help pay for the common costs of their non-bottleneck lines, they cannot earn revenues adequate to attract capital. Without capital, efficiencies will not be obtained or continued, variable costs will increase, and the railroads will be forced to raise their rates to low-demand shippers to cover variable costs. Those shippers who cannot afford those rates, will leave the railroad, leaving the fixed and sunk costs to be borne by the remaining shippers who, presumably, are paying as much as they can already. As revenues decline, so will service, thus driving away more shippers. Less and lower quality rail service will result; in extreme cases, lines that could have been sustained will be abandoned, and shippers near those lines will lose service altogether.

Of course, this will not last forever. At some point, where there are today two rival lines, there will be only one. At that point, both market forces and the Board's regulations will permit the remaining railroad to set its rate at stand-alone cost (it will now constitute a bottleneck line), and it will attempt to bring back service to the levels it once

enjoyed. If the line has not deteriorated too badly, and if enough shippers have not closed their facilities, that may be possible. In any event, the shippers on the other line will have lost their service forever.

It is not clear that it will be possible to bring the line back. Rail systems are not neatly divided into bottleneck and non-bottleneck lines. What is a bottleneck line for one shipper may be a non-bottleneck for another. If rates are forced lower by regulation, inadequate revenues on the "non-bottleneck" segment of Shipper A's route may force it to be closed, thus also closing the bottleneck segment of Shipper B's route. The loss of those revenues may force Shipper C's route to be closed, and so forth. The railroads are a network and are operated as a network. When the railroads' profits as a whole decrease, investors will, therefore, not continue to invest in those bottleneck segments that can remain viable. Rather, they will cease investing in the railroads, because they will find safer and better returns on their investments elsewhere.

III. Competitively-Neutral Pricing of Bottleneck Services is Always Possible and Voluntary Negotiations Among Competing Railroads Will Tend to Yield Such Prices

A second misunderstanding may be invited by the current rules for the pricing of bottleneck services. It may be feared that if the price the bottleneck-owner railroad sets for the use of those services by competing railroads is sufficient to cover the owner's fixed and common costs, then the resulting (supposedly suspiciously high) price will constitute a fatal handicap to the rivals' ability to compete. Since that seems not to be at issue here, we merely note the possible misunderstanding, and point out that it has been dealt with

extensively elsewhere.⁹ Specifically, it has been shown that there exists a price formula (called the *parity pricing* formula) for the bottleneck services supplied to competitors that is compatible with adequacy of revenues of end-to-end services. That price is perfectly neutral competitively, in the sense that it permits the most efficient supplier of the competitive portion of the end-to-end service to underprice any less efficient supplier, and yet cover its costs. Thus, a railroad operating in the non-bottleneck portion of the efficient route will be assured that, so long as prices indicate an investment can rationally be made to sustain service, the investment will be made over whatever portion of the line requires it. If the non-bottleneck carrier has the more efficient route, it will be in the interest of the bottleneck carrier to pay enough to ensure that investments are made in that route. In the absence of ill-advised regulatory interference of the sort that used to be employed before the Staggers Act, the competing railroads will be given the incentive by market forces to arrive at bottleneck-service pricing that is both compensatory and ensures use of the most efficient route.

The price formula and its analysis are summarized in Appendix B.

⁹ See, e.g., Ex Parte No. 445 (Sub-No. 1), Joint Verified Statements of William J. Baumol and Robert D. Willig filed May 31, 1985, July 8, 1985, and July 18, 1985 on behalf of the AAR; Ex Parte No. 347 (Sub.-No. 2), Rate Guidelines -- Non-Coal Proceedings, Joint Verified Statement of William J. Baumol and Robert D. Willig filed October 6, 1986 on behalf of the AAR; Ex Parte No. 346 (Sub-No. 8), Exemption From Regulation -- Boxcar Traffic, Joint Verified Statements of William J. Baumol and Robert D. Willig filed September 9, 1985 and November 8, 1985 on behalf of the Atchison, Topeka & Santa Fe Railway, et al.

IV. The Requirement of End-to-End Pricing in the Railroad Industry is Entirely Consistent With the Progress of Regulatory Reform in the Electric Utility and Telecommunications Industries.

As this Board knows, the state and federal agencies that regulate the electricity and telecommunications industries are considering or have adopted measures to grant "open access" to certain facilities used in those industries. It would be a serious mistake to adopt either of the proposals before the Board on a supposed analogy to "open access" in the electricity or telecommunications industries.

Electricity. The electricity industry may be thought of in three sectors: generation, transmission, and distribution. The Federal Energy Regulatory Commission (FERC) regulates interstate wholesale sales (sales for resale) and interstate transmission, and the states regulate retail sales (sales for ultimate consumption) and distribution. Generation provides the product, and transmission and distribution provide the transportation. Transmission and distribution are said to be bottleneck segments for most customers of delivered power, and generation is increasingly competitive.

It is well known that so-called "open access" requirements were recently imposed by FERC with respect to unbundled transmission for wholesale sales, and that a number of states are considering similar requirements with respect to distribution. Under open access,¹⁰ the transmission or distribution provider must provide nondiscriminatory access to a broad range of eligible users, which generally consist of sellers of electricity.

¹⁰ By "open access," we are referring to the broad elements of the unbundling proposals that FERC adopted with respect to transmission and that may be adapted by various states with respect to distribution. We are not by these references arguing one way or the other as to the merits of such actions.

Sellers may be either generators or power marketers (the latter buy and resell, but do not generate, electricity). When the transmission or distribution provider uses its own transmission or distribution for its own electricity sales, it is required to take service under the same cost-based tariff that it offers to other users.

Open access in the electricity industry is not about creating competition in the transportation of electricity, or about reducing rates for transportation, or about enabling sellers of electricity to negotiate separately with various segments of the electricity transportation network. Open access in electricity is intended to foster competition beyond the transportation bottleneck by providing generators and power marketers with nondiscriminatory transportation access, effectively making transmission and distribution owners and operators into common carriers. FERC and many state regulators have concluded that when utilities own both transmission or distribution, on the one hand, and generation on the other, they have strong incentives to discriminate against unaffiliated sellers of electricity. These conclusions about the incentives of integrated utilities reflect the traditional forms of regulation that are applied in the electricity industry.

It should be evident that FERC and other electric utility regulators are striving to put in place a regulatory system with the desirable consequences of the system that is already in place for railroads (which, indeed, have a superior system). Where a delivered product utilizes both bottleneck and competitive segments, as is often true in both railroads and electricity, the proper goals of regulation are to ensure that: end-users do not pay too much for the final product; vertically integrated owners of bottleneck segments and owners of efficient competing segments each have the opportunity to recover their efficient fixed and

common costs; and vertically integrated owners of bottleneck facilities have incentives to utilize a competing supplier when doing so is more efficient than utilizing their own facilities in the competitive sector.

The system already in place for railroads accomplishes each of these objectives. Stand-alone cost rate ceilings ensure that shippers do not pay too much for the origin-to-destination railroad service. When demand is adequate, prices can rise to cover efficient fixed and common costs because the Board regulates only the origin-to-destination price, and does not separately regulate the bottleneck segment. And under this system, the bottleneck carrier has the incentive to choose the most efficient route because it is allowed to share in the greater efficiencies of the connecting railroad. Thus, the system of regulation already in place for railroads ensures efficient competition beyond the bottleneck, which is precisely what FERC and state regulators are now struggling to bring about in the electricity industry.

The rail system that we have just described not only already has all of the good features that electricity regulators are seeking through open access; it is, in fact, superior because it leaves the bottleneck carrier with the incentives that it would have in a competitive market to utilize the most efficient supplier of the competitive segment.¹¹

Since the system already in place for railroads achieves all of the goals of sound public policy where a delivered product requires both a bottleneck and a competitive

¹¹ We have already described the incentives of the bottleneck to use the most efficient route. Owners of electricity transmission or distribution do not have the same incentives because their revenues remain the same no matter which generators use their systems; under cost-based, rate of return regulation they are unable to share in any portion of the greater efficiencies of a more efficient generator, and cannot price efficiently to demand.

component, nothing more can be gained from the proposals of the shippers, and the analogy to open access in the electric utility industry provides no reason to change the present system. In fact, as we now demonstrate, the shipper proposals would cause significant harms in comparison with open access, making the analogy to open access all the more inapt.

As we have emphasized, the shipper proposals would preclude revenue adequacy for railroads that own bottleneck and competitive segments. Open access, by contrast, preserves the opportunity for revenue adequacy for electric utilities, subject to the recovery of so-called "stranded costs," which we discuss below. Open access assumes a demand for transmission and distribution of electricity that will enable owners of such systems to recover their fixed and common costs at averaged (or so-called "fully allocated") rates, and thereby become revenue-adequate, after a transitional period during which stranded costs will be recovered through an additional mechanism. The last thing that proponents of open access want is a failure of transmission and distribution systems to replace, modernize and expand.

Generation, by contrast with transmission and distribution, has been deemed by regulators and economists as not essentially integrated into a particular network, and the most efficient new generation technologies no longer exhibit significant economies of scale, and have few fixed or common costs. Once it has recovered its stranded costs, the vertically integrated utility can, therefore, recover its capital costs for generation from prices at incremental costs in competitive markets, and its capital costs for bottleneck transmission or distribution from regulated rates that cover fixed and common costs.

Notwithstanding this underlying consistency of open access with revenue adequacy, the transition to open access will cause very large amounts of utility investment in generation, as well as various categories of non-commercial costs that were mandated by regulation, to become unrecoverable via competitive prices (the so-called "stranded costs" problem).¹² This fact highlights yet another fundamental difference between open access and the shipper proposals before the Board. FERC and various states have recognized the stranded costs problem, and are working toward its solution. For example, FERC has authorized a mechanism whereby the utility can recover from a departing customer the lost contribution that the utility would have earned from that customer (the "revenues lost" approach), where that customer subsequently receives unbundled transmission services from the utility. The shippers, however, have not even proposed a system for the recovery of prudent costs, or advanced a mechanism for doing so with the competitive neutrality that is so essential for efficiency in the railroad or any other industry. The shippers thus are not proposing the open access system that FERC is trying to create, but a system of expropriation whose analogy in the electricity industry FERC has explicitly disavowed.¹³

¹² Much of prudently incurred utility generation has been insufficiently depreciated under regulation to bring its capital value in line with the lower costs of new generating technologies. The non-commercial costs include the costs of numerous social programs, for example, support of renewable energy sources, conservation programs not justified by the market, R&D, and "lifeline" rates for the poor.

¹³ It bears mention that the types of mechanisms for stranded cost recovery that have been adopted by FERC and are under consideration by the states necessarily require regulators to determine the size of stranded costs. If the Board were to adopt the shipper proposals but try to preserve the present rail network by devising some substitute mechanism for the recovery of then-unrecoverable fixed and common costs, for example, in the form of a surcharge, the Board would become enmeshed in judgments about the levels of appropriate investment in rail lines that comprise the competitive segments. That would be a gigantic

It is not surprising, in light of the differences that we have so far identified, that the consequences to network users of open access in electricity, on the one hand, and, on the other, the proposals before the Board, would be entirely different. Open access does not harm other users of the electricity transportation network because it does not cause efficient fixed and common costs of electricity transportation to become stranded. By contrast, the costs that railroads would be unable to recover are the efficient costs of the rail transportation system. Revenue inadequacy thus will harm other users of rail networks that include bottleneck and competitive segments.

The proposals before the Board not only would cause the deterioration of the existing rail network. They would distort the final prices for origin-to-destination moves that involve bottleneck and competitive segments. This distortion would be another fundamental point of contrast with open access in electricity. The combination of regulated rates for transmission and distribution, and competitive prices for generation, can produce an efficient price for delivered electricity. The combination of SAC for the bottleneck and a non-compensatory price for the competitive segment, however, will not produce an efficient price for the origin-to-destination railroad service.

This is so because a final product price that is efficient in the long run is one that allows the recovery of all pertinent efficient costs, both incremental and fixed and common, and no more. Where the competitive portion is close to contestable, or where

step backward toward massive regulation, substituting regulatory judgments for the private investment decisions that have brought dramatic service improvements and rate reductions to the rail industry since the Staggers Act.

there are no economies of scale in the competitive segments themselves, regulation of the bottleneck alone will not distort final prices.

That is the case for generation. The most efficient new gas-fired generators do not have economies of scale in that their minimum efficient scale is quite small relative to market demand, and they are significantly contestable. With respect to the second point, modular configurations are available, so entry can occur in stages. Open transmission access will provide tremendous siting flexibility. With respect to exit, the new technologies for generation facilities -- combustion gas turbines -- may be redeployed in other markets at relatively small cost.

Rail services, by contrast, are not contestable, and have significant economies of scale and scope because they embed high fixed and common costs. For this reason, separate regulation of the bottleneck will not produce efficient final prices for the origin-to-destination move. Far from fostering efficient competition among shippers, as open access does among generators and marketers, the proposals before the Board would distort such competition wherever rail transportation is more than a trivial part of the final delivered price of the shipper's product.

Telecommunications. The Telecommunications Act of 1996 (the "1996 Act") requires that access be provided by local exchange carriers to the individual elements of the local exchange network. The local exchange has been a bottleneck facility, and the 1996 Act requires local exchange carriers to offer network elements on an unbundled basis to competing providers of local exchange and exchange access services. In the 1996 Act, Congress addressed a problem posed by the local exchange bottleneck that does not exist in

the railroad industry. Congress's solution, implemented in rules recently issued by the FCC, provides no support for the proposals before the Board.

In the 1996 Act, Congress directed the unbundling of the local exchange because there was a major economic problem in local exchange markets: the incumbent local exchange carriers were demonstrably motivated to avoid unbundling even when it would have been efficient, in large part from the nature of the regulation that constrained them. Under that system, end-user prices were often cross-subsidized by other services. Some prices to end-users were above stand-alone cost; others were below incremental cost. This structure, accordingly, both encouraged inefficient entry and discouraged efficient entry to local exchange markets.¹⁴

Congress having mandated unbundling of the local exchange because the economic incentives for efficient unbundling were lacking, the FCC then established guidelines for the pricing of the unbundled elements. The FCC adopted rate principles that it believes will in no way preclude revenue adequacy for local exchange carriers.

Before the FCC (as in this proceeding before the Board), a central issue was the recovery of fixed and common costs. We addressed this issue in testimony before the FCC. Our testimony and the FCC's decision were both predicated upon the recovery of all

¹⁴ We so testified before the FCC, and the FCC agreed. See FCC, In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Dkt. No. 96-98, Comments of AT&T Corp. (May 16, 1996) ("FCC Local Competition Proceeding"), Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig, pp. 8-9 ("Affidavit of Baumol, et al."); see also FCC 96-325, The First Report & Order In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, pp. 324, ¶ 662; 344, ¶¶ 709-10 ("FCC First Report"). Our testimony was on behalf of AT&T, which is a potential entrant into the local exchange and, therefore, a potential purchaser of unbundled network elements.

efficient costs, including fixed and common costs. We noted in our FCC testimony that local networks could rationally be broken down into aggregates along physical lines, for example, the local loop, and switching. We pointed out that both intuition and available engineering studies indicated "that for a logical aggregation of network elements, SAC [stand-alone cost] does not differ significantly from long run incremental cost because there are no significant common or shared costs among the groups of network elements."¹⁵

Nevertheless, we stated: "Although we are skeptical that significant common or shared costs exist, we agree that prices for individual network elements should permit the recovery of any significant forward-looking, efficient shared or common costs incurred in providing network elements."¹⁶ Thus, our proposals were designed to maintain the local exchange carrier's opportunity to achieve revenues adequate for the recovery of all efficient costs.

The FCC agreed, and stated that it was preserving the opportunity of local exchange carriers to recover their forward-looking fixed and common costs. First, the FCC attempted to reduce the amount of fixed and common costs by defining the product that local exchange carriers must offer as the network element, rather than the services that the element

¹⁵ Affidavit of Baumol, et al., pp. 4-5 n.1.

¹⁶ FCC Local Competition Proceeding, Reply Comments of AT&T Corp. (May 30, 1996), Reply Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig, p. 1 ("Reply Affidavit of Baumol, et al."). We testified that any such recovery had to be subject to an SAC ceiling, and could not exceed the implicit price for the bottleneck that the exchange carrier was charging end-users for retail services that it was providing to them. Our conclusion was that these constraints would allow the incumbent local exchange carrier "to recover all of the costs that a competitive market would allow efficient firms to recover." Id. (emphasis in original).

provides, and by defining the elements at a high level of aggregation.¹⁷ Under this approach, the FCC expects that most fixed costs will be economically assignable to a particular network element, and, therefore, will be part of its incremental costs, and, thus, not common costs at all.¹⁸

Second, to the extent common costs remain, the FCC allowed their recovery by any competitively neutral means, limited by the stand-alone cost of the element.¹⁹ The FCC believed that demand in telecommunications is sufficient to recover the fixed and common costs of the network elements when each element is priced at SAC.²⁰ The FCC thus adopted unbundled cost-based pricing that it specifically designed not to preclude revenue adequacy.

The problem Congress addressed in the 1996 Act does not exist in the railroad industry, and the FCC's pricing rules provide no support for the proposals before the Board. With respect to the absence of the problem, the existing regulatory system for railroads already creates the proper incentives for bottleneck railroads to choose efficient routes (the analogy to efficient unbundling in the telecommunications industry). By regulating only the

¹⁷ The FCC aggregated all of the elements of local networks into just seven elements, for example, "network interface devices," "local loops," and "local and tandem switching capability." FCC First Report, p. 177, ¶ 366.

¹⁸ *Id.*, pp. 330-31, ¶ 678; 337, ¶ 695.

¹⁹ *Id.*, p. 338, ¶ 698.

²⁰ Accordingly, the FCC's pricing regulations, which will guide the states in implementing the 1996 Telecommunications Act, state that the "sum of the allocation of forward-looking common costs for all elements and services shall equal the total forward-looking common costs, exclusive of retail costs, attributable to operating the incumbent [local exchange carrier's] total network, so as to provide all the elements and services offered." FCC First Report, p. B-30, to be codified at 47 C.F.R. § 51.505(c)(2)(B) (emphasis added).

origin-to-destination price, and not the price for the bottleneck, the Board enables the bottleneck carrier to attain a bargained-for share of a more efficient connecting carrier's efficiencies; the more efficient connecting carrier can make the bottleneck carrier better off using the connecting line, rather than the bottleneck carrier's own line, for the competitive segment. The existing system also provides a remedy when a bottleneck railroad attempts to foreclose an efficient route.²¹

The pricing regulation adopted by the FCC cannot be compared to the proposals before the Board because, unlike the FCC regulation, which was designed to allow coverage of all costs of service, the proposals before the Board would make it impossible for railroads with bottleneck and competitive segments to cover their costs.

We are aware that numerous parties have filed petitions for judicial review of the FCC's local competition rules. We believe that much of the controversy centers on the size of fixed and common costs. For purposes of this proceeding before the Board, however, that fact, and the outcome of those judicial proceedings, are irrelevant. The relevant point is that neither our testimony nor the FCC's intended action provides an analogy to the proposals before the Board, or in any way supports their adoption. The FCC defined the network elements so as to maximize the ability economically to assign fixed costs

²¹ Where a bottleneck railroad is accused of foreclosing efficient routes, the Board may derive the proper bottleneck price -- the price that will not foreclose efficient routes -- by subtracting the bottleneck carrier's long run incremental costs from the price for origin-to-destination service, as we describe in Appendix B. This method provides the surest way to arrive at the price for bottleneck components that does not foreclose efficient unbundling. The FCC could not take this approach for a reason that is absent in the rail industry; its guidelines had to address pricing of the bottleneck directly because end-user prices were so distorted that they did not provide a proper starting point for the necessary calculation. See FCC First Report, p. 344, ¶¶ 709-10.

to them, thereby minimizing common costs. And it made every effort to ensure that, to the extent that common costs remained, they would be recovered through rates for the network elements. It took this action in the context of a structure of demand for network elements that it believed would allow full recovery of forward-looking fixed and common costs. Such an expectation would be out of the question for rail networks under either of the proposals before the Board.

Finally, we note that the 1996 Telecommunications Act does not provide even a colorable analogy between long distance services and competitive rail segments attached to a bottleneck. It has been true for a decade that there are many competitors in long distance. The FCC has found that AT&T is not a "dominant" carrier in long distance. The fixed and common costs of long distance carriers are a far smaller proportion of their total costs than is the case in the rail industry. Long distance carriers have shown by their decisions to enter and expand over the past fifteen years that they consider it possible to be revenue adequate at the rates in the competitive long distance sector.

APPENDIX B

A. The Public Interest in Efficient Railroad Services Requires that the Regulation of Bottleneck Services be Consistent with the Parity Pricing Rule.

If there is a shortfall between the sum of the firm's incremental costs and its total cost, that shortfall must be covered, and the competitive market model tells us that the price of bottleneck services is an appropriate way to do it. However, in many instances the bottleneck services are used both by the bottleneck-owner firm to serve its final-product customers and by its final-product competitors. Therefore, the price charged for the bottleneck service to those competitors must not be so high that it extracts from those rivals more than the owner firm charges its own final-product customers for the use of its own bottleneck services. If the competitors pay more than that, they will obviously be handicapped in their efforts to compete with the bottleneck owner in the final-product market. On the other hand, if the price of the bottleneck service imposed by regulation is less than this amount, it is the bottleneck owner who will be handicapped in competing with its rivals. The price of the bottleneck service therefore must be competitively neutral -- it must not tilt the playing field in favor either of the bottleneck owner or its competitors.

The way to do this is for the price that is charged to competitors for bottleneck service to be exactly the same as the price the bottleneck owner "charges itself," or "charges its final-product customers," for use of that service. The problem is that there is no such directly observable price. However, as will be shown next, there is a straightforward pricing rule, commonly called *parity pricing* or pricing that follows the *efficient component-pricing rule (ECPR)*, that meets this competitive neutrality requirement. Moreover, it is the only

pricing rule that is competitively neutral. It is the pricing behavior for bottleneck services that market forces impose when markets are unregulated and effectively competitive.¹

We note two critical aspects of the parity pricing rule. First, only if bottleneck services are priced in this way will railroad activity be carried out efficiently. That is, parity pricing is a necessary requirement for economic efficiency. Second, as we have already described, the competitive-market guide for regulatory decisions calls for bottleneck prices to be set in this way; that is, competitive market forces will enforce parity pricing of bottleneck services.

Parity pricing is necessary for economic efficiency for a straightforward and simple reason. Suppose the bottleneck price were such as to permit the bottleneck owner to underprice its competitors in end-to-end transportation even though the competitors were the more efficient suppliers of the non-bottleneck portion of the route. Then clearly, an inefficient supplier (the bottleneck owner) could capture the business, despite its excessive real cost and resources use. The same sort of problem would arise if inefficient competitors could underprice an efficient bottleneck owner because of the prevailing price of bottleneck service. In either case, the resulting waste of resources and loss of economic efficiency is

¹ To determine the parity price for the bottleneck facilities, one begins with the directly observable price the bottleneck-owner charges its customers for the final product, and then subtracts the incremental cost to the bottleneck-owner of providing the non-bottleneck service. What remains is the amount the bottleneck-owner implicitly is charging for the use of the bottleneck. The formula can be written as follows for the case where the incremental costs of the rival's use of the bottleneck are the same as those of the owner's use of the bottleneck:

$$\text{Parity bottleneck price} = \text{the bottleneck-owner's final-product price} \\ \text{MINUS the bottleneck-owner's incremental cost} \\ \text{for the non-bottleneck}$$

clear. But it has been shown that parity pricing (and only parity pricing) can ensure that the most efficient supplier of non-bottleneck service can charge the lower final-product price and get the business. Thus, without parity pricing of bottleneck service efficiency cannot be ensured. It is, indeed, a necessary requirement for efficiency in rail operations.

It has sometimes been argued that where both a bottleneck carrier and another railroad can serve the non-bottleneck portion of the move, allowing the bottleneck carrier to set divisions that "soak up the rents" will drive the non-bottleneck carrier out of business. As we have explained on several occasions in the past, this is incorrect. That is why it is unnecessary, and indeed damaging to economic efficiency, to limit the price of bottleneck services below that under parity pricing.

A bottleneck railroad whose end-to-end price for rail service is effectively constrained either by market forces or by regulation has every reason to encourage use of the facilities of a more efficient connecting carrier and to make certain that the rates earned by that carrier are sufficient to permit it to survive and prosper in the long run. Assume, for example, that segment A is the bottleneck and segment B can be served both by the owner of the bottleneck and by one or more other railroads. If the market allows end-to-end rates of \$100 and the long-run incremental cost to the bottleneck railroad of transportation along the non-bottleneck segment B is \$40, then if the connecting carrier can carry it for \$30 and offers service at a price of \$39, the bottleneck carrier's profit will be increased by \$1 per ton for every ton that uses the connecting carrier's facilities. Note that this is so despite the fact that in our example the connecting carrier retains for itself virtually all of the benefits of superior efficiency. Since a \$1 per ton gain in profits is always better than zero, the

bottleneck carrier always gains by perpetual continuation of service by the connecting carrier. For that reason, railroads, whether or not they own bottleneck facilities, have every incentive in the absence of regulatory distortion to encourage full use of the efficient services and facilities of connecting carriers. Thus, in the domain of the division of end-to-end rates among joint carriers, the proper role of regulation is to encourage voluntary negotiations among the carriers so that the incentives for the acceptance of offers for efficient joint service are fully preserved.

Why does not regulatory intervention accomplish the same purpose? The answer is that neither regulators nor university professors can calculate efficient prices as well as the market is able to do. Voluntary negotiation provides the incentives to arrive at price and other terms that are mutually advantageous, because otherwise the losing party would simply withdraw. This is the basis for the famous "mutual gains from voluntary trade" theorem that goes back to Adam Smith.

In sum, because parity pricing (or ECPR) is the rule for the pricing of bottleneck services that ensures competitive neutrality, and because it is the only rule that does so, it is also the only such pricing principle that is compatible with economic efficiency and the competitive-market model. These are the reasons parity pricing was adopted as a key component of Constrained Market Pricing, and why the public interest urgently requires that this rule not be changed now.

B. The Proposals Being Considered By The Board Would, By Virtue of Violating the Rule of Competitive Neutrality, Have an Adverse Effect on Competition and Require Extensive Re-regulation

The alternative proposals before the Board violate this public interest criterion of competitively-neutral pricing. At first blush, it may not appear clear why this is so. The

proposals set the same maximum rate for the bottleneck segment regardless whether the carrier on the non-bottleneck segment is the bottleneck railroad or another carrier. This appears to comply with the parity pricing rule. The reason the proposed alternatives do not in fact meet this criterion can be seen clearly, however, when we examine the railroads' incentives under the alternatives.

Under current regulations, the bottleneck railroad will find it most profitable to choose to use the most efficient rail route because it will make the most profits by doing so. We showed also that this replicated the results that occur in contestable markets. If a connecting carrier can provide service over the non-bottleneck portion for less than the bottleneck carrier can provide that service for itself, the bottleneck owner will benefit by, in effect, paying that carrier to carry the traffic; the difference between the bottleneck's costs and the other carrier's costs will be divided between the two railroads, making both better off. This leads to lower total costs for the route and lower rates for shippers.

These incentives are undermined by the proposed alternatives. The shippers' proposal permits the bottleneck railroad to charge no more than stand-alone cost for the bottleneck segment. If the traffic is carried over the non-bottleneck segment by a connecting carrier, the bottleneck will earn the same amount regardless of the efficiency of that connection. The bottleneck owner therefore has no incentive to invest in order to lower the costs of the interchange. Thus, under the shippers' proposal, the bottleneck railroad is given little incentive to expend its resources maintaining or improving interchanges with other railroads.

These same inefficient incentives are introduced by the intermediate approach. Since the maximum origin-to-destination rate would depend on the rate offered by a connecting carrier for the non-bottleneck portion of the move, it should be clear that the

higher the costs of interlining traffic with that carrier, the higher the maximum rate will be. Thus, here too, the bottleneck carrier would no longer have an incentive to minimize the costs of connecting service, or to upgrade an interchange or to create a new one.

It may be suggested that regardless of the railroads' incentives, the Board can police bottleneck carriers, perhaps through a comprehensive system of interchange regulation, mandatory investment programs and other intrusive policies. We cannot imagine why the Board would want to undertake such a program of re-regulation when, under the current standards, there is no need to do so: the market provides the railroads with the incentives that elicit desirable efficient decisions without regulatory intervention.

While today the Board need not oversee the railroads' operations in all but the most exceptional of cases, under the proposed alternatives the Board would be forced to review complaints from shippers on a myriad of subjects relating to interline service: that the bottleneck railroads were not acting fairly or efficiently in providing interchange service; that they had not properly maintained the interchanges; that they have failed to upgrade their interchanges; and even that they have failed to build new ones. Shippers would find that it pays to ask the Board to micro-manage both the railroads' operations and their investment decisions. These are exactly the types of decisions that we as economists believe are best handled by market forces, not by government regulatory agencies.

VERIFICATION

I, William J. Baumol, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement. Executed on October 8, 1996.



William J. Baumol

VERIFICATION

I, Robert D. Willig, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement. Executed on October 4, 1996.


Robert D. Willig

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

No. 41242

**CENTRAL POWER & LIGHT COMPANY
v.
SOUTHERN PACIFIC TRANSPORTATION COMPANY**

No. 42195

**PENNSYLVANIA POWER & LIGHT COMPANY
v.
CONSOLIDATED RAIL CORPORATION,
CSX TRANSPORTATION, INC., and
NORFOLK SOUTHERN CORPORATION**

No. 41626

**MIDAMERICAN ENERGY COMPANY
v.
UNION PACIFIC RAILROAD COMPANY and
CHICAGO AND NORTH WESTERN RAILWAY COMPANY**

**COMMENTS AND EVIDENCE
OF NORFOLK SOUTHERN CORPORATION**

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Attorneys For Norfolk Southern Corporation

October 15, 1996

Verified Statement

of

W. J. Romig

My name is W. J. Romig, and I am Vice President and Treasurer of Norfolk Southern Corporation. I have been with Norfolk Southern or one of its predecessor companies since 1977. In my current position, I am responsible for financial analysis and investment management, corporate profitability analysis, treasury operations, investor relations and risk management.

In this statement I will describe Norfolk Southern's policy with respect to capital investments; I will quantify the capital investments we have made in recent years; and I will explain the likely effect on Norfolk Southern's capital spending of the regulatory changes that are being considered by the Surface Transportation Board.

The economics of railroad operations differentiate the rail industry from other American industries. Railroads require massive and ongoing infusions of capital, much of which is invested in fixed assets, that is, assets that are not easily redeployed when traffic patterns change. Moreover, a large share of a railroad's high fixed costs are not attributable to any particular shipper or traffic. The same investment that creates the track infrastructure needed to move a single freight car from Buffalo to Chicago will move many thousands of cars, and the same crew and locomotive needed to operate a single-car train between those points can move a 100-car train.

While railroads are similar to utilities in their capital requirements, railroads differ from electric utilities in that there is no guarantee that customers will use the railroad's assets. The lack of such a guarantee, combined with the fact that our assets are fixed, means that we will not make most investments without a reasonable expectation that they will be productive over a considerable period of time. Unlike other freight transportation modes, railroads cannot escape the need for large capital investments because railroads own and maintain their rights-of-way.

Norfolk Southern funds capital investments out of internally-generated cash. The dividends we pay our shareholders also come out of this cash; thus, as a general rule, capital investments will not exceed cash provided from operations less dividends. Safety is always our first priority, and that means that each year a substantial portion of the capital budget is spent on maintaining and improving our infrastructure. We typically devote approximately 40% to 45% of our capital budget to investments in rail, ties, ballast, bridges, signals, maintenance equipment, and other projects focused primarily on improving safety. We need locomotives to serve our customers, and, with locomotives costing in excess of a million dollars each, that means substantial annual expenditures. For the next five years, I anticipate 10-20% of each budget will be devoted to locomotive purchases. It is generally only after those priority needs have been met that capital projects which benefit specific customers or groups of customers, including rail car purchases, are considered.

Our improved financial status under deregulation has enabled us to reinvest heavily in both maintaining and improving our system. From 1985 to 1995, Norfolk Southern made capital expenditures of approximately \$7.5 billion. Over the last five years, spending on our infrastructure has included over \$1.1 billion for rail, cross-ties and ballast; \$127 million for bridges, trestles, and the like; \$70 million for maintenance of way machinery; and \$79 million for communications and signals work. During the same five-year period, we also spent \$588 million on freight cars, of which \$244 million was for the rebodying of coal cars; \$360 million on locomotives; and \$101 million on intermodal terminals.

Those investments have allowed us to increase the quality of our rail system, upgrade our locomotive and car fleets, and operate the safest and most efficient major railroad in the United States. Anything that might threaten our ability to earn funds sufficient to sustain the high levels of investment required each and every year to maintain our progress is of deep concern to us.

What would change if the Surface Transportation Board adopts rules which result in increasing short-hauls and decreasing rail revenues? It has been a long-standing practice in the rail industry that the origin carrier gets its long-haul. From a financial perspective, this certainly makes sense, as it makes it easier for the serving railroad to justify investments necessary to serve its customer. If this practice were to be changed by new government regulation, the way we view investments for the shippers we physically serve

would have to change. Whether it is the purchase of additional cars, building new facilities or maintaining existing facilities, we will not invest without a reasonable expectation of earning an acceptable economic return on our investment. Because the spectre of being short-hauled would always be present, the riskiness of many projects would increase and thus the economic returns, particularly the acceptable minimum internal rate of return (an excellent indicator of risk), would need to be much higher in order to justify investment.

Adoption of the proposed regulatory changes would shrink our capital budget by reducing internally-generated funds. If regulation drastically reduced revenues, we could face the prospect of having to borrow funds to cover even our most basic investment needs (and if we were forced to borrow to make capital investments for any significant period of time, our financial health would be seriously and adversely affected). A more modest reduction in our capital budget is unlikely to affect our high-priority investments (such as infrastructure maintenance), but other investments would be curtailed. The most likely reductions would occur in investments that could not guarantee a well above average rate of return, including investments in feeder and branch lines (lines with annual gross tonnage less than eight million tons); secondary lines over which Norfolk Southern competes with another carrier's main line; and customer-specific investments, such as rail cars, bulk distribution facilities, and intermodal facilities.

If we were required to reduce our capital expenditures, the result would be less traffic on the rails and more traffic on the highways. With a reduced capital budget, we

would be unable to commit the resources necessary to attract new traffic to our system, and we would also lose existing traffic by foregoing investments needed to serve specific customers and to maintain and improve overall service quality.

Traffic losses would produce a ripple effect. If we experience traffic declines, some traffic that is profitable today would become unprofitable in the future. With fewer carloads on a given line or on a given train, the contribution each carload must make to cover the cost of the line or the train would rise. Traffic that is only marginally profitable would become unprofitable and, absent rate increases, we could no longer afford to carry it. This is what happened to the industry prior to deregulation and, while deregulation has changed a lot of things in the industry, it has not changed fundamental railroad economics. We cannot afford to have a declining traffic base and begin again the downward spiral, which was the legacy of deregulation and which has required fifteen years to reverse.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
) SS:
CITY OF NORFOLK)

W. J. Romig, being duly sworn, deposes and says that he is Vice President and Treasurer for Norfolk Southern Corporation, that he has read the foregoing verified statement, knows the facts asserted therein and that the same are true as stated.

W. J. KOMIG

Subscribed and sworn to before me,
a Notary Public in and for the
State and City aforesaid, this
11th day of October, 1996.

Landra J. Gorby
NOTARY PUBLIC

My commission expires:

MARCH 31, 1998

[SEAL]

Verified Statement

of

James W. McClellan

My name is James W. McClellan, and I am Vice President - Strategic Planning of Norfolk Southern Corporation. I have overall responsibility within Norfolk Southern for strategic and corporate planning, mergers and acquisitions, and management of the size and scope of Norfolk Southern's route network.

Qualifications

I began my railroad career in the Marketing Department of Southern Railway Company in 1962, and subsequently worked for the New York Central Railroad Company (and its successor, Penn Central Transportation Company) in domestic and international marketing. I served with the Federal Railroad Administration in policy positions from November, 1968 to April 1974, interrupted by a year helping to oversee the start-up of Amtrak. I joined the United States Railway Association in 1974 to assist in planning the creation of Consolidated Rail Corporation ("Conrail") and the rationalization of the eastern railway network, and moved to the Association of American Railroads in April 1976. In 1977, I returned to Southern Railway as Director - Corporate Development. I was promoted to Assistant Vice President - Corporate Development in 1991 and to my present position in 1993.

Statement

The purpose of my statement is to explain how railroads have used their regulatory freedom to achieve unprecedented efficiency gains and how those gains would be seriously threatened by any system of regulation that resulted in reduced earnings and the introduction of forced interchanges without regard to effects on efficiency. The significant efficiency gains that Norfolk Southern and other railroads have achieved have brought substantial benefits to the vast majority of our customers. The system is not perfect, but any changes aimed at resolving individual customer complaints must be weighed against their impact on the overall system, including the impact on other customers.

Norfolk Southern and other railroads have spent the post-Staggers Act era working to make the national rail network function more efficiently. This effort has included increasing railroad reliability, concentrating traffic on a smaller number of efficient, high-capacity routes, closing inefficient and redundant interchanges, and improving the quality of the infrastructure on the remaining route network.

But these efficiency gains, which have been generally passed on to customers, could be reduced or eliminated by new regulations, short-hauling and proportional rates that force shipper-specified interchanges at undesirable locations, routings over secondary lines and fragmentation of the traffic flows that the railroads have worked so hard to concentrate.

Reliability

Customers are demanding service reliability from the railroads comparable to that of trucks. While railroads are improving, their service quality still falls short of motor carrier standards (except for certain long-distance intermodal movements). The variety and complexity of railroad traffic flows, and the need to combine those flows to achieve density and scale economies, make managing reliability inherently more challenging for railroads than for motor carriers.

Reliability translates into more business, as more customers find rail service meets their needs, and into lower costs, as railroads minimize the costs of deviating from an optimal operating plan. This additional traffic controls costs for all customers by reducing the share of costs each must bear.

Reliability is even more important as time sensitive automotive and intermodal traffic make up a greater proportion of the overall traffic base. For example, carloads of motor vehicles and equipment on Class I railroads have risen from 887,000 in 1983 to 1,374,000 in 1995, a 55% increase (during a time when the number of vehicles per rail car also increased.)

While intermodal and automobile traffic are the most commonly used examples of traffic that require reliable rail service, other customers can be no less demanding. For example, Norfolk Southern moves coal from Appalachian mines to a dock in Norfolk, VA, where it is blended with other coals, and exported to Europe and Asia. We must ensure that all the coals, coming from several different mines for

loading into a single vessel, are on hand at the dock when the ship arrives, or else vessel demurrage costs of thousands of dollars per hour will be incurred.

Another example is provided by the transportation requirements of western electric utilities. Those utilities, most of which have invested in their own coal-hauling rail cars, have very demanding cycle-time requirements for their trainsets. The major western railroads have invested heavily in track, locomotives, signals and tracking systems to keep trains moving and to meet those requirements. Norfolk Southern, as a terminator of western coal, also invests to meet these cycle-time demands.

If flows are fragmented, railroad reliability becomes unattainable. Railroads cannot afford, and will not invest, to make every route a high-capacity, high-reliability route. Instead of some routes and services being more reliable than others, overall service could regress, causing customers to desert the rail system. When that happens, prices to the remaining customers will rise, or service levels will decline, or both.

Route Rationalization

Rail carriers have worked throughout the post-Staggers era to boost efficiency by concentrating their major flows on a smaller number of heavily used main lines. This concentration creates the critical mass to allow the frequency of service that customers demand, and generates the contribution that allows the rail

carrier to add additional tracks, signaling systems, and terminals that increase both the capacity and reliability of the overall system.

Norfolk Southern has pursued this strategy with notable success. In 1983, Norfolk Southern handled 191.9 billion gross ton miles ("GTM") over 17,925 miles of road, an average of 10.7 million GTM per mile. In 1995, we handled 256.4 billion GTM over 14,415 miles of road, an average of 17.8 million GTM per mile --fully a two-thirds improvement in this fundamental measurement of efficiency.

Although this increase can be partially explained by the sale of lighter density lines to short-line and regional operators, the major reason for the dramatic improvement has been our ability to commit the capital necessary to develop the core Norfolk Southern system -- to invest in track to handle more and longer trains, in signals to allow higher speeds and safer operations, and in bridges, trestles and tunnels to accommodate higher, heavier, and longer cars. (For example, almost all of the Norfolk Southern network has been upgraded to accommodate 286,000-pound capacity cars, which are preferred by customers and are more efficient.)

Historically, Norfolk Southern and its predecessors had many duplicate routes, all of which required continued investment. For example, Norfolk Southern had two parallel routes between its major yard at Bellevue, OH, and East St. Louis, IL, one via Fort Wayne, IN and another via Lima, OH. Both routes were within 20 miles of being the same length, but the Fort Wayne route served Norfolk Southern hubs at Fort Wayne and Decatur, IL, while the Lima route served no other major

Norfolk Southern point. The Fort Wayne route was also initially designed to better standards, and thus could be upgraded more readily.

The eventual consolidation of trains onto the Fort Wayne route improved service not only for the customers in the Bellevue - St. Louis lane, but also for customers whose traffic switched onto and off Norfolk Southern trains at Decatur and Fort Wayne. As traffic reached critical mass, Norfolk Southern was able to invest in track capacity, control systems, and bridge improvements to meet customer requirements.

Had Norfolk Southern been required to spread this investment over both lines, instead of concentrating it on a single route, neither route would be adequately maintained or able to support the service level required by our customers. Any regulatory scheme that would allow outside forces to dictate routings within the railroad system runs the risk of routing traffic where investment has not been made to handle it, stranding investment on routes that are capable of handling the traffic, and discouraging selective future investments to improve routes and service.

Interchange

Norfolk Southern works with our major interline partners to concentrate interchange traffic through the highest-capacity, most efficient gateways. While concentrating interchange points sometimes adds minimal circuitry to routes, it benefits most customers by concentrating traffic flows on high-capacity corridors. These

routes have the frequency of service customers demand and are in the physical condition to support that service.

The retention of numerous excess interchanges in the Northeast was one of the major contributing factors to the eastern railroad crisis of the 1970s. Faced with declining traffic levels, carriers did not rationalize the number of interchange locations. This led to underutilized yards, shorter than optimal train lengths, wasted terminal activity and excess staffing, none of which the financially weak eastern carriers could afford. It took the formation of Conrail and, later, the Staggers Act, to rationalize these interchange locations, which led to larger trains, less switching, and thus a more efficient operation.

Carriers are still working to consolidate interchange points and make the rail system more efficient. For example, Norfolk Southern originates large volumes of finished automobile traffic, much of which terminates at Conrail points. Previously, this traffic was interchanged at numerous points, including Buffalo, Cincinnati and East St. Louis. These dispersed interchanges slowed service, increased transit time, and added handlings and damage to lading. But in 1995, Norfolk Southern and Conrail agreed to consolidate the interchange of finished vehicles at Cleveland, Ohio. Each carrier agreed to forego revenue on portions of the moves, but the customer benefited from more reliable service and reduced transit times. This project also required railroad investment in yard facilities in Cleveland to make the new interchange possible. Such investments in efficiency, which benefit

both the railroad and the customer, would not be made if railroads lose control over the point of interchange.

A new Norfolk Southern/Kansas City Southern Railway Company ("KCS") run-through train between Birmingham, AL and Shreveport, LA is an even more recent example. Until recently, each carrier was maximizing its length of haul by interchanging almost all traffic at New Orleans, LA. In addition to adding nearly 200 miles of circuitry per movement, this traffic traversed the congested New Orleans terminal. Now, the new run-through train operates via Meridian, MS, reducing circuitry, transit time, and congestion.

The two carriers also interchange at several other Mississippi locations: Corinth, Columbus and Hattiesburg. By concentrating the majority of the interchange at Meridian, even though this may not be technically the shortest route for some traffic, Norfolk Southern and KCS were able to develop traffic density that ultimately benefitted customers as well as our respective rail operations.

Allowing customers to specify interchange points between carriers solely to optimize their individual flows would impose costs not only on railroads, but on rail customers as well. Traffic moving out of major flows generally takes longer and requires additional handlings, increasing costs for railroad and shipper alike. In the end, both parties are less competitive as these "out of flow" interchanges create operational bottlenecks and fragment traffic. Inevitably, allowing customers to dictate traffic routing would degrade the performance of the entire network.

Infrastructure

The keys to running a good railroad -- safety, reliability, capacity and efficiency -- are all based on the quality of the infrastructure. Because of that, Norfolk Southern and the other Class I railroads have invested heavily in raising the standard of U.S. railway infrastructure.

In marked contrast to the Interstate Highway System, the U.S. railway network today has never been in better condition. Norfolk Southern recently invested millions of dollars in the "Third Main" project, designed to speed trains through a railroad bottleneck at Cincinnati, OH. We are investing in double track between Atlanta, GA and Chattanooga, TN, in part to deliver Powder River Basin coal to a Georgia utility. As an industry, U.S. Class I railroads invested over \$5.7 billion in capital expenditures in 1995, of which \$3.2 billion was spent on track.

This massive investment is concentrated on a Class I route network that is 26% smaller in 1995 than in 1983, indicating a much higher investment per route mile than in past eras. High standards bring known benefits, but at a high price. Every time Norfolk Southern undertakes substantial reinvestment, the cost must be explicitly justified by the traffic moving over that line.

Railroads can invest in projects with long paybacks because they control their own infrastructure, which minimizes the risk of these investments. Any change that threatens this control threatens investment in the maintenance and renewal of the railroad system as a whole, and impairs railroads' ability to operate safely, reliably and efficiently.

Control over the infrastructure does not mean it can never be shared. Norfolk Southern and Burlington Northern Santa Fe Corporation are involved in a number of cooperative arrangements in Alabama, Illinois, and Iowa that enable one carrier to remain in a market it otherwise would have exited, while the other carrier realizes the benefit of increased use of an otherwise underused line.

In other places, control over and sole use of the infrastructure are essential to efficient rail operations. For example, Norfolk Southern allows no other tenants on its Chattanooga, TN - Cincinnati, OH line, because the line's capacity is fully committed as a crucial link in Norfolk Southern's routes between the Midwest and the South, carrying over 70 million gross tons per year on some segments.

It is difficult to craft and sustain a bilateral deal between railroads for joint use of trackage. These deals do get done, not to improve the lot of a specific customer, but to improve the overall railroad networks, and thus to yield benefits to a large number of customers.

A variety of commercial arrangements have been made to compensate those who share track, each solution customized to the needs of the specific situation. Any regulatory imposition of rights, or a compensation system for the use of such rights, will discourage the best use of, and investment in, rail infrastructure.

Safety

An investment in infrastructure is also an investment in railroad safety. At Norfolk Southern, safety is the rock upon which we have built our culture, because our employees are our most valuable asset; because the public is increasingly intolerant of any accident; and because our customers -- who often have millions of dollars of production-line cargo on one of our trains -- will accept nothing less.

Deregulation, because it allowed the railroads to reconfigure their operations and invest in plant and equipment, has made the railroads a far safer place. Track and equipment is in far better shape than it was in the 1970s, prior to deregulation, meaning that derailments are far less frequent and damaging. Fewer people are getting hurt as well. For example, Norfolk Southern has cut its personal injury rate 80% over the past seven years, showing improvement every year.

While I am not saying that renewed regulation will immediately cause a rise in derailments, any mandate that threatens our ability to reinvest must consider the impact on the railroads' safety accomplishments.

Summary

The present level of rail regulation has resulted in unprecedented efficiency gains and an overall decline in rail rates -- a benefit largely realized by our customers. Any change to benefit a single shipper will affect the economics of the

rail network and other customers as well. To remedy the perceived disadvantages of the few threatens to undo the good enjoyed by the many.

Customer complaints about limited transportation options need to be addressed, but are best handled on the facts of individual cases, without resorting to a "one size fits all" remedy. Railroads serve a variety of customers economically and efficiently. Any solution should not imperil that ability, or the gains made in the last decade.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
) SS:
CITY OF NORFOLK)

J. W. McClellan, being duly sworn, deposes and says that he is Vice President-Strategic Planning for Norfolk Southern Corporation, that he has read the foregoing verified statement, knows the facts asserted therein and that the same are true as stated.

J. W. McCLELLAN

Subscribed and sworn to before me,
a Notary Public in and for the
State and City aforesaid, this
10th day of October, 1996.

NOTARY PUBLIC

My commission expires:

MARCH 31, 1998

[SEAL]

BEFORE THE
SURFACE TRANSPORTATION BOARD

Docket No. 41242

CENTRAL POWER & LIGHT COMPANY

v.

SOUTHERN PACIFIC TRANSPORTATION COMPANY

Docket No. 41295

PENNSYLVANIA POWER & LIGHT COMPANY

v.

CONSOLIDATED RAIL CORPORATION

Docket No. 41626

MIDAMERICAN ENERGY COMPANY

v.

UNION PACIFIC RAILROAD COMPANY AND
CHICAGO AND NORTH WESTERN RAILWAY COMPANY

MOTION FOR LEAVE TO FILE

The Association of American Railroads respectfully requests leave to supplement its October 15, 1996 comments in this proceeding with the materials attached as Exhibits A, B and C hereto.

Exhibit A is a joint statement of economists, including Nobel Laureate Kenneth J. Arrow and ten other eminent economists, in further support of AAR's comments. Those comments included the verified statement of Professors William J. Baumol and Robert D. Willig explaining in detail

STATEMENT OF ECONOMISTS

In a decision served August 27, 1996, the Surface Transportation Board has solicited the views of interested persons on certain issues of industry-wide significance for the Nation's freight railroads and their shippers. These issues are raised by several pending agency complaint proceedings in which electric utilities are seeking regulatory prescription of maximum reasonable rates for large-volume rail shipments of coal to electric power generating plants.

Succinctly stated, the issue posed by these cases is whether a shipper, whose freight moves over the lines of one or more railroads to a destination that is exclusively served by a single railroad, should be permitted to obtain regulatory prescription of a maximum reasonable rate applicable solely to the so-called "bottleneck" portion of an end-to-end through shipment moving to the final destination from a junction point with another railroad. The coal shippers propose that railroads should be required on demand to establish common carrier rates to apply only to the "bottleneck" segment, *whether or not* the movement of traffic over such a joint-line routing is efficient and *whether or not* such a routing would result in reducing the length of the delivering carrier's haul. The shippers contend further that the rate for transportation over such a bottleneck segment should be *independently assessed* under prevailing maximum-rate standards (notably, the "stand-alone cost" test), without regard to whether the *overall* through rate (or combination of rates) applicable to the entire shipment from origin to final destination exceeds a maximum reasonable level. The shippers thus seek to confine rate regulatory analysis to the bottleneck

portion of the through movement, and to rely on direct rivalry between the competing carriers serving the non-bottleneck segment to establish the rate applicable to that portion of the overall movement. (In its decision, the Board also invited comment on a possible "intermediate" approach. This approach would also apply the stand-alone cost analysis only to the bottleneck segment, while the portion of the through rate for the non-bottleneck segment would be based on some estimate of a "competitive" rate for that segment.)

The undersigned economists, each of whom has written and taught in the areas of industrial organization and economic regulation affecting network industries such as railroads, electric utilities and telecommunications, have been asked by the Association of American Railroads to assess these proposals. As explained below, we conclude that both of these proposals are contrary to the public interest. They would undermine effective and sustainable competition by denying the railroads a realistic opportunity to earn revenues sufficient to recover their efficient long-run costs of service (including cost of capital); they would create disincentives for continued capital investment in plant and facilities necessary to maintain and improve rail freight service; and they would encourage inefficiencies in railroad operations, thereby wasting society's resources devoted to the provision of rail freight transportation.

The first and most fundamental defect in the coal shippers' bottleneck rate and routing proposal is that it would deny railroads the opportunity to earn revenues sufficient to cover their long-run efficient costs of service. Under the shippers' proposal the maximum rate ceiling would be set at stand-alone cost only for the bottleneck segment of a through shipment. For the non-bottleneck portion, the shippers' approach would allow direct rivalry between alternative carriers to establish the rate for that segment. Such rivalry can be

expected to drive the "competitive" rate for the non-bottleneck segment toward the higher-cost carrier's short-run marginal costs. Because each railroad, confronted with this situation, would be better off in the short run serving than not serving the traffic if it covered such short-run marginal (or incremental) costs and made at least a minimal contribution to fixed and common costs, rivalry between the carriers serving the non-bottleneck segment would tend to force rates toward this level. Such rates would make little or no contribution to the recovery of the railroad's substantial fixed and common costs. The logical result of the shippers' proposal, therefore, is that the bottleneck railroad will not be able to cover its full economic costs even when it is operating efficiently and even when demand is sufficient to permit full cost recovery.

If the railroad serving the non-bottleneck portion of a freight shipment is prevented by regulators from charging a rate up to the level of stand-alone cost, it will be unable to attract the capital necessary to maintain its physical plant and continue service. Eventually, all but one of the railroads serving the non-bottleneck segment could be forced to exit the market, thereby eliminating service for other rail shippers that use (and may be entirely dependent for rail service on) those lines. Until such exit occurs, plant maintenance and investment of all carriers is likely to deteriorate, as they would be unable to earn sufficient revenues. The potential adverse impact on the Nation's rail industry could be significant.

The Board's proposed "intermediate" approach suffers from the same fundamental problem, although the magnitude of the potential harm to the railroads' overall ability to recover their costs could be less than under the shippers' proposal. While the shippers' proposal would effectively yield rate levels for the non-bottleneck segment at or

slightly above short-run marginal (or incremental) costs, the "intermediate" approach would apply the statutory revenue/variable cost (r/vc) jurisdictional threshold to set a floor on agency-prescribed rates for the entire end-to-end through shipment at a level no lower than 180 percent of variable costs. The resulting maximum rate levels could be greater than under the shippers' proposal, which would apply the 180 percent r/vc rate floor only to the bottleneck segment of the movement. If the bottleneck portion of the through movement at issue is a relatively small proportion of the total haul, however, the probable result of the Board's "intermediate" approach would be to fix the end-to-end rate at the 180 percent r/vc rate level. Thus, what the statute envisions as a rate *floor* would become a rate *ceiling*. The adverse consequences for the railroads' ability to recover their full economic costs would be significant, and adoption of the Board's "intermediate" proposal would impede full cost recovery by the railroads.

The bottleneck rate and routing proposals offered by the coal shippers and Board also would breed inefficiencies contrary to the public interest in minimizing the costs of producing rail service. By allowing a shipper to designate virtually *any* physical junction between two railroads as the point for the interchange of traffic, regardless of the relative costs or feasibility of the interchange point or the relative efficiency of the designated joint-line route, the shippers' proposal would create incentives for the creation and use of inefficient joint-line routes. The shipper's interest in each case would be to select an interchange point located nearest to the exclusively served origin or destination of its traffic, so as to minimize the length of the bottleneck segment to which the stand-alone cost test would be applied, regardless of whether that designated interchange point is efficient. Shippers would have no incentive to promote the routing of traffic over the most efficient

route, and would be encouraged in many instances to create and use routes that would be inefficient.

Both proposals could also create further disincentives for railroads to use efficient routes. Under the shippers' approach, the railroad's rate for the bottleneck segment would be capped at stand-alone cost. Where the bottleneck carrier also owns one of the non-bottleneck segments, it would earn greater contribution to its fixed and common costs if it could induce the shipper to use its non-bottleneck segment at a rate that exceeded incremental cost by even a small amount. It would therefore prefer the use of its single-line route even if the joint-line route were more efficient. Indeed, railroads would have strong incentives to close interchanges, and to resist opening of new interchanges, as well as to lengthen wherever possible the length of their bottleneck segments, even when economic efficiency would dictate use of different routes. Such incentives for inefficient outcomes could be expected to generate disputes requiring agency resolution, with all of the societal costs that regulation entails.

In sum, we conclude that the segmented "bottleneck" rate and routing proposals are a bad and unnecessary idea.

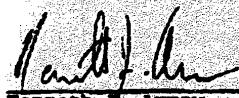
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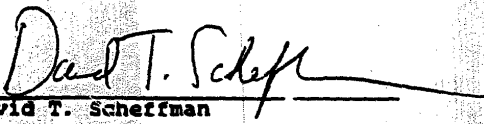
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Glenn A. Woroch

BEFORE THE
SURFACE TRANSPORTATION BOARD

Docket No. 41242

CENTRAL POWER & LIGHT COMPANY

v.

SOUTHERN PACIFIC TRANSPORTATION COMPANY

Docket No. 41295

PENNSYLVANIA POWER & LIGHT COMPANY

v.

CONSOLIDATED RAIL CORPORATION

Docket No. 41626

MIDAMERICAN ENERGY COMPANY

v.

UNION PACIFIC RAILROAD COMPANY AND
CHICAGO AND NORTH WESTERN RAILWAY COMPANY

REBUTTAL OF THE ASSOCIATION OF AMERICAN RAILROADS

Of Counsel:

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October 25, 1996

REPLY VERIFIED STATEMENT

OF

WILLIAM J. BAUMOL AND ROBERT D. WILLIG

In this reply statement, we respond to the arguments made by Dr. George Borts in statements filed on behalf of Pennsylvania Power & Light Company, MidAmerican Energy Company, and Western Resources, Inc. As the differences among the three statements are minimal, we will refer to the statement as filed on behalf of PP&L. We also respond to certain arguments made by Mr. James N. Heller, in a statement filed on behalf of Western Fuels Association, about the Board's revenue adequacy standard.

Before we address these two statements, we wish to note a fundamental misconception that appears throughout the comments of the parties supporting revisions of the Board's existing efficient pricing rules. This is the notion that, somehow, regulating rates as proposed in the alternatives before the Board would increase competition. This notion has no basis in economic analysis. To the contrary, whereas the existing rules provide the maximum incentive for competition between or among carriers operating beyond a bottleneck, the alternatives before the Board would provide anticompetitive incentives. They would, as we explained in our initial statement, motivate efforts by bottleneck carriers to discourage efficient competition beyond the bottleneck and they would foreclose the investment that is essential to sustain such efficient competition.

The current rules support competition to the fullest and most efficient extent. By restricting end-to-end rates to levels no higher than the costs that would be incurred by an efficient entrant, they guarantee the lowest price levels that are

consistent with compensatory operation of the railroads. Those rates thereby encourage and facilitate competition on every segment of every route where it is viable. Any lower rate for end-to-end service must be destructive to the carriers and can only serve to undermine competition. The pending proposals by their very nature are sure to bring the incentives for such competition to an end.

I

Dr. Borts makes two main arguments against the present system of regulation of rail rates for the through movement. First, according to Dr. Borts, the present system defeats competition. Second, according to Dr. Borts, the present system inappropriately extends regulation to the competitive segment, where it is not needed. In addition, Dr. Borts argues that rail rates would increase under the "intermediate" proposal, and that there is a "practice" of regulating bottleneck segments in other industries. We address each of these four arguments in turn.

A.

In place of the present structure of rate regulation, Dr. Borts urges the Board to adopt what he calls the "Contestability Approach" to rate regulation, under which the shipper would pay no more than the sum of the rate on the competitive traffic plus the Constrained Market Price ("CMP") on the bottleneck, where that price is determined by SAC. Borts V.S., pp. 4-5. This is the shipper proposal that we addressed in our initial statement. As authors of the theory of contestable markets,¹ we are especially impelled to

¹ See William J. Baumol, John C. Panzar, Robert D. Willig, Contestable Markets and the Theory of Industry Structure (2d ed. 1989).

correct Dr. Borts's mislabeling. The shipper proposal is not the "contestability" approach. Dr. Borts's arguments against the present structure of rate regulation are misconceived.

As we emphasized in our opening statement, the present rules for rate regulation "constrain the regulated firm to behave as it would if it were, contrary to the facts, operating in an effectively competitive market." While preventing abuse of market power, they "leave the regulated firms with all of the freedom of decision making that would be available to them in an effectively competitive market." Baumol/Willig V.S., p. 9. Each of the proper goals of regulation is, therefore, fulfilled: "end-users do not pay too much for the final product; vertically integrated owners of bottleneck segments and owners of efficient competing segments each have the opportunity to recover their efficient fixed and common costs; and vertically integrated owners of bottleneck facilities have incentives to utilize a competing supplier when doing so is more efficient than utilizing their own facilities in the competitive sector." Id., pp. 25-26.

The present system of railroad rate regulation is the only system under discussion for which these observations are true. It is the only system that derives from the theory of contestable markets. It brings with it the maximum amount of competition that is possible given the high fixed and common costs of railroads and the structure of the demand for rail services, and any of the proposals before the Board would bring about a massive retreat from and distortion of competition. The present system brings about more service and more efficiency at the lowest sustainable rates than could either of the proposals before the Board.

In contestable markets, if the price for the competitive services cover no more than their incremental costs, "then the price for the bottleneck services will have to cover fully both the costs of the supply of the bottleneck services and the fixed and common costs." That must be so "because in this competitive scenario there is no other source of the needed revenues." *Id.*, p. 13. In contestable markets, prices "will equal the stand-alone cost of the final product." *Id.*, p. 14. Unless prices are at that level, or investors rationally expect prices to be at that level, the required investment will not be forthcoming.

Dr. Borts never explains how the fixed and common costs of the competitive segment, or the costs that are fixed and common across the bottleneck and the competitive segments, would be met under what he calls the "Contestability Approach." The sum of SAC for the bottleneck and a "competitive" price for the competitive segment simply do not add up to the total, forward-looking, efficient costs of the end-to-end service. In calling the shipper proposal the "Contestability Approach," Dr. Borts wrongly assumes that in a contestable market, a bottleneck entrant would be attracted by the prospect of charging its SAC. The assumption is obviously wrong where expected revenues would be insufficient to maintain the competitive segments necessary to provide the end-to-end service, which is the final product desired by shippers and which provides the rationale for investment in the bottleneck in the first place.

We said in our opening statement that when the price of the end-to-end service overall is below the compensatory level, and only the costs directly associated with the bottleneck are covered, "the rest of this sad story is obvious. Some or all of the competing providers of non-bottleneck services will be driven out of the market. The bottleneck entrant

will be threatened with an end to its traffic, and the shippers will suffer along with the insolvent railroad." *Id.*, pp. 3-4. Dr. Borts does not offer an alternative ending to this story, nor could he under any of the systems of rail rate regulation before the Board other than the one that is now in place. Nor does he answer the obvious objection that under his approach, the incentives of the bottleneck railroad will be to extend the bottleneck, thereby diminishing rather than increasing competition.

Instead, Dr. Borts asserts that the present system of end-to-end rate regulation "defeats the competition on the connecting segment by allowing a higher rate for the through move than can be obtained by giving effect to the forces of competition on the connecting movement." Borts V.S., p. 12. Under the "Contestability Approach," by contrast, says Dr. Borts, the "shipper is left with the benefit of competition on the connecting movement, consistent with national transportation policy." *Id.*, p. 14. A shipper "under the statutory scheme in effect should have a right to take advantage of the rates offered by competitive carriers." *Id.*, p. 8.

If, by the "benefit of competition" for the non-bottleneck segment, Dr. Borts means rates that approach incremental cost, he is correct that the shipper will not receive such rates under the present regulatory scheme. But Dr. Borts is obviously referring only to the short-run benefits of competition. In the long run, of course, such competition in the railroad industry will lead to disinvestment, in which case both the industry and shippers will likely be seriously harmed. That is why, as the ICC recognized, contestability is the correct standard for railroads, not only in the long-run but in the short-run as well. In a contestable market, rates for end-to-end services will rise to SAC (or revenue adequacy) and may be

sufficient to allow all of the current providers of non-bottleneck services to remain. It is wrong, therefore, for Dr. Borts to say that the present system deprives the shipper of the "benefit" of competition. So long as the rate is at or below the sustainable level -- the SAC for the entire route -- the shipper is receiving all the genuine benefits of competition, that is, all the benefits that it would receive in a contestable market.

Where a "bottleneck" railroad exists and the end-to-end service is not subject to effective competition from product or geographic competition, the Board will be required to regulate end-to-end rates in order to emulate the competitive outcome. The question is not whether to regulate, but how. Dr. Borts' approach -- which would require the Board to set rates for "bottleneck" portions of movements and to mandate routings and interchanges -- is not "competition" but regulation. As we show, it is bad regulation and is contrary to the public interest.

The ultimate goal of competition, of course, is to maximize consumer welfare. Consumer welfare is not maximized by deteriorating rail facilities, and competition is truly defeated when one of the competing railroads disinvests and eventually exits. That is exactly what would happen under Dr. Borts's approach: a railroad would exit as quickly as possible if it could not recover its fixed and common costs and would be doomed to revenue inadequacy. Prices at levels that are insufficient to sustain a long-run supply of efficient rail services, and draw new investment to the networks, would be an illusory "benefit" of the kind of "competition" that Dr. Borts envisions. Again, in a contestable market, prices for the end-to-end services would rise to SAC (or revenue adequacy). That competitive outcome is the only outcome that maximizes consumer welfare.

As we stated in our opening testimony, the best way to promote competition beyond the bottleneck "is to ensure that the bottleneck carrier does not price to foreclose efficient routings." Baumol/Willig V.S., p. 8. That is what the present system does, and what the proposed alternatives would not do. Under those alternatives, the bottleneck railroad's incentive would be to extend the bottleneck, as we have already noted. Since the bottleneck railroad would not benefit in any direct way by using the more efficient route, its incentive to do so would be minimal. And, as we stated in our opening statement and will reiterate below, the bottleneck railroad would have no incentive to invest in order to reduce the costs of interchange with the more efficient connecting carrier. See Baumol/Willig V.S., App. B, pp. 4-6.

Dr. Borts argues, however, that the shipper should be able to choose the connecting railroad because the bottleneck carrier will "squeeze" its competitors by charging them a price so high that it forces them out of the market. Assertions that the bottleneck carrier can "squeeze" its competitors are not new. They were long-ago considered by the ICC, which designed its competitive access rules (which Dr. Borts never once mentions in his statement) precisely to deal with this possibility. Dr. Borts long ago recognized that regulatory intervention is never justified to preserve market share for a railroad that provides a less efficient movement than a competitor.² He does not now question the view that under the present system, the bottleneck railroad is enabled to identify the most efficient connecting carrier. See Borts V.S., p. 7. He never provides a plausible reason why a bottleneck carrier

² Railroad Accounting Principles Board, Colloquium (June 18-19, 1986), Transcript, p. 215.

would have any incentive not to utilize the most efficient route. Indeed, he states that whether the bottleneck carrier will utilize a connecting carrier "depends on the profitability" of moving the traffic in single-line or joint service. Borts V.S., p. 9. We can think of no better way to ensure efficient outcome. As we have shown in various proceedings before the ICC, and as history confirms, the pursuit of profits by railroads subject to CMP does ensure efficient routing and enhanced productivity.

We need only add that the bottleneck railroad has an unequivocal incentive to facilitate continuation of a more efficient route. Continuation of a more efficient route requires that the more efficient connecting carrier earn sufficient revenue to maintain and replace its facilities. The term "squeeze" might be taken to mean that the bottleneck carrier will deny the more efficient connecting carrier adequate revenues by forcing the connecting carrier's share to something at or close to its direct variable costs. If that is Dr. Borts's intended meaning, he is mistaken. The bottleneck carrier will have every incentive to enable the more efficient connecting carrier to earn the revenues that it needs to maintain, replace, and improve its system, because that will reduce the overall costs of the bottleneck carrier and thereby facilitate its attainment of adequate revenues.³

Dr. Borts quotes our testimony in the non-coal rate guidelines proceeding, where we stated: "'Competitive access' becomes an issue only where a carrier controlling a 'bottleneck' segment engages in a predatory price squeeze or refusal to deal with a more

³ Thus, the bottleneck carrier does not have anything to gain by "squeezing" the more efficient connecting carrier out of the market. The bottleneck carrier is already able to price its share of the move at an efficient level, making itself better off when it uses the more efficient route but enabling the more efficient connecting railroad to earn adequate revenues so that it does not exit or allow its more efficient route to deteriorate.

efficient connecting carrier for the purpose of preventing the connecting carrier from competing in the market." Borts V.S., pp. 9-10.⁴ From this statement Dr. Borts concludes that we "implied" that bottleneck rates should always be regulated. Id. This conclusion is the very opposite of the meaning of the testimony that he quotes. We were expressing the position that only predatory behavior by the bottleneck carrier should be regulated, as should be evident from our reference to a "predatory price squeeze or refusal to deal." Predatory activities, of course, are those that exclude from the market firms whose efficiency would otherwise make it possible for them competitively to serve the customers in that market. The predator must sacrifice profits it could earn through efficient service in the hopes of recouping its losses through monopoly pricing once it has driven its competitors out of the market. We are back to the point that because of the SAC ceiling for end-to-end service, if for no other reason, a rational bottleneck carrier does not have any incentive to undertake predation in relation to interlining. That conclusion is further supported by the Board's competitive access rules, which recognize that the bottleneck carrier has an incentive to use the most efficient route, and which, accordingly, are designed to prevent only truly predatory activities.⁵

⁴ Dr. Borts is quoting here from our testimony in Ex Parte No. 347 (Sub-No. 2), Rate Guidelines -- Non-Coal Proceedings, Joint Statement of William J. Baumol and Robert D. Willig filed October 6, 1986 on behalf of the AAR, at p. 4.

⁵ Dr. Borts wisely does not suggest that the bottleneck carrier might endure reduced contribution from using the less efficient route in the hope that someday the competitive carrier will exit, the rail assets will be dismantled, the bottleneck will then be extended to the entire move, and the bottleneck carrier will then be able to recoup its diminished earnings by charging monopoly rates. The lack of realism of such a predatory scenario is obvious, not only because rail assets are long-lived but because the limitation of end-to-end rates to SAC, together with other forms of competition, would preclude recoupment.

Dr. Borts states that shippers, too, will be motivated and able to identify the most efficient connecting carrier. *Id.* Let us assume that Dr. Borts is correct that bargaining by shippers will be as efficient and effective as bargaining by railroads in identifying the most efficient connecting carrier. Under the present system of regulation, shippers today are not denied the opportunity to take the initiative -- to identify the more efficient connecting carrier and offer to split the gains from the cooperation. Under Dr. Borts's approach, however, the one party that would be unable to make any additional profit from using the more efficient connecting carrier would be the bottleneck carrier. It would, therefore, have diminished incentives to cooperate. Under the present system, by contrast, if the shipper identifies a more efficient connecting carrier, then the shipper, the bottleneck railroad, and the more efficient connecting carrier, all can be better off.⁶

In addition to ignoring the opportunities that shippers already have under the present system of CMP for end-to-end service, Dr. Borts's assertion says no more than that his alternative is not worse than the present system. That minimal claim is not a reason to abandon the present system. The reasons not to abandon the present system remain unanswered. We cannot repeat too often that the shift that Dr. Borts urges will do nothing less than deny railroads the opportunity to recover the fixed and common costs of the

⁶ For example, Dr. Borts discusses a shipper that wants to shift to a different source of coal. If the carriers are to have any greater efficiencies to share, the shipper must find the shift worthwhile. With respect to the bottleneck carrier's incentives to pass through some of the efficiencies, if the shipper identifies a more efficient route, the resultant cost-reduction means that the profit-maximizing price for the end-to-end service also decreases. The bottleneck carrier increases its profits by increasing its volume. The bottleneck railroad therefore has an incentive to split the gains with the shipper. The ICC recognized this point in Burlington Northern -- Control & Merger -- Santa Fe Pacific Corp., Docket No. 32549, slip op., p. 75 (August 23, 1995).

network and thereby reduce competition by ensuring that the non-bottleneck services are forced to exit, thus really damaging the very shippers whom Dr. Borts represents.

Further, Dr. Borts betrays a static view of efficiency in this context. His approach ensures that the railroads will make fewer efficiency-enhancing investments in the rail infrastructure. Under Dr. Borts's approach, the bottleneck railroad would receive the same revenues regardless of which connecting railroad carried the traffic over the competitive segment. As we pointed out in our opening statement, in such circumstances the bottleneck railroad "is given little incentive to expend its resources maintaining or improving interchanges with other railroads." *Baumol/Willig V.S.*, App. B, p. 5.

Dr. Borts states that the present system of rate regulation "would have the perverse effect of reducing the competing railroads' incentives to operate more efficiently." *Borts V.S.*, p. 14. In view of the dramatic increases in rail productivity under the present system, we can only wonder at this assertion. We are aware of no data that suggests that railroad productivity gains, or investments, are less for traffic for which railroads must compete as connecting carriers than they are for traffic that railroads move single line. Single-line moves are generally more efficient than interline moves, but we see no evidence that the railroad incentives for improving efficiency are less on interline moves. On the contrary, being more efficient is the only way to win the competition to become the connecting carrier. Dr. Borts also ignores the fact that if the benefits of efficiency go to the shipper, as he urges they should, the effect on the connecting carriers' incentives will be the same as if the benefits go to the bottleneck railroad.

B.

Dr. Borts argues that the present system is "contrary to Congress' intent in limiting regulation to noncompetitive rates." Borts V.S., p. 12. As a legal argument, this is outside our expertise, as it is outside that of Dr. Borts. As a policy argument, it reflects the erroneous notions of "competition" that we have already discussed. Dr. Borts's approach would lead to rate regulation on the bottleneck portion of moves for which the end-to-end rate (for the bottleneck and competitive segments) is below SAC. A rate that is below SAC is a competitive rate. Yet Dr. Borts would regulate that competitive rate by segmenting it and applying the SAC ceiling separately to the bottleneck portion. It is Dr. Borts's alternative that would apply regulation to competitive rates. The present system has been carefully designed to avoid such inappropriate and counterproductive regulation.⁷

Dr. Borts states that the shipper "needs relief only on the bottleneck portion of the overall movement, and not where the carriers compete for traffic between the origin . . . and the interchange." Borts V.S., p. 4. The shipper "needs relief" on neither segment. It "needs" relief only where the rate from the origin to destination is above SAC; and that relief it can obtain under the present system.

⁷ PP&L in its brief asserts that "there is no need to use SAC as a surrogate for competition where there is real competition," and, in support, quotes Dr. Baumol's statement in the coal rate guidelines proceeding that "the stand-alone cost test is unnecessary where there is direct, indirect or potential competition." PP&L Br., p. 21 (quoting Ex Parte No. 347 (Sub-No. 1), Coal Rate Guidelines - Nationwide, Joint Statement of William J. Baumol and Robert D. Willig filed April 13, 1982 on behalf of the Eastern and Southern Railroads at p. 59 (emphasis in original)). Of course Dr. Baumol's statement there was referring to competitive conditions for the end-to-end service. PP&L completely misconstrues the point.

C.

Dr. Borts finds a prospect that rates would increase under the "intermediate" proposal where today the sum of the SAC for the bottleneck and the division or rate offered by the connecting carrier is less than 180 percent of variable cost. Borts V.S., p. 13. Dr. Borts has it backward. Current rates or revenue shares could only remain the same or decrease under either the "intermediate" proposal or the shipper proposal. Current rates and revenue shares are driven by the market (subject to the SAC cap), not by any relation to variable cost. If rates are below the jurisdictional threshold today, it is because competition has pushed them there. If the Board were to adopt the "intermediate" proposal, that same competition would remain.

D.

Dr. Borts's final argument in support of the shipper proposal is that there is a "practice" of regulating bottleneck carriers in other industries. Borts V.S., p. 18. Regulation in other industries provides no support for the regulation that Dr. Borts is urging here. In the natural gas industry, the combination of regulated rates for the pipeline and competitive rates at the wellhead can produce an efficient price for the delivered product -- a price that allows the recovery of all pertinent efficient costs, both incremental and fixed and common, and no more. We discussed these concepts in our opening statement in connection with electricity. Baumol/Willig V.S., pp. 29-30. Where the competitive portion is close to contestable, or where there are no significant economies of scale in the competitive segments, regulation of only the bottleneck does not preclude final prices that are sufficient

to generate adequate revenues. Rail services do not satisfy any of these criteria. The same analysis distinguishes telecommunications, Dr. Borts's other example, as well.

We note that PP&L in its comments, but not Dr. Borts, mentions oil pipelines as an industry in which FERC, in effect, "has deregulated competitive rates." PP&L Br., p. 25. The "market dominance" requirement of the Staggers Act, as carried out in the present system of rail rate regulation, does the same thing. The issue here is not whether rates subject to effective competition should be regulated. The issue is whether, even when the end-to-end service is subject to effective competition (or can be priced that way under CMP), the Board should nevertheless separately regulate the bottleneck portion of the move. That would be the exact opposite of allowing competition to work in effectively competitive markets, as we have already explained.

II.

In this part we respond to certain points in the statement of James N. Heller (submitted on behalf of Western Fuels Association) regarding the role revenue adequacy plays in the Board's rules for setting maximum rail rates. We recount the proper standards for determining revenue adequacy and describe why the Board's current standard -- the cost of capital -- correctly measures revenue adequacy and the proposed measures used by Mr. Heller are misleading and incorrect. The arguments made by Mr. Heller are not new. We have addressed them,⁸ and the ICC has rejected them, before.

⁸ See, e.g., Ex Parte Nos. 393 and 393 (Sub-No. 1), Standards for Railroad Revenue Adequacy, Verified Statements of William J. Baumol filed January 23, 1981 and September 23, 1983 on behalf of the AAR; Ex Parte No. 393 (Sub-No. 1), Standards for Railroad Revenue Adequacy, Joint Verified Statements of William J. Baumol and Robert D. Willig filed August 4, 1986 and September 3, 1986, on behalf of the AAR; Ex Parte No.

A.

Maximum rate regulation must provide the railroads the opportunity to earn adequate revenues, properly defined, over the long run.⁹ A firm earns adequate revenues when those revenues are sufficient to enable it to attract (or retain) the capital needed for the maintenance, replacement, and modernization of its assets. That is, revenues are adequate when they are sufficient to cover the replacement cost of the assets needed to provide the services demanded by customers. If revenues are lower than this, the assets cannot be maintained and replaced. The deterioration and eventual disappearance of the firm's services are a foregone conclusion. Private enterprise simply refuses to continue to supply capital to activities that do not cover their full costs, including a competitive return to capital.

There is no serious disagreement with this basic premise. Railroads must be permitted to earn revenues sufficient to attract new investment and induce reinvestment in the railroad. It should be equally obvious that railroads can attract that investment only if they are able to offer investors -- be they lenders or stockholders -- a competitive rate of return on rail investments.

The market for capital funds is one of the most competitive in the economy. It offers no room to a firm that cannot meet the competition for funds by other firms that also seek capital. If there is plentiful demand for funds by firms that are willing and able to

347 (Sub-No. 1), *Coal Rate Guidelines -- Nationwide*, Joint Verified Statements of William J. Baumol and Robert D. Willig filed May 11, 1981, April 13, 1982, July 28, 1983, and October 4, 1984, on behalf of the Eastern railroads.

⁹ The maximum rate rules should also not permit the railroads to earn more than adequate revenues, again properly defined, over the long run.

offer 12 percent interest, for example, then no funds will be available to a similar firm that can offer only 8 percent. The latter may be able to raise capital for a while by mortgaging its future; it can short-change its past investors in order to provide its future investors the 12 percent return required by current market conditions. But no firm can short-change past investors indefinitely, because the market soon learns how fragile its promises are and at some point the past investors rebel, refusing to permit management to make further capital investments.

Thus, in defining revenue adequacy and in imposing any limitations on earnings, regulators cannot escape the following principles:

(A) The regulated firm's overall rate of return must be allowed to equal the returns currently required by investors who have the alternative of making other investments with similar risks elsewhere in the economy. That is, it must be permitted to equal the returns demanded by the market.

(B) Adequacy of revenues can be judged only by comparison with earnings anticipated by investors who may invest outside the regulated industry, not by comparing the regulated industry's earnings with the market value of its equity. The market prices of a regulated firm's securities will automatically adjust themselves downward to match any act by the regulators that restricts the earnings of the firm below a compensatory rate of return. Thus any comparison of returns on equity within the industry will appear to justify any earnings restrictions, no matter how inappropriate.

(C) In determining the regulated firm's revenue requirements, the rate of return must be applied to an investment base that covers the economic replacement cost.

determined consistently with CMP, of all of the firm's facilities. Otherwise, the regulators will be preventing the firm from earning sufficient revenues to replace those facilities.

(D) The resulting earnings figure must not be used as a rigid ceiling.

Otherwise, the firm will not have the ability to earn this figure over the long run, since it will be precluded from ever making up revenue shortfalls which are sure to occur as the result of temporary fluctuations in the demand for its services.

As we stated above, the primary role that revenue adequacy plays in maximum rate regulation is that for regulated rates to make sense economically they must never be incompatible with these principles. The rates must not be set at a level that prevents the railroads from earning adequate revenues. Of course, no prices can guarantee that a railroad will earn adequate returns overall. If the demand for a railroad's services is insufficient, even appropriate prices cannot be expected to lead to profitable operations. But the railroads must be given the opportunity to earn adequate revenues, which can happen only if they are permitted to charge appropriate prices. It is then up to the railroads to take advantage of that opportunity by means of economy of operation, quality of service, and effective marketing efforts.

B.

Mr. Heller claims that measures other than the cost of capital show that the financial health of the railroads is strong and that the Board should no longer rely on the cost of capital to determine adequacy of revenues. In essence, he argues that the cost of capital measure must be incorrect because the railroads are doing well, even though they are not

earning adequate revenues. Mr. Heller confuses the issue by referring to meaningless concepts of financial "health."

Doing "well" is a relative measure; it does not mean that the railroads are doing well enough to continue their operations. As we explained above, if investors do not expect to earn the market rate of return, they will not continue to invest in the railroad, and without that investment, the railroads cannot continue their services in the long run. Mr. Heller never explains how the railroads are to continue to attract investment if they are denied the opportunity to provide their investors with the market rate of return.

Most of Mr. Heller's arguments are centered around the observation that the railroads are stronger today than they have been in the past. Heller V.S., p. 9. We do not disagree; indeed, the Board's annual revenue adequacy determinations, which use the cost of capital measure, show the same result. But the fact that the railroads are becoming financially stronger does not necessarily mean that they are earning adequate revenues. And Mr. Heller's measures do not reveal whether they are.

Mr. Heller argues that over the past five years, the railroads' average operating ratio has improved, from 87.1 percent to 80 percent. Heller V.S., p. 9. He does not argue that an 80 percent operating ratio is sufficient for the railroads to earn adequate revenues and, indeed, does not even discuss the point. The unanswerable question, what operating ratio is "adequate," is just one of the reasons that the ICC rejected the use of such

a measure in the past. See Standards for Railroad Revenue Adequacy, 3 I.C.C.2d 261, 266 (1986).¹⁰

Similarly, Mr. Heller notes that the railroads' productivity has increased since 1980 and that this has led to increased profits for the rail industry. Heller V.S., pp. 12-13. Again, though, while he claims that "this evidence reinforces the significant improvement in the profitability of the rail industry," he does not indicate how we are to tell whether the industry is profitable enough to continue its operations at their current levels. As we have shown above, only the cost of capital measure can do that.

Mr. Heller also notes that over the past five years railroad stocks have outperformed the S&P 500 stock index. Heller V.S., p. 11. In fact, the railroads underperformed the S&P 500 between 1980 and 1991 and between 1994 and the present. AAR Opening Comments, Anestis V.S., pp. 23-24 & Ex. K. In any event, as is true with Mr. Heller's other claims, this argument confuses the level of earnings with the direction of their movement. In a period where the cost of capital is 12 percent, for example, a change in earnings from 4 percent to 7 percent is indeed a rise, and, everything else equal, will be reflected in the relative rate of increase in the price of the company's stock. Yet it still leaves earnings woefully deficient.

As noted in the opening statement, since the passage of the Staggers Act, the railroads' financial condition has improved dramatically, in large part as a result of the

¹⁰ Of course, the only operating ratio that is sufficient is one that allows the railroads to pay their investors the market rate of return so that the railroads can continue to attract and retain the necessary capital to continue their operations. That ratio is likely both to differ among railroads and to change over time.

Board's current rate regulations. Even more important, investors have had no reason to believe that regulators would foreclose adequate earnings in the future. It is therefore not surprising to find that stock prices, dividends and returns on investment have increased over this time. Again, though, the fact that the railroads are financially stronger than they were in the 1970s, when many railroads were near bankruptcy and others actually had been taken over by the federal government, hardly suggests that the railroads have now achieved long-term revenue adequacy. Similarly, the fact that the railroads' earnings have at times surpassed stock analysts' predictions indicates only that the railroads have at times done better than expected, not that those earnings are sufficient.

Mr. Heller also argues that railroads must be earning adequate revenues because they have purchased and merged with other railroads. Heller V.S., p. 11. But this shows only that the railroads believe they can improve their chances of attaining long-term revenue adequacy by consolidating their operations and that the acquisition prices of the railroads have been realistic. In the recent mergers approved by the Board, the railroads have projected hundreds of millions of dollars of savings and other synergies each year. It is likely that the possibility of achieving these savings (as well as other efficiencies) is what has impelled the railroads to merge. This also suggests, in part, why merging railroads are willing to pay more than the market value placed on the railroads by individual investors; quite simply, the railroads are worth together more than the sum of their individual parts.

That the railroads have finally begun to strengthen their financial positions can by no means be equated with achieving long-term revenue adequacy. The ICC rejected

similar arguments in the past. In refusing to replace the cost of capital with indicators that measured only the short-term financial condition of the railroads, the ICC stated:

[Those indicators] were and are inappropriate as long-term indicators of long-term revenue adequacy and are especially inappropriate as measures to limit rail pricing flexibility which is one of the roles the [Staggers] Rail Act accords to revenue adequacy findings. If we adopted [those standards] here, we would likely in the next few years find ourselves denying a railroad the pricing flexibility necessary to obtain long-term revenue adequacy simply because the railroad was making some progress towards achieving that goal. In short, we would be assigning the railroads the Sisyphean task of working toward revenue adequacy, and every time it came close robbing it of the very means it had used to get there. We do not believe this is desirable nor do we believe it was intended by Congress.

Standards for Railroad Revenue Adequacy, 364 I.C.C. 803, 808 (1981).

Mr. Heller raises other arguments. He claims that the industry's "free cash flow" indicates the railroads' financial condition. Heller V.S., pp. 9-10. Mr. Heller defines "gross cash flow" as the railroads' continuing net income plus depreciation and "free cash flow" as that amount less dividends and capital expenditures. Gross cash flow simply reflects the amount of funds available to make investments in the rail system; it does not indicate whether a railroad should make those investments nor whether the amounts of revenue available are sufficient to maintain, repair and replace the railroads' assets.

Mr. Heller also examines the railroads' return on "average total capital." Heller V.S., p. 10. The ICC rejected similar measures before. The return on average total capital is a mixture of the return on the railroads' average long-term debt -- in other words, the railroads' embedded cost of debt -- and the return on their average equity. One of the many problems besetting use of the embedded cost of debt, rather than the market cost, is that it whipsaws the rail industry. Railroads face intense competition in most of their

markets. During those times when the embedded cost of debt is higher than the current cost of debt, that competition prevents railroads from earning their embedded cost. If, when the embedded cost of debt is lower than the current cost, regulation prevents them from earning the current cost, the railroads will never be able to make up the shortfall. In simple terms, limiting the railroads to earning the embedded cost of debt will prevent them from covering their cost of capital over time.

Further, as already noted, determining revenue adequacy by examining the railroads' return on equity -- the return on the market value of their stock -- is circular and nonsensical. The stock market is competitive and efficient. No matter how inadequate the revenues of the firm may be (and thus no matter how inadequate the return to investors may be initially), the price of the stock will always be at the point where the rate of return on the new market value equals the market rate of return. This is why the ICC rejected such measures in the past. Regardless of the adequacy of the earnings permitted by the regulators, the market will adjust the stock prices so as to appear to justify the earnings restrictions.¹¹

Mr. Heller also claims that the Board's current method of calculating the cost of capital is incorrect for three reasons: it includes special charges as expenses; it values

¹¹ For example, if the cost of equity capital is 10%, and a firm is expected to earn \$3 per share, its stock price will be \$30. If regulators constrain the prices the firm may charge so that it is now expected to earn \$1.50 per share, the price of its stock will quickly drop to \$15. The firm will appear to be paying the market rate of return, but that will be true only with respect to new investors; past investors will be earning well below that level and any future investors will be quite leery of placing their capital at risk in such a firm.

assets using acquisition cost when a railroad is purchased by another; and it uses R-1 data which are inconsistently reported by the railroads.

Regarding special charges, surely no proper revenue adequacy determination can ignore any major cost of rail service. We understand that the Board has specifically determined that special charges are "legitimate business expenses that are a normal and directly related cost of running a railroad." Railroad Revenue Adequacy -- 1988 Determination, 6 I.C.C.2d 933, 944 (1990). As such, they must be included in any determination of the adequacy of revenues. *Heller V.S.*, pp. 5-8.

Regarding the Board's use of acquisition cost to value the railroad's assets, as we have testified on several occasions, the only economically proper investment base to use in determining adequacy of revenues is the replacement cost of the railroads' assets. In any event, shippers cannot logically or consistently argue for the use of acquisition cost where the predecessor cost is above acquisition cost, as they did only a few years ago,¹² but argue for predecessor cost when acquisition cost is higher, as Mr. Heller appears to be doing now.

Finally, regarding R-1 data, Mr. Heller claims that the railroads do not provide the same results on the Board's R-1 reports as they provide to their stockholders. He does not give any reason, however, why the R-1 data (which conform to the Board's accounting and reporting requirements) are "incorrect." Further, most of the "discrepancies" he identifies result from the R-1's exclusion of data related to holding companies, non-rail

¹² See Railroad Revenue Adequacy -- 1988 Determination, 6 I.C.C.2d at 935-42. In that proceeding, EEI also stressed that the Board "should not switch methodologies simply because they happen to affect revenue adequacy determinations. One method should be adopted and used, regardless of the results." *Id.* at 939. On this last point, EEI was assuredly correct.

subsidiaries or non-Class I railroads. Thus, the stockholder reports, which report results for the holding companies' consolidated operations, and the R-1 reports legitimately include different data. Obviously, in determining whether the railroads' revenues are adequate, revenues from non-rail operations should not be considered.¹³ Railroad data that have been reported in a consistent form across railroads, as required by the Board, are a better basis upon which to make revenue adequacy determinations than the data presented in shareholder reports, which, for perfectly proper reasons, will differ among companies.

¹³ In recent years, the railroads and their holding companies have received significant revenues from their non-rail operations. See AAR Opening Comments, Anestis V.S., p. 18.

VERIFICATION

I, Robert D. Willig, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement. Executed on October 13, 1996.


Robert D. Willig

VERIFICATION

I, William J. Baumol, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement. Executed on October 23, 1996.


William J. Baumol