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Kansas City-Memphis. BN/Santa Fe has the only direct route here (130 miles shorter than UP's), and handles

to UP's and SP's . UP is circuitous, and SP even more so. The merger can only increase competition.

Kansas City-Houston. BN/Santa Fe competes against UP and SP here, taking advantage of the route and terminal flexibility that came from combining the parallel lines of BN and Santa Fe. KCS is also a strong competitor for grain. These railroads handled SP handled

The upgrading of the OKT route so that bulk traffic can avoid Kansas City, directional operations between Dallas and Houston, and the flexible use of facilities in Texas will greatly improve UP/SP service. Intermodal schedule time will be 16 hours shorter than UP's present schedule, which requires a connection in St. Louis.

Kansas City-New Orleans. KCS has by far the best route, and water is also very strong, with tonnage more than twice that of rail. UP handled only and SP, whose route is circuitous (and will remain so even with the Kansas City-Fort Worth rights it received in BN/Santa Fe), less than . SP's route is 339 miles longer than KCS' and 247 miles longer than UP's. In the settlement, BN/Santa Fe will gain a new single-line route that is a good deal shorter than the route SP has now.

St. Louis/Northeast-Dallas. UP had here, with . BN/Santa Fe, with

. Consolidation of Santa Fe and BN traffic on BN's direct route (which is 240 miles shorter than the Santa Fe route), and exploitation of terminal flexibility in Dallas/Fort Worth, will make BN/Santa Fe a significantly stronger competitor. Also, KCS gained haulage rights over BN/Santa Fe between Neosho, Missouri, and St. Louis in a settlement in the BN/Santa Fe case, which gives it a competitive St. Louis-Dallas route. The UP/SP merger will strengthen competition, thanks to directional operations and run-through service to and from Eastern carriers.

St. Louis-Memphis. IC has an excellent route, and BN/Santa Fe also has a direct route. These railroads handled between them in 1994, SP and UP only Water tonnage is almost twice rail tonnage. The merger can only strengthen competition against IC and BN/Santa Fe in this lane.

St. Louis/Northeast-Houston. Here, BN/Santa Fe competes against UP and SP. UP and SP had between them in 1994, and BN handled the remainder, largely over a circuitous route via Springfield, Missouri. KCS will gain a role in St. Louis-East Texas traffic (e.g., to and from Port Arthur and Beaumont) with the Neosho-St. Louis haulage rights it secured from BN/Santa Fe. The Houston-Memphis rights that BN/Santa Fe will receive under the settlement will give it a direct, highly competitive route that is significantly shorter (by 124 miles) and faster and has much less rise and fall and

curvature than its present route. The merger will also strengthen UP/SP, as a result of directional operation, more run-through trains, and more pre-blocking.

St. Louis-New Orleans. IC has by far the shortest and best route and the only intermodal service. Water tonnage is nearly nine times rail. BN/Santa Fe also competes on an interline basis. These railroads had in 1994, UP and SP. KCS, using its Neosho-St. Louis haulage rights, will also gain a role in this market. SP's route, via Houston, is highly circuitous. In the settlement, BN/Santa Fe will gain a new single-line route that is shorter than SP's current route.

Dallas-Memphis/Southeast. UP handled SP was third For traffic to and from the Southeast, KCS has a highly competitive route via Meridian, Mississippi. BN/Santa Fe, following its merger, has improved its service in this lane, in conjunction with its new California-Southeast service. The UP/SP merger will strengthen competition through directional operation of UP and SP lines and additional pre-blocking of traffic for CSX, NS and IC.

Dallas-Houston. BN/Santa Fe is very strong here, with the shortest route. The merger of BN and Santa Fe, combining parallel lines, gave them new route and terminal flexibility. BN/Santa Fe handled and SP only. Directional operation and the ability to handle 286,000-lb. cars will make UP/SP a stronger competitor.

Dallas-New Orleans. KCS, both single-line and in joint-line routings with BN/Santa Fe, is the strongest competitor here, with . SP had only . The UP/SP merger will provide a 114-mile saving, and a transit time reduction of several days, to SP shippers. The settlement gives BN/Santa Fe a new single-line route that is better than SP's present route.

Memphis-Houston. UP and SP, with the only direct routes, had . The settlement gives BN/Santa Fe a direct, highly competitive single-line route. The merged UP/SP will greatly improve service through directional operations. With two stronger competitors, competition will be intensified in this city-pair.

Memphis-New Orleans. Here, IC's excellent route is the only direct route. Water tonnage exceeds rail. KCS, NS and UP all have circuitous routes; SP's route is even more circuitous. BN/Santa Fe handles some traffic on an interline basis. In 1994, UP had only and SP only . In the settlement, BN/Santa Fe gains a new single-line route that is shorter than SP's present route. Competition will clearly be stronger.

Houston-New Orleans/Southeast. UP and SP have the only direct routes, and handled between them in 1994. BN/Santa Fe handled some traffic to New Orleans in interline service, and traffic to and from the Southeast over Birmingham and in conjunction with KCS over Meridian. Water is

very competitive for bulk traffic, with tonnage exceeding the total for rail. Under the settlement, BN/Santa Fe will gain a direct, highly competitive single-line route between Houston and New Orleans, and competition in this corridor will be stronger than it is today.

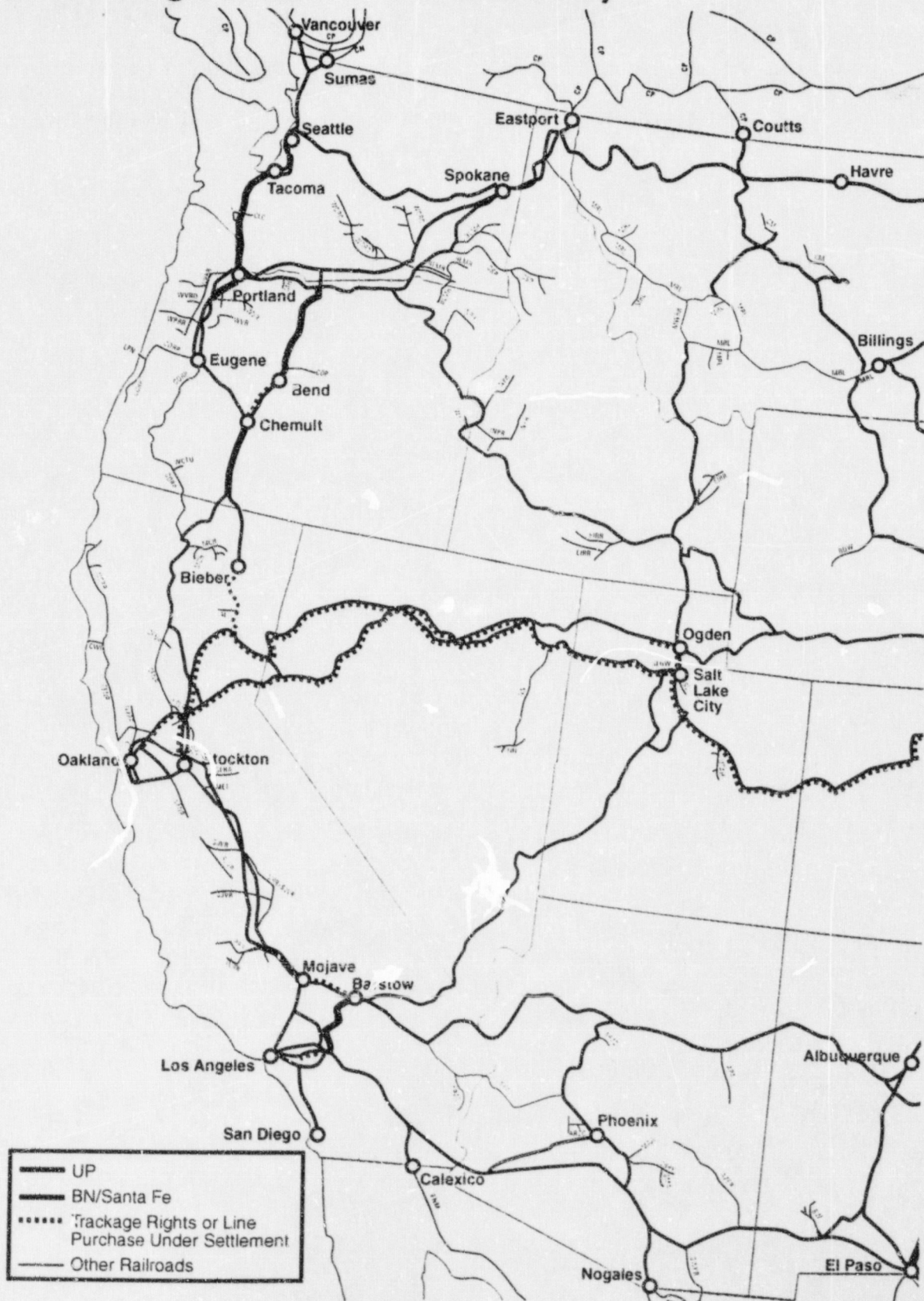
4. West Coast North-South

As already discussed, the merger and the settlement will have revolutionary implications for rail competitiveness in the West Coast north-south market (see Map #38). Rail volume in this overall corridor is already large (15 million tons), rivalling the Pacific Northwest-Midwest/Northeast, Northern California-Midwest/Northeast and Southern California-Midwest/Northeast flows. Truck tonnage is even larger -- twice rail between the Pacific Northwest and California, and more than seven times rail between Northern California and Southern California. Water movements are also substantial. The merger and the settlement will create extensive new UP/SP and BN/Santa Fe single-line service all up and down the West Coast from Canada to Mexico. And they will greatly increase the competitiveness of rail against truck and water for traffic flows in the corridor.

In agreeing to create a new BN/Santa Fe single-line route via Bieber, the Applicants have gone far beyond any competitive issue. The BN-Bieber-UP-Stockton-Santa Fe route has not been a competitive factor; it has two interchanges, service only three times a week, and only moves 6,000 cars a year. Thus,

Principal Far West Routes

(Reflecting BN/Santa Fe Settlement)



the settlement injects wholly new competition where there is no competition today.

The proportional rate arrangement agreed to between BN/Santa Fe and UP/SP adds still another important element of competition in this corridor, for traffic moving to or from BN/Santa Fe points in Washington, Idaho and Montana and the Canadian interchanges at Vancouver, Sumas and Coutts. And the Bend-Chemult trackage rights shorten UP/SP's routes to and from Eastern Washington, Idaho and the Eastport gateway.

The merger and settlement intensify competition between every pair of major West Coast cities. Between Seattle and Portland, UP/SP and BN/Santa Fe will run more trains, in conjunction with onward service up and down the coast. Between Seattle and Oakland, and between Seattle and Los Angeles, there will be two new single-line routes. Between Portland and Oakland, there will be a new BN/Santa Fe route and a new dedicated UP/SP intermodal train. Between Portland and Los Angeles, there will be a new BN/Santa Fe single-line route. And between Oakland and Los Angeles, there will be a new dedicated intermodal train, better equipment repositioning, and new single-line service for UP shippers (and for SP shippers to and from UP industries).

J. Every "2-to-1" Shipper Will Enjoy Stronger Competition

As I have said, the Applicants resolved from the outset to introduce a second, strong rail competitor at every point that would go from two serving railroads to one in the event of an

unconditioned merger. If possible, we wished to accomplish this by agreement -- and we did succeed in reaching such an agreement, with the strongest possible rail competitor, BN/Santa Fe.

In taking this step, we went beyond what might strictly be required by an analysis of the competitive effects of the merger. Some "2-to-1" shippers enjoy such strong truck or source competition or make such minimal use of one or both of their rail alternatives that they will lose little or no competition as a result of the merger. But the Applicants wanted to eliminate any possible issue as to such traffic, recognizing that in the process we would in many cases be introducing stronger competition than exists now.

We reviewed UP and SP traffic data and carefully investigated the actual facts as to rail service in order to identify to the best of our ability all rail facilities that are served by UP and SP and no other railroad.⁷⁹ All the "2-to-1" points are shaded on Map #1. We also regarded competitive intermodal and auto ramps in a municipal area as falling into

⁷⁹ We did not limit our search to stations served by only UP and SP. We also looked for shippers at stations served by three or more railroads who might have only UP and SP service, but found none. We have also carefully considered whether there might be any shippers who have a truck-rail transloading option today because UP and SP are independent railroads, but would have no such option after the merger. We have been able to identify no such shippers; as best we can determine, in all instances where UP or SP have the potential of moving traffic through a transload, BN/Santa Fe will continue to furnish a transloading option after the merger. Also, we included as "2-to-1" shippers three chemical plants at Mont Belvieu, Texas, that are presently exclusively served by SP, but that UP is seeking Commission authority to access through a build-in.

this category, though the ramps themselves are exclusively-served. All shortlines that connect to UP and SP and no other railroad were also treated as "2-to-1." In addition, we concluded that in two corridors, Houston-New Orleans and Houston-Memphis -- and only those two corridors -- UP and SP had the only genuinely competitive rail routes, and that traffic in those corridors should therefore be treated as "2-to-1" as well. This was clearly a conservative approach, since in both of these corridors other railroads had routes which, though circuitous, carried appreciable amounts of traffic.

The agreement we arrived at with BN/Santa Fe addresses all of these "2-to-1" situations. It also goes well beyond that, by giving BN/Santa Fe a through route in the Central Corridor, notwithstanding that BN/Santa Fe already has the premier route from California to the Midwest, and by giving BN/Santa Fe the link it needs to connect up its system on the West Coast and match the new UP/SP single-line service in the I-5 corridor.

The traffic at "2-to-1" points to which BN/Santa Fe will gain access under the settlement agreement amounted to some 750,000 units in 1994, accounting for over \$900 million in gross revenues. This figure would be even higher if Houston-Memphis and Houston-New Orleans traffic were added on the theory that those corridors are "2-to-1." (And of course BN/Santa Fe will also gain new and improved routes, under the settlement, for substantial additional traffic not included in this figure, such as I-5 Corridor traffic and Denver-Oakland traffic.) As detailed

in Part II below, only a part of this "2-to-1" traffic was projected in our Traffic Study be diverted to BN/Santa Fe, but all of it is opened to competition by the settlement agreement. And the "2-to-1" traffic that we projected that BN/Santa Fe would in fact divert -- even before considering the substantial other traffic that BN/Santa Fe would move over the rights (such as Twin Cities-Bay Area traffic rerouted to achieve major mileage savings) -- is more than enough to support solid train service for "2-to-1" shippers. For example, this traffic will support at least two trains a day in each direction (one intermodal and one manifest) between New Orleans and Houston and between Denver and Salt Lake City, and at least one train a day between Houston and Memphis, between Houston and Corpus Christi, and between Salt Lake City and the Bay Area.

The points at which "2-to-1" shippers are located are in eight states (Utah, Nevada, California, Texas, Louisiana, Arkansas, Missouri and Kansas).⁸⁰ The great majority will be served via BN/Santa Fe trackage rights, which will tie them in efficiently to the BN/Santa Fe system. Those points are listed in Exhibit A to the settlement agreement.⁸¹ A handful of small

⁸⁰ There are no "2-to-1" shippers in seventeen states that UP or SP serve: Oregon, Colorado, Oklahoma, Illinois, Tennessee, Wisconsin, Minnesota, Iowa, Nebraska, Wyoming, Washington, Idaho, Montana, New Mexico, Arizona, South Dakota and Michigan.

⁸¹ The Louisiana line sale, with retained trackage rights by UP/SP, preserved two-railroad competition at two other "2-to-1" points, as well as creating new two-railroad competition for numerous shippers along the line.

"2-to-1" points, such as Herington, Kansas, and Dexter, Missouri, were not covered by the trackage rights that we negotiated with BN/Santa Fe, and we agreed on an "omnibus" clause, Section 8i of the agreement, committing the parties to enter into arrangements, such as trackage rights, haulage or ratemaking authority, that will ensure two-railroad competition for jointly-served shippers at these points, as well as for any other "2-to-1" shippers that our investigation may not have located. All such points of which we are aware are listed in section 8i except one, the Union Electric Plant at Labadie, Missouri, 43 miles from St. Louis. That point is also covered by the "omnibus" clause, but BN/Santa Fe was agreeable to our entering into an arrangement with Union Electric for service by a different railroad (there are multiple candidates at St. Louis), or for some other form of continued rail competition. We are continuing to discuss this with Union Electric, but in all events the Labadie plant is covered by the "omnibus" clause.

The settlement agreement will yield more intense rail competition for "2-to-1" shippers than they have today. Every such shipper will have service from two stronger rail systems than at present, and will have single-line access to far more points than they can reach on a single-line basis at present. For example, shippers in Brownsville, Corpus Christi, San Antonio and New Orleans will gain entirely new single-line access to BN/Santa Fe points as disparate as Vancouver, Albuquerque, Billings, Minot, Sioux Falls and the coal mines of the Northern

Powder River Basin, and a second single-line route, in place of only one today, to points as disparate as the Twin Cities, Duluth/Superior, Seattle/Tacoma and Grand Island, Nebraska. BN/Santa Fe's routes from the "2-to-1" points to all major gateways are as direct, and in many cases more direct, than SP's present routes. BN/Santa Fe will be able to serve the "2-to-1" shippers either directly or via reciprocal switching at a switch charge that will be well below SP's present charges.

BN/Santa Fe will unquestionably be able to mount fully effective competition using the rights it will receive under the settlement agreement. Trackage rights on high-quality mainlines, such as those involved here, are the basis for very effective competition. Every major railroad in the United States relies substantially on trackage rights to compete. UP, for example, has trackage rights (a) over BN/Santa Fe between Riverside and Daggett, California, which are an integral part of our Los Angeles-Chicago mainline, (b) over BN/Santa Fe between North Portland Junction, Oregon, and Reservation, Washington, which are an integral part of our Seattle-Chicago mainline, (c) over SP between Illmo, Missouri, and Paragould, Arkansas, which are an integral part of our Chicago-Houston mainline, and (d) over KCS between Beaumont, Texas, and DeQuincy, Louisiana, which are an integral part of our Houston-New Orleans mainline.⁸² In 1992,

⁸² We also operate under a paired track arrangement, similar to trackage rights, with SP in Nevada as an integral part of our Oakland-Chicago mainline.

Santa Fe shifted its West Coast-Dallas/Fort Worth traffic onto trackage rights over UP from Sweetwater, Texas, to Fort Worth.

Shippers agree that the BN/Santa Fe agreement will create stronger competition at "2-to-1" points. Golden Aluminum Company states that BN/Santa Fe access to San Antonio will provide "improved competition." Duro Bag Manufacturing Company endorses the grant of rights to BN/Santa Fe to serve Brownsville:

"These trackage rights mean that the UP/SP merged system will compete with a second strong railroad serving Brownsville. BN/SF is a financially strong railroad with an exceptional route structure. Our Brownsville facility will consequently be connected on a single line basis to a number of new points in the Western United States. In particular, the merger will give us an additional single-line option from our Tacoma, Washington paper supplier to Brownsville. We expect that competition between two strong railroads will produce advantages that far exceed those services we receive today from competition between one strong and one weak railroad."

Short's Scrap Iron & Metal says:

"We are particularly pleased with that part of the settlement which grants trackage rights to BN/SF between Salt Lake City, Utah and California. Such new competition from a strong competitor should result in more favorable rates for a great part of our business."

And Kavanagh Associates testifies:

"Currently, Salt Lake City is served by two railroads, UP and SP. Our competitive choices, however, will be enhanced by the merger, because there will be two strong railroads competing in the same market. Today, competition is less effective because there is one strong and one weaker rail carrier serving Salt Lake City."

K. Shippers Now Served By Three or More
Railroads Will Enjoy Stronger Competition

The UP/SP merger will intensify competition for all shippers. Shippers in the "2-to-1" category will, as we have just seen, gain stronger competition. Exclusively-served shippers on both UP and SP lines will as well, for reasons I have already discussed at length. Still other shippers, such as BN/Santa Fe shippers who are covered by the proportional rate arrangement and shippers on the Southern Louisiana line that will be sold to BN/Santa Fe, will go from a single rail option today to two rail options after the merger and the settlement, clearly increasing competition.

Here, I focus on why competition will also be increased for shippers who are served by more than two railroads today, and will have the number of railroads serving them reduced by one. In many cases, this reduction will be to a number greater than two -- i.e., from 4 to 3, 5 to 4, etc. Shippers between competitive points in Chicago and St. Louis, for example, go from 7 to 6 (UP/SP, BN/Santa Fe, IC, NS, CSX, Conrail and Gateway Western), and shippers between common points in Chicago and Kansas City go from 6 to 5 (UP/SP, BN/Santa Fe, CP, NS and Gateway Western). I shall focus here, however, on shippers who go from three serving railroads to two, because that is the situation that has been highlighted by certain opponents of the merger, and because once it is established that these shippers

will enjoy stronger competition, it will follow even more clearly that the remaining shippers will.

Opponents of the UP/SP merger have claimed that the merger will produce a "duopoly," weakening rail competition. One of those opponents, KCS, has claimed that the traffic falling in the "3-to-2" category accounts for nearly \$4 billion in annual revenues.⁸³ I want to make two points in response.

First, and most fundamentally, the shippers who do go from three rail options to two as a result of the UP/SP merger will have stronger, not weaker competition. SP is a weak competitor that faces the prospect of becoming relatively less and less competitive in the wake of the BN/Santa Fe merger. UP is also at a competitive disadvantage compared with BN/Santa Fe. For all the many reasons I have discussed -- shorter routes, faster service, lower costs, more single-line service, and so on -- the merged system will offer a true competitive alternative to BN/Santa Fe as neither SP nor UP individually can. Moreover, with the settlement, BN/Santa Fe will be strengthened as well, and much further competition will be introduced throughout the West. Nor, as I explain further below, can there be any doubt that these two systems will compete to the full extent of their potential. For the reality is that where two strong railroads

⁸³ KCS-3, Grimm V.S., p. 4 ("There are another \$3.93 billion in revenues in BEA origin-destinations that would fall from 3-2 independent alternatives if merger is approved.").

with broad networks are up against each other in the marketplace, they do not collude -- they compete vigorously.

Second, claims like the one made by KCS grossly distort the facts. KCS' numbers are wrong: as I shall show, the amount of traffic that is even theoretically competitive among three Western railroads is much less than KCS alleges. And KCS' basic premise is wrong: the traffic that can theoretically be handled by three Western railroads is in fact very often not the subject of strong three-way competition. Rather, for most of it, SP is a weak competitor. Indeed, for large parts of it, such as high-end intermodal traffic, SP is not a competitive factor at all, and the real effect of the merger will be to create two rail competitors where there is only one -- BN/Santa Fe -- today, since neither UP nor SP can offer the transportation product that BN/Santa Fe is offering today.

Let me discuss each of these points in turn.

1. Competition for "3-to-2" Traffic Will Be Stronger

I have already explained at length the many ways in which UP/SP will be a stronger competitor against BN/Santa Fe than UP and SP can be separately. Only by merging can UP and SP offer the much shorter routes I have described, offer the expanded single-line service I have described, mount the more frequent and more reliable train service I have described, achieve the improvements in equipment utilization I have described, and so on. There can be no debate that these are major enhancements in competitiveness, and that they can only be

achieved by merger. The simple fact is that as a result of the UP/SP merger, both UP/SP and BN/Santa Fe will be stronger competitors than any railroad has ever been, and that only the merger can bring this about. It is also indisputable that the alternative is a weak SP that will fall farther and farther behind in the competitive race.

The Commission has often held that going from three railroads to two will increase, rather than diminish, competition, if the "character of the competition" is improved, such as by affording "more competitive routes" and "more diverse geographic competition" or bringing financial stability to a weak carrier.⁸⁴ As we have seen, that is precisely what this merger will do -- and the shippers who will be the beneficiaries of this stronger competition agree.

CSX Intermodal, Inc., SP's largest shipper, says in its statement in support of the merger (p. 3): "The UP/SP merger will result in one less Class I railroad. Nevertheless, there will be stronger competition than can be expected and is experienced today among the Western railroads."

American President Companies, UP's largest shipper, says (p. 5): "Overall, we believe that competition will be stronger as a result of the merger. At points where the UP-SP merger would otherwise have eliminated two-railroad competition,

⁸⁴ Norfolk Southern Corp. -- Control -- Norfolk & Western Ry. & Southern Ry., 366 I.C.C. 171, 223 (1982); Guilford Transportation Industries, Inc. -- Control -- Delaware & Hudson Ry., 366 I.C.C. 396, 411 (1982).

BNSF will have access by agreement with UP/SP so that there will be strong competitive alternatives in the future. At other points, competition between two strong and viable systems -- BNSF and UP/SP -- is likely to be more intense than competition among three railroads, where one of the railroads -- SP -- is relatively smaller and does not provide a realistic competitive alternative."

California Steel Industries says (p. 2): "We recognize that certain destinations to which we ship (Houston, Dallas, Portland and Denver) will experience a reduction from three to two rail carriers. However, the vigorous competitive environment resulting from two strong, service sensitive railroads (UP/SP and BNSF) is far preferable to that which can be expected from the significantly smaller UP and the financially weaker and smaller SP attempting to compete with the newly merged BNSF."

Van Den Bergh Foods says (p. 2): "I am not concerned that, after the merger, STE in Stockton will have two connections, BN/SF and UP/SP, rather than three connections. The two competing systems will both be large, integrated, financially sound rail systems, capable of balanced and robust competition. Absent the merger, BN/SF will dwarf either UP or SP, and there will not be a basis for effective competition in the long run."

Roseburg Forest Products says (p. 9): "We believe Union Pacific and Burlington Northern Santa Fe will compete at least as vigorously for our business as the three predecessor

railroads did. Both railroads will be financially strong, well-operated transportation providers who know the hard truth that if shippers they serve cannot deliver their products at a competitive price to the marketplace, the product will not move over the railroad."

Cavenham Forest Industries says (p. 2): "Although Portland, the primary origin point for our shipments, will be served by two railroads after the merger instead of the three railroads that serve it today, decreasing the number of railroads will actually enhance competition. Neither the SP nor the UP alone can be an effective competitor of the BN/SF; as noted above, we do not even consider SP to be a factor in rail competition at this point. The merged system will provide benefits from the competition of two strong railroads."

And Pacific National Transportation Warehouse Systems says (p. 1): "We are better served by two strong and efficient rail systems of roughly equal size (BNSF and a new UP/SP), than the current situation where the powerful BNSF system competes with two separate, much smaller railroads, particularly where one of those railroads, SP, is struggling financially. Thus, the proposed merger will not reduce competition, it will create a far stronger competitor."

Many other shippers echo these sentiments.⁸⁵

⁸⁵ See, for example, statements of Sunac America, Schnitzer Steel Products, Atlas Metal & Iron, GST Corporation, Forestglan Lumber, Southern Polymer, All-Coast Forest Products, (continued...)

These shippers understand that two strong railroads with broad networks will compete vigorously for their traffic -- not, as opponents like KCS suggest, "collude." No one who actually deals in the real-world rail marketplace, and has seen the intense competition between CSX and NS in the Southeast, UP and BN in Washington, or SP and Santa Fe in California's Central Valley or the Southern Corridor, could possibly think otherwise.⁸⁶

One perspective on the fact that a sheer reduction in the number of railroads does not lead to "collusion" and higher prices is the merger experience of the last 15 years. Since the 4R and Staggers Acts were passed, there have been many rail mergers, as the balkanized rail system has been restructured into a smaller number of efficient roads with comprehensive single-line networks. The result has been a two-thirds reduction in the number of Class I systems.⁸⁷ Many of these mergers involved

⁸⁵ (...continued)
Gilroy Canning, Golden State Lumber, Reddy Raw, Spreckels Sugar, Western Lumber, Bettermade Plastics and Mitsubishi Motor Sales of America.

⁸⁶ See the statement of Riss Intermodal, pp. 8-9.

⁸⁷ The principal transactions since 1980 have been: BN acquired Frisco; Southern and Norfolk & Western merged to become Norfolk Southern; UP acquired MP and WP; Chessie merged with Seaboard to form CSX; the Rock Island went under, with significant pieces going to SP and CNW; the Milwaukee went under, with its core lines going to Soo; CP acquired 100% ownership of Soo and acquired D&H; Conrail, created by the federal government from the assets of the Penn Central and five other bankrupt Eastern roads, was privatized; Guilford combined Maine Central, B&M and several smaller roads into a New England carrier; UP
(continued...)

"3-to-2" situations which the Commission found not to involve any harmful reduction in competition -- for example, the reduction in railroads at San Antonio from 3 to 2 in the UP/MKT case. But at the same time, the Commission was careful to guard rail competition by rejecting mergers that would eliminate rail competition -- the prime example being the SFSP merger, in which the Southern Corridor would have gone from two railroads to one and the applicants refused to acknowledge any competitive problem or accept conditions. The BN/Santa Fe case followed the same pattern: the applicants accepted conditions to deal with "2-to-1" situations, and no one even argued that the fact that several cities went from 3 to 2 (e.g., Oklahoma City, Tulsa, Enid) made the merger anticompetitive.

The result of this policy of approving pro-efficiency mergers -- and thereby reducing the number of railroads serving many shippers -- while barring major outright eliminations of rail competition was not "collusion." Rather, notwithstanding much greater "concentration," in the sense of a sharp reduction in the sheer number of railroads serving many shippers, real rail rates fell over this fifteen-year period of constant rail mergers by 50%.⁸⁸ This could only have happened if there continued to be

⁸⁷ (...continued)
acquired MKT; SP and DRGW combined; WC acquired Fox River Valley and Green Bay & Western; KCS acquired MidSouth; UP acquired CNW; and BN combined with Santa Fe.

⁸⁸ Association of American Railroads, Railroad Freight Rates Since Deregulation, Oct. 1994.

effective competition that spurred the railroads to pass on their efficiency gains to shippers. The lesson is clearly that mergers that add to the efficiency of rail carriers and to their ability to offer new services, while preserving rail alternatives, do not give rise to "collusion" -- they promote competition.

The intensity of two-railroad competition -- and the fallaciousness of "collusion" arguments -- is very clear from actual experience. Let me offer some concrete examples:

-- In 1984, CNW's WRPI subsidiary gained access to the Powder River Basin, and began moving coal, together with UP, in competition against BN. This initiated a decade of extraordinarily vigorous competition.

This could not be farther from a story of "collusion" to set prices at monopolistic levels and curtail output. It is a story of as intense a competitive battle as American railroading has ever seen.

-- Three railroads compete for intermodal traffic in the Los Angeles-Chicago corridor, and two compete for intermodal traffic in the Seattle-Chicago corridor. Do the three (BN/Santa Fe, UP and SP) compete, while the two (BN/Santa Fe and UP) "collude"? The data eloquently refute any such notion.

-- In the Southern Corridor, only two railroads compete for intermodal traffic -- SP and BN/Santa Fe. Have these railroads "colluded," keeping rates up and output down? Absolutely not.

. Price competition was fierce, and Santa Fe captured several major intermodal contracts from SP.

-- In the UP/MKT case, parties expressed concerns about the reduction from three railroads to two in San Antonio, in the Salina/Abilene grain market in Kansas, and for the movement of construction aggregates in the Houston area. The Commission rejected arguments by DOJ and others that these "3-to-2" situations were anticompetitive and that conditions should be imposed to preserve three-railroad competition in these markets. Instead, the Commission found that the continued competition from a second strong railroad, the increase in competition as a result of the merged system's introduction of new single-line routes and other service improvements, and other competitive constraints such as modal and source competition would keep competition

vigorous.⁸⁹ Was the Commission right? The charts on the following pages contain the answer: rates in all three markets have fallen sharply since the merger in 1988.⁹⁰

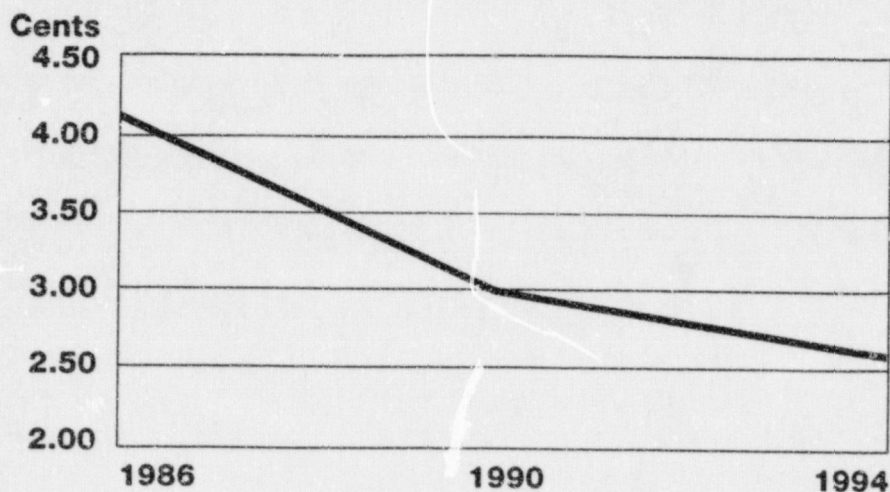
-- The two highest-volume chemical (STCC 28) commodities that UP handles in the Gulf Coast are polyethylene (STCC 2821142) and polypropylene (STCC 2821139) -- two types of plastics. Some of the plants that UP serves are served by two railroads and some are served by three or more railroads. Do railroads "collude" when only two serve a plant, holding rates up above the rate level when three or more railroads serve a plant? To the contrary, the opposite is true.

-- Two competitors, UP and SP-Tex Mex, serve Laredo. Have they "colluded" to keep rail rates high and suppress output,

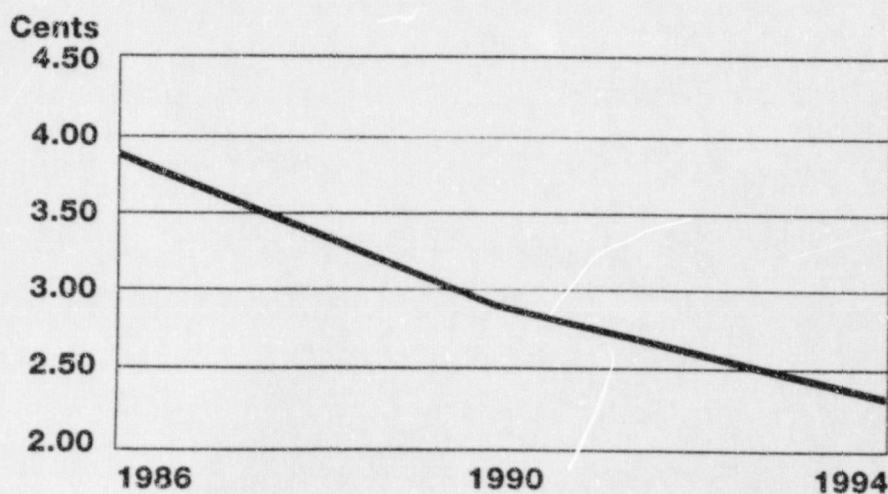
⁸⁹ 4 I.C.C.2d at 440-44, 458-59, 461-71.

⁹⁰ Rates are shown for both UP and SP in the San Antonio and Houston aggregates markets. The railroad competing against UP and MKT in Salina/Abilene was Santa Fe, whose rates are unavailable to the Applicants.

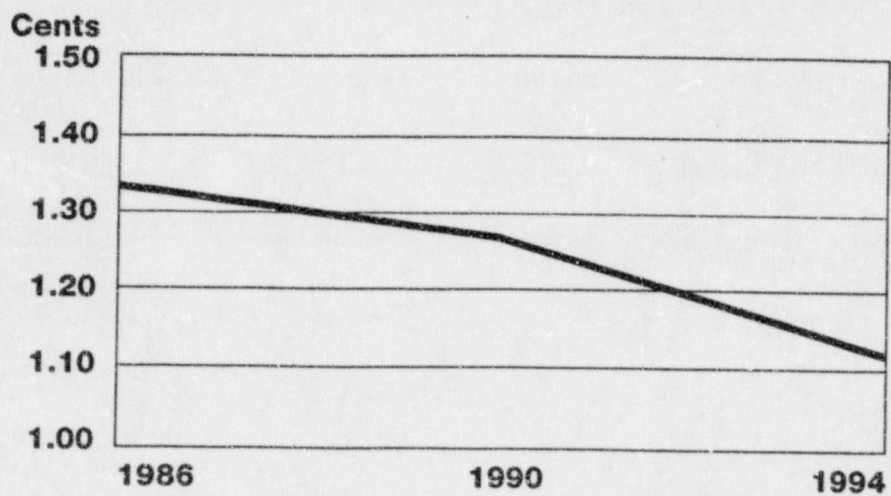
**UP Traffic to San Antonio:
1986, 1990 & 1994**
Revenue Per Ton-Mile in 1986 Dollars



**SP Traffic to San Antonio:
1986, 1990 & 1994**
Revenue Per Ton-Mile in 1986 Dollars

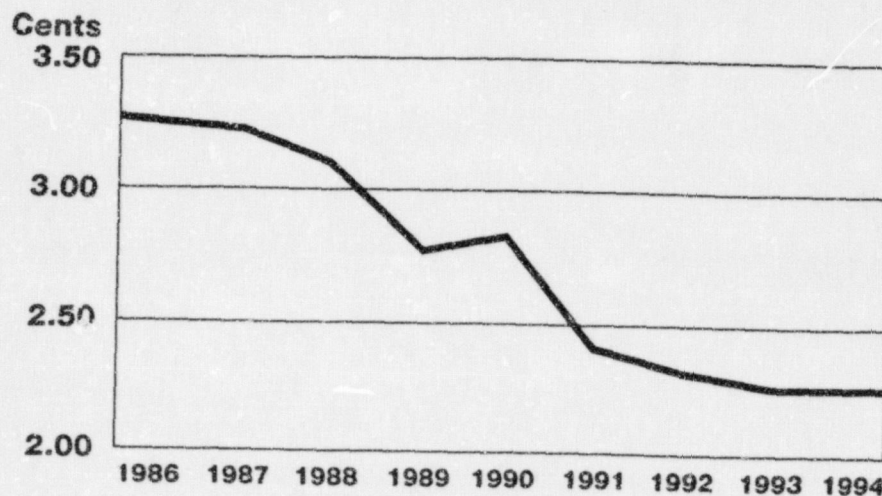


**UP Traffic from Salina/Abilene KS:
1986, 1990 and 1994
Revenue Per Ton-Mile in 1986 Dollars***



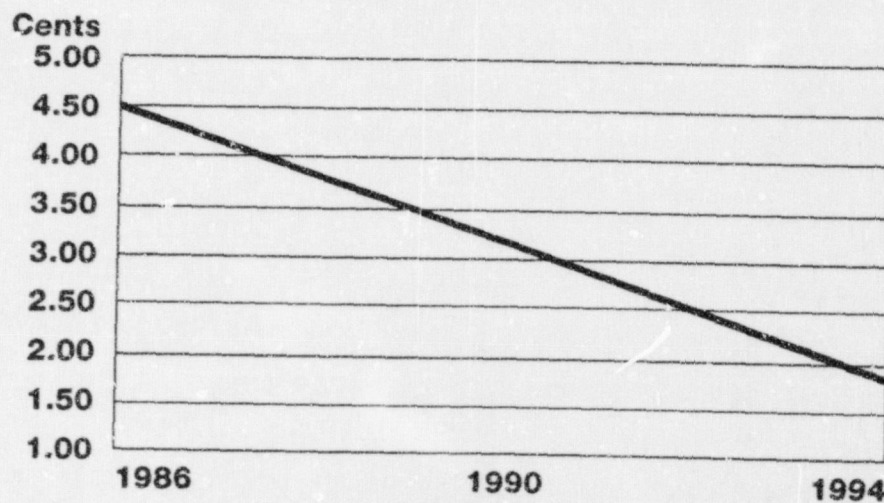
UP Limestone Aggregates Traffic to Houston Area: 1986-1994

Revenue Per Ton-Mile in 1986 Dollars



SP Limestone Aggregates Traffic to Houston Area: 1986, 1990 & 1994

Revenue Per Ton-Mile in 1986 Dollars



as a monopolist (or anticompetitive "duopolists") would?
Absolutely not.

-- UP ships copper ingots for Kennecott from Garfield, Utah, where there is two-railroad competition (UP and SP), and for ASARCO from El Paso, where there is three-railroad competition (UP, SP and BN/Santa Fe). Are shippers charged more in Utah, reflecting "collusion"? Absolutely not.

-- UP ships canned goods to St. Louis from San Jose, California, where there is two-railroad competition (UP and SP), and from Stockton, California, where there is three-railroad competition (UP, SP and BN/Santa Fe). Are the rates higher from San Jose, reflecting "collusion"? Once again, absolutely not.

My point is not that two-railroad shippers invariably have lower rates than three-railroad shippers. Sometimes the difference is in the other direction.⁹¹ But what these examples show is what railroad marketing people know from their daily work: that competition is just as strong when we are up against one other strong Class I railroad as when we are up against two or three or four other railroads. That will be doubly the case following the implementation of the UP/SP merger and the BN/Santa Fe settlement agreement, as each railroad will be stronger and more capable of offering shippers a full range of highly competitive services.

2. Detailed Discussion of "3-to-2" Traffic

I now turn to a detailed discussion of the "3-to-2" traffic.

The quantity of traffic that theoretically is open to competition among all three of the major Western railroads (or in a few instances UP, SP and KCS) is much less than KCS has asserted. Including all intermodal traffic that moves between points competitively served by UP, SP and BN/Santa Fe (including neutral gateways) (some 1.9 million units, accounting for about \$1.3 billion in annual gross revenues), all the automotive traffic that moves between such points (again including neutral

⁹¹ Actually, it is not easy to find simple, comparable two- and three-railroad movements like these, because often special circumstances with regard to equipment, backhauls or competitive circumstances make comparisons difficult. The examples I have given were carefully reviewed to be sure that no such skewing factors were present.

gateways) (some 195,000 carloads, accounting for about \$480 million in annual gross revenues),⁹² and a liberal estimate of the carload traffic that has three railroad options (some 291,000 carloads, accounting for about \$360 million in annual gross revenues)⁹³ yields a grand total of theoretical "3-to-2" traffic of \$2.1 billion. This is a very small fraction of total Western rail revenues of more than \$18 billion.

The breakdown of this "3-to-2" traffic among BN/Santa Fe, UP and SP drives home the power of BN/Santa Fe -- especially since these figures do not reflect the many additional strengths that BN/Santa Fe will gain from its merger -- and the third-place status of SP. By far the largest component of the "3-to-2" traffic is intermodal (and by far the largest part of the intermodal traffic is Los Angeles-Midwest and Oakland-Midwest). The total "3-to-2" intermodal units were handled

. Next in volume is the "3-to-2" competitive carload traffic, where the shares in 1994 were

. Last is autos, where UP has been quite successful but BN/Santa Fe can be expected to make major inroads following its merger. Here, in 1994, the "3-to-2" traffic was split

⁹² Small amounts of intermodal and auto traffic between "3-to-2" points were excluded because one or more of the three railroads was too circuitous to be a competitor.

⁹³ This is the total of the various figures for three-railroad competitive carload traffic set forth in the discussions of specific "3-to-2" points below, less 23,769 carloads that originated at one of these points and terminated at another.

In total, the breakdown of the "3-to-2" traffic in 1994 was

This traffic moves to and from 26 locations in the West, ranging from large cities to small hamlets, which I shall discuss individually. The intermodal and automotive traffic is limited to five major points -- Portland, Oakland, Los Angeles/Long Beach, Denver and Houston -- which I address first. At the other 21 points, which I then address, there are not three competing intermodal or automotive facilities. For these points, intermodal and auto traffic is largely handled via the five major points.

A review of the actual circumstances with respect to this traffic will reveal that large parts of it are not competitive among three railroads in any meaningful sense. The great majority of the traffic is intermodal and automotive, and as I have already shown SP is a weak competitor or a non-competitor for much of this traffic. SP cannot compete at all for high-end transcontinental intermodal traffic, yet we have included that traffic in the total that we have treated as three-railroad competitive. Intermodal shippers are very clear that competition between a combined UP/SP and BN/Santa Fe will be stronger than competition among BN/Santa Fe, UP and SP.⁹⁴ Also,

⁹⁴ See, for example, the statements of Riss Intermodal, p. 7 ("The combination of Union Pacific and Southern Pacific offers shippers, IMCs and capacity providers the best means of getting to sustainable, intense competition."); Fort Pitt Consolidators, p. 2 ("We believe that the merger of UP and SP will enhance
(continued...)")

as I have discussed, SP has dropped to a very small share of Western auto flows, yet we have included all of those high-revenue flows in the traffic we treat as "3-to-2."

Let me also say at the outset that the purpose of this discussion is not in any way to diminish the point that I have already emphatically made -- that for such traffic as is truly competitive among three railroads today, the merger will strengthen competition. But it is also useful to understand how relatively little such traffic there is and how attenuated the competition is for much of it -- and that is the purpose of the discussion that follows.

Before turning to the individual "3-to-2" points, I should explain the methodology we used to identify competitive "3-to-2" carload traffic. (As I have said, all intermodal and

⁹⁴(...continued)
competition in the western United States. Combining UP and SP will create a robust rail carrier in the West."); Werner Enterprises, p. 2 ("The merger of UP and SP will increase rail competition in the West. . . . The merger of UP and SP will create a strong railroad, which can fully compete with BN/Santa Fe for intermodal traffic on an equal footing."); Alliance Shippers, p. 1 ("A major benefit of the merger of the Union Pacific and the Southern Pacific for Alliance will be the creation of a railroad that can compete on an equal footing with the Burlington Northern-Santa Fe."); Express System Intermodal, p. 1 ("The Burlington Northern and Santa Fe merger will create a situation where there will be one large rail carrier that will dominate the West. The two smaller carriers, Southern Pacific and Union Pacific, will be unable to compete with them."); CSX Intermodal, p. 3 ("UP's acquisition of SP is essential if there is to be healthy rail competition with meaningful alternatives available to intermodal transportation companies such as CSXI."); Genex, L.P., p. 2 ("The combination of UP and SP will be a more effective intermodal competitor, more the equal to BN/Santa Fe than the UP or the SP standing alone.").

auto traffic potentially subject to three-railroad competition was included.) We first identified all locations that are currently served (either directly or through a shortline) by UP, SP and a third Class I railroad (generally this was BN/Santa Fe, but sometimes it was KCS). This yielded the 26 points I shall discuss.⁹⁵ Using the same comprehensive rail traffic data base that I discussed in connection with the regional flows above, we selected 1994 traffic that moved to or from any 6-digit SPLC in these 26 areas that we determined could be within the switching limits of each terminal. We also included all connecting shortline traffic. We did this in a painstaking way by studying detailed maps of each area.

Our next step was to eliminate that carload traffic at each terminal that could not be handled by UP, SP and another Western line-haul carrier. This could be because the industry

⁹⁵ We also identified Carrollton, Texas, as a possibility, but upon investigation we found that there was no "3-to-2" traffic there. UP only provides reciprocal switching at Carrollton in instances where it cannot receive a line haul. This is a situation that UP inherited from MKT.

One other point worthy of mention is Cape Girardeau, Missouri. This point, located in Southeast Missouri, could theoretically receive competitive rail service from UP, SP and BN/Santa Fe. Cape Girardeau is on BN/Santa Fe's St. Louis-Memphis mainline, and UP's branch line was recently sold to the Southeast Missouri Port Authority, which could potentially connect to both UP and SP. Cape Girardeau also benefits from extensive barge service, as it lies along the Mississippi River. There are no current industries located at the Southeast Missouri Port Authority that handle rail traffic. The data for 1994 showed no competitive rail traffic at Cape Girardeau. QC Chemical Company, which is located near Cape Girardeau and is exclusively served by BN/Santa Fe, is the major customer in the area and is a supporter of the UP/SP merger.

was outside of the reciprocal switching limits or because, even though within the limits, it was not open to all three carriers. (We included those few industries that are directly served by three railroads, rather than served through reciprocal switching; sometimes this was through a joint facility agreement.) We performed this elimination by identifying for large numbers of UP and SP customers in each terminal whether the customer was open or closed. We initially matched the traffic data by computer with the UP and SP reciprocal switching data bases. These data bases (commonly known as customer masters) indicate the open or closed status of the customer. We also manually reviewed a substantial number of larger-volume movements that could not be matched by computer. We were able to determine open or closed status for some 75% of the UP and SP movement records in this manner. (Open/closed status could not be determined for any of the Waybill Sample records, because they lack customer name.) On a location-by-location basis, we applied the open/closed ratio that we determined in this fashion to the remaining records to obtain an estimate of open traffic.

For the open traffic, we then turned to the other end of the movement. We found that for 36% of the movements, the origin or destination point at the other end was served only by one major Western railroad. For this traffic, there is only one rail option available today. As to another 17% of the movements, we found that the other end was served by only two major Western railroads. Here the customer has two options today and will

continue to have two options following the merger: if the other end is served by UP and SP, the settlement agreement provides for BN/Santa Fe service, and if the other end is served by either UP or SP and another Class I railroad, then the merger will only strengthen competition. Finally, we classified movements as non-competitive where the route of one of the three carriers was 150% or more circuitous. This represented only 3% of the total carloads.

This analysis revealed that of the 977,772 carloads at the 26 points, only 291,693 were theoretically competitive among three railroads. (It is this traffic I mean when I speak of "competitive" traffic in the discussions of each "3-to-2" location below.) Still to be considered was whether the three-way competition for this traffic was in fact substantial. This number is a liberal estimate of "3-to-2" carload traffic, because in fact many of the industries located at the other ends of these movements are not open, but we were unable in the time available to conduct the sort of detailed open/closed analysis at the other ends of these movements that we conducted for the 26 points.

a. Major "3-to-2" Points

Portland. Portland is one of the primary metropolitan areas in the Pacific Northwest, and is an important port and center for forest products traffic. Portland dramatically illustrates how a major city directly served by SP, UP and BN/Santa Fe can in fact have very little competitive traffic.

The reason can be seen from looking at a map. SP's line heads directly south, while BN and UP lines head north and east. Only for traffic moving east of Denver and Fort Worth can the three railroads overcome circuitry and have even a theoretical opportunity to compete.

Portland generated 154,152 cars of carload traffic in 1994, but after our review, using the steps described above, was completed, we found that only 10,458 carloads were potentially competitive between BN/Santa Fe, UP and SP -- a mere 7% of total Portland carloads. The small amount of competitive carload traffic was

. BN/Santa Fe's percentage is likely to grow when the full effects of its merger are felt. SP's awkward way of getting to the East from Portland via Roseville, California, results in

. SP handled only

. The head-to-head competition between UP and BN/Santa Fe will only be intensified as a result of the UP/SP merger.

As for intermodal traffic, there were 292,149 units in 1994 at Portland. Much of Portland intermodal traffic moves in corridors that are not competitive among all three railroads, principally the I-5 Corridor. The competitive intermodal traffic, which moves primarily between Portland and the Midwest, the Northeast and the Southeast, totalled 162,911 units. BN/Santa Fe is far and away the market leader for intermodal

traffic at Portland, as it is throughout the Pacific Northwest.
BN/Santa Fe handled the competitive
intermodal traffic as UP, and versus for UP.
SP handled competitive intermodal traffic
representing less than . SP

, as its route via Roseville is far too circuitous.
The merger and the settlement will enable UP/SP to compete more
effectively against BN/Santa Fe, which is the dominant carrier
for competitive intermodal business at Portland.

As for automotive traffic, Portland is one of the major
automotive distribution centers in the Pacific Northwest, along
with Seattle/Tacoma, Vancouver, B.C., and to a lesser extent
Spokane. There were 32,087 carloads of automotive traffic in
1994 at Portland, and 29,650 were competitive. The carrier
shares were

. BN/Santa Fe handles the Ford and Chrysler business,
along with Toyota, Honda and other import business, while UP's
primary customer is General Motors. SP has no major customers.
BN/Santa Fe is the dominant auto handler at Portland, where it
has excellent automotive facilities, including on-dock facilities
directly switched by BN. BN/Santa Fe will become even more
competitive for Portland autos business as a result of its
merger, and the UP/SP merger will allow the merged system to
compete more effectively against BN/Santa Fe. In addition, both
UP/SP and BN/Santa Fe both will become better able to serve

Portland's automotive customers by triangulating movements and repositioning empty equipment between Portland and California.

Oakland. The San Francisco-Oakland Bay Area is one of the largest and fastest-growing metropolitan areas in the country, with a diversified industrial base and a major West Coast port that benefits from one of the world's best natural harbors. Most port activity occurs at the Port of Oakland, which enthusiastically supports the UP/SP merger.

As for carload traffic, there once was a sizable amount of such traffic to and from Oakland, including the port. However, over the years, most of this carload traffic has migrated to outlying locations and other areas, or to intermodal or truck, with the result that there were only 14,711 carloads in 1994 to and from the Oakland switching district, which includes nearby locations such as Emeryville and Fruitvale. This is less carload traffic than in many towns less than 1% of Oakland's size. The fact is that most of the rail traffic moving to and from the City of Oakland and Port of Oakland moves via intermodal service, where BN/Santa Fe is the recognized leader.

For the carload business, we found that there were only 6,284 carloads of competitive traffic -- only 43% of the small Oakland total carload volume. SP directly switches almost all of the industries in Oakland. UP and BN/Santa Fe directly switch little Oakland industry, and the neutral switch lines (Oakland Terminal Railway and Alameda Belt Line) have declined to the point where they currently handle little volume. With its direct

access to industry, it is not surprising that SP handled
Oakland competitive traffic . UP
handled and BN/Santa Fe handled . Even for this very
small part of the Bay Area rail market, there will be significant
competitive benefits as a result of the UP/SP merger and the
settlement with BN/Santa Fe. BN/Santa Fe will gain direct access
to numerous industries in the Warm Springs-San Jose area, as well
as to the planned Oakland Joint Intermodal Terminal. This will
improve the frequency of Santa Fe's Oakland carload service from
its primary terminal at Richmond (nine miles north of Oakland).
Also, UP/SP will significantly lower SP's reciprocal switching
charges. BN/Santa Fe will gain new single-line routes via the
Central Corridor and to the Pacific Northwest. At the same time,
UP/SP will be creating new single-line routes to UP Pacific
Northwest points and Western Canada and putting in place much
improved service via the Central and Southern Corridors. In all
respects, Oakland stands to be a big beneficiary of the UP/SP
merger.

As for intermodal traffic, in 1994 there were 445,406
intermodal units moving between Northern California and the
Midwest and Northeast. This is the "3-to-2" Oakland intermodal
market, as other markets such as the Southern Corridor and the I-
5 corridor are served by only one or two competitors. BN/Santa
Fe . UP
was BN/Santa Fe's primary competitor, handling and SP was
third . BN/Santa Fe is expected to

increase its market share further following its merger, and the UP/SP merger is clearly needed in order for there to be strong competition for this traffic. By using SP's route west of Ogden, the merged system can become service-competitive with BN/Santa Fe for this intermodal traffic.

As for automotive traffic, there were 44,190 carloads of competitive automotive business involving the Bay Area in 1994. (This excludes production at the General Motors/Toyota NUMMI facility at Fremont, which is a "2-to-1" point that will be served by BN/Santa Fe.) SP was once the dominant automotive carrier in the Bay Area, as it directly served two production plants and handled General Motors and Chrysler traffic. Over time, SP's Bay Area automotive volume has declined significantly, although SP retains the Ford business, which it secured several years ago following its loss of the General Motors business to UP. UP also handles the Chrysler traffic, which was also formerly handled by SP. Santa Fe handles a significant amount of competitive import business. The automotive shares are

BN/Santa Fe is poised to increase its Bay Area automotive share in coming years. Its high speed route, its recent merger, and the merged system's adoption of Santa Fe's aggressive marketing of automotive business, as evidenced by its recently winning the Southern California GM business from SP, will likely result in a significantly increased BN/Santa Fe future share. Given its route structure and service capability,

we fully expect that BN/Santa Fe will build new automotive facilities in the Bay Area and compete on an equal basis with UP/SP.

Los Angeles/Long Beach. Los Angeles has become one of the world's major metropolitan areas, following explosive growth in the decades following World War II. The nearby port complex of Los Angeles/Long Beach, which is North America's largest, is jointly served by BN/Santa Fe, UP and SP, as is Los Angeles itself. SP and BN/Santa Fe have long been the dominant carriers in Southern California. Both SP and BN/Santa Fe connect Los Angeles/Long Beach via efficient routes to Northern California and via the Southern Corridor to the Midwest, Northeast, Southwest and Southeast. UP, on the other hand, has a single line between Los Angeles and Utah, where it connects to UP's Central Corridor routes to the Midwest and the Northeast. As is the case for our nation's other major metropolitan areas, most traffic is not moving via rail carload service.

The total Los Angeles/Long Beach carload volume was only 89,238 cars in 1994 -- a tiny fraction of the traffic that moved via rail intermodal and truck. We found that over three-quarters of this traffic is not competitive. BN/Santa Fe, SP and UP each have sizable volumes of traffic moving from points not competitive among the three Western systems. For example,

California -- none of which is susceptible to three-railroad competition. Our analysis resulted in 20,882 carloads' being identified as competitive.

Much of the competitive traffic is switched by SP and BN/Santa Fe (including BN/Santa Fe's subsidiary, Los Angeles Junction Railway), and

. UP directly switches little Los Angeles industry, and handled only

. These represent long-haul transportation activity involving the Los Angeles area.

The UP/SP merger will strengthen competition at Los Angeles/Long Beach in many ways. Upgrading of the Colton-El Paso and Tucumcari lines, and the use of route specialization, will allow UP/SP to match BN/Santa Fe's third-morning Chicago-Los Angeles intermodal service on a reliable basis -- something neither UP nor SP can do today. UP/SP will dramatically improve its carload service by utilizing SP's City of Industry Yard for westbound traffic that will be blocked at locations such as North Platte and Fort Worth, with West Colton Yard used for eastbound traffic. A host of new services to the Pacific Northwest, via the Central Corridor and via the Southern Corridor, will benefit Southern California customers. BN/Santa Fe will be improving its services as a result of its merger, including new single-line routes to Memphis and the Southeast. BN/Santa Fe will further improve its Los Angeles/Long Beach market position as a result of

the settlement, which contemplates enhanced BN/Santa Fe access to the Los Angeles/Long Beach port complex, new single-line service to the Pacific Northwest and Western Canada, and new single-line service to New Orleans.

As for intermodal traffic, 1,049,418 intermodal units moved between Southern California and the Midwest and Northeast in 1994, making this the largest single intermodal market in America. All other intermodal markets involving the Los Angeles area, including the Southern Corridor and the I-5 Corridor, are not "3-to-2" markets.

this Southern California-Midwest/Northeast intermodal traffic, while

With this strong BN/Santa Fe market share, and major gains expected from its recent merger which are not reflected in this 1994 data, the UP/SP merger is needed to provide a real competitive alternative.

As for automotive traffic, there were 72,186 carloads of such traffic to and from the Los Angeles/Long Beach area in 1994, and 61,266 were competitive. The carrier shares were

UP handles Ford business at its Mira Loma facility and Chrysler traffic at its Montebello facility, along with some import traffic. Santa Fe handles the General Motors business at its new San Bernardino and San Diego facilities, along with import traffic. SP, once the dominant automotive carrier in Los Angeles, has no major customers and traffic based on handling some imports.

As SP has been largely driven out of the Southern California automotive market, UP is competing with BN/Santa Fe, which has become very aggressive in marketing its premier route between Los Angeles and the East. Following its merger, BN/Santa Fe can be expected to serve automotive customers even more competitively based on its efficient routes to and from all major Western markets. The BN/Santa Fe merger created new single-line routes to and from Memphis, Birmingham and the Southeast, and the settlement with UP will create a new single-line route to New Orleans and the gateways to Eastern Mexico. This will strongly position BN/Santa Fe to participate in movements to Southern California of the growing automotive production in the Southeast and Mexico.

Denver. Denver is a major Intermountain city and rail hub served by BN/Santa Fe, UP and SP. BN/Santa Fe's lines radiate to the east, north and south, while UP's lines go north and east and SP's go south and west.

As for carload traffic, we identified 76,447 cars at Denver. A superficial look at this traffic would show

. However, closer analysis reveals that the carrier shares for the competitive carload traffic are vastly different.

In our carload traffic analysis, we found that 65% was open at Denver but originating or terminating on a single railroad outside of Denver. For example, SP handled

coal from nearby mines that it exclusively serves to Denver power plants, and neither BN/Santa Fe nor UP can compete for this traffic. Substantial additional carload traffic originates or terminates at locations outside of Denver served by only two railroads, or at three-railroad locations for which one of the railroads is highly circuitous. Of the total Denver carload traffic, only 14,446 carloads (19%) are actually subject to three-railroad competition today.

Of the 14,446 carloads that UP, SP and BN/Santa Fe can compete for, we found that

. These shares for the competitive traffic are in stark contrast to the shares for the total traffic at Denver. As is frequently the case, due to a variety of limitations in its route structure, service and equipment, SP handles a very low percentage of competitive traffic, and its volume is weighted much more heavily toward exclusively-served traffic that other railroads cannot access. For example, SP handled a total of traffic moving between Denver and points in the East and Southeast, as it must first operate south to Pueblo and then turn east whereas BN/Santa Fe has a direct high speed mainline from Denver to Chicago. With a UP/SP merger can only be pro-competitive.

The settlement reached with BN/Santa Fe will intensify competition even further. A UP/SP merger will make UP/SP better able to compete with BN/Santa Fe by linking UP's good routes to

Chicago and the West Coast with SP's newly-acquired route from Denver to Texas and the Southwest. The settlement provides BN/Santa Fe with a Central Corridor route from Denver to the Bay Area. As a result, Denver will be served by two strong Western systems that can each handle Denver traffic moving to and from all major Western markets.

As for intermodal traffic, BN/Santa Fe is the leader. In 1994, BN/Santa Fe handled

. UP and SP lagged far behind, with UP handling and SP only . The UP/SP merger will greatly strengthen competition for this traffic, as the merged system institutes various new Denver intermodal services. Nonetheless, BN/Santa Fe can be expected Denver intermodal traffic, as its new Central Corridor rights will complement its high-speed mainline between Chicago and Denver (the primary Denver intermodal traffic lane), its direct mainline route from Denver to the Pacific Northwest, and its mainline south from Denver to Texas and the Southwest.

As for automotive traffic, there were 22,524 carloads of such traffic at Denver in 1994, 21,297 of which were competitive. The carrier shares were

. UP handles the General Motors and Chrysler business, and SP handles the Ford business. Each of the three carriers handles some import traffic as well.

Denver is an excellent example of a location where BN/Santa Fe, as a result of its merger and settlement, will be a

much stronger competitor. BN's high speed mainline from Chicago to Denver will be coupled with BN/Santa Fe's new trackage rights between Denver and the Bay Area to increase overall efficiency and service between the East and Denver. Here, SP's hold on the Ford business would appear to be particularly tough to defend, since SP must operate into Denver from the south via Pueblo and cannot hope to equal BN/Santa Fe service.

Houston. Houston is one of our nation's major metropolitan areas, with a large concentration of oil refining and chemical manufacturing facilities. Houston is served by BN/Santa Fe, UP and SP, as well as KCS, which obtained as a result of the UP/MKT merger the right to move grain traffic to Houston via UP haulage from Beaumont, Texas. There is a major port operation at the Port of Houston, which enthusiastically supports the merger.

As for carload traffic, we first eliminated grain, as four railroads compete vigorously for this business today and three will do so following the merger. In spite of the large amount of rail-oriented industrial activity in the Houston area, there were actually only 218,995 non-grain carloads to and from the area accessed by all Houston line-haul railroads, as many of the chemical and other facilities are served by only one or two railroads in the area surrounding Houston. While a number of the open industries are on Houston's two neutral switching carriers, HBT and PTRR, SP directly switches 94 industries that are open to reciprocal switching. We consider this traffic open. We found

that competitive Houston carload traffic was 97,739 cars. This amounts to less than 300 carloads per day, and is an extremely small percentage of total Houston area traffic, which includes high volumes moved by truck, barge and pipeline.

Historically, both UP and SP have had route structures that allow them to participate in more Houston flows than BN/Santa Fe. While BN/Santa Fe has highly competitive routes from Houston to California, the Pacific Northwest, the Midwest and the East, BN/Santa Fe currently has no direct route to the Southeast via New Orleans, no direct route to Memphis, and no routes south and west of Houston to important south Texas points and Mexican gateways. Therefore, it is not surprising that, when looking at all Houston competitive carload traffic,

. The surprise here is that UP, with of the competitive carload traffic, handled

. SP's share was

despite SP's having an excellent route structure for Houston traffic. Undoubtedly, this is again a case of poor SP service and other infirmities. Despite all of SP's historic advantages, rail competition at Houston is becoming more and more a case of UP versus BN/Santa Fe -- which can be expected to increase its share of Houston traffic significantly following its merger.

The merger and the settlement will greatly intensify competition for Houston traffic. UP/SP will have a much more comprehensive route structure, including the important Southern

Corridor route to California which UP has lacked. The merger will improve Houston's service in many ways, including directional running, the ability to handle 286,000-pound cars, and several new run-through train services into the Northeast and Southeast.

BN/Santa Fe will be able to increase its share of Houston business because it too will be able to institute many new services, capitalizing on the great amount of additional South Texas traffic that it will gain through connecting Houston with New Orleans and Memphis, serving "2-to-1" points such as San Antonio, Corpus Christi, Baytown and Orange, and obtaining enhanced access to Eastern Mexico. In addition, the reduction in SP's reciprocal switch charges will provide new options for a large segment of Houston competitive traffic that is switched directly by SP today.

As for intermodal traffic, approximately 98,000 intermodal units moved in 1994 between Houston and the Midwest and Northeast -- which is the Houston intermodal market that is served by UP, SP and BN/Santa Fe. As explained earlier, trucks dominate this intermodal market due to the relatively short hauls and fragmented nature of the origins and terminations. Other Houston markets, such as the Southern Corridor to California, have only two current competitors. The Houston-Midwest/Northeast carrier shares in 1994 were

BN/Santa Fe should increase its share significantly following its merger, as it is committed to competing strongly in this market

and will be able to coordinate parallel BN and Santa Fe operations all the way from Chicago to Houston.

As for automotive traffic, there were 38,905 carloads of such traffic at Houston in 1994, with 38,620 being competitive. The carrier shares were

. Houston is yet another example of a major automotive market where SP has declined . SP's service problems, coupled with limitations on its ability to finance both new equipment purchases and expensive automotive terminal investments, have relegated it to handling only small volumes from Memphis and Mexico. In both of the latter markets, the settlement will make BN/Santa Fe a fierce competitor. UP handles Houston's General Motors traffic, while Santa Fe handles the Ford traffic. UP and BN/Santa Fe are currently competing head-to-head for Houston automotive traffic, with SP handling only . The UP/SP merger and BN/Santa Fe settlement will position BN/Santa Fe to compete against UP/SP even more strongly for Houston automotive traffic to and from all major markets.

b. Other "3-to-2" Points

As already mentioned, our analysis of the remaining "3-to-2" points deals almost entirely with carload traffic. At none of these locations do UP, SP and BN/Santa Fe (or KCS) all provide intermodal or automotive service. In some cases, such as the three Kansas locations, there are no intermodal ramps in the area. In most cases, such as most of the California and Texas

locations, major metropolitan areas that I have already analyzed are close by, and intermodal and automotive service is provided there. However, at those points where at least one railroad has an intermodal or automotive facility, such as at El Paso and Shreveport, we discuss the specific situations.

Pittsburg, California. Pittsburg is situated along the Sacramento River approximately 45 miles east of Oakland. It lies on BN/Santa Fe's mainline from the Bay Area to the east, and is a relatively short distance from Martinez, which is on SP's Central Corridor mainline. UP accesses Pittsburg only on a branch line basis via trackage rights on BN/Santa Fe's line from Stockton to Port Chicago.

There were 12,542 Pittsburg carloads in 1994. A majority of the industries in the Pittsburg area are covered by a SP-BN/Santa Fe joint facility agreement, and are not open to UP. In fact, the only SP-BN/Santa Fe industry that is open to UP in Pittsburg is USS Posco Steel, which operates the former U.S. Steel facility. This shipper supports the merger. Posco receives large quantities of steel from Korea, and its traffic is thus significantly less than when the plant was operated by U.S. Steel. Nonetheless, this customer generated in 1994. This traffic consists primarily of inbound steel from the Midwest and Southeast and smaller volumes of outbound scrap, as this facility is a mill that fabricates steel products for use in West Coast markets. BN/Santa Fe had

. The traffic

handled by UP and SP was

. The merger will be strongly pro-competitive for Pittsburg.

Port Chicago. Port Chicago is located eight miles west of Pittsburg, again on BN/Santa Fe's mainline, and covered by an SP-BN/Santa Fe joint facility agreement. As with Pittsburg, only a single customer, the Navy's Concord Naval Weapons Station, is open to UP. UP, SP and BN/Santa Fe each directly connect with the Navy's railroad, which handles the switching of the traffic, consisting almost entirely of ammunition moving to or from storage or ships at the Concord facility. The rail traffic primarily moves between Port Chicago and various government facilities throughout the United States.

. Most Port Chicago traffic moves to or from locations served by only one or two railroads. A major origin/destination for Port Chicago traffic is the Sierra Army Depot at Herlong, California, which is jointly served by UP and SP. BN/Santa Fe will gain access to the Herlong facility and will be in a position to increase its share of the traffic even further due to its mainline service at both ends of the movement.

. A UP/SP merger will enhance competition at Port Chicago.

Sacramento and Other CCT Points. The capital of California, Sacramento, is located approximately 100 miles

northeast of San Francisco. It was the point at which the Central Pacific Railroad, predecessor of SP, started construction east to an eventual connection with UP at Promontory, Utah. SP has long been Sacramento's primary railroad, although UP's mainline also goes through the city. BN/Santa Fe reaches Sacramento via CCT, which is owned one-third each by SP, UP and BN/Santa Fe.

CCT operates between Stockton and Sacramento and provides service en route at Lodi and at Polk and Fruitridge, which are on the outskirts of Sacramento. All industries on SP and UP in Sacramento that are open to reciprocal switching are open to CCT, which provides connecting service from Sacramento to BN/Santa Fe's mainline terminal at Stockton. Several years ago, the three owners of CCT eliminated separate CCT waybilling, and listed CCT points as their own stations. The three owners compensate CCT for handling traffic in their respective accounts.

The Sacramento area does not generate heavy volumes of rail traffic. In 1994, the Sacramento-area industries open to SP, UP and BN/Santa Fe (located in Sacramento, Fruitridge, Lodi and Polk) generated 5,325 total carloads, of which 1,392 were competitive.

. BN/Santa Fe handled of competitive traffic.

BN/Santa Fe will become a stronger competitor for this traffic as a result of its new access to area points under the settlement agreement, which will improve BN/Santa Fe service

frequency. BN/Santa Fe is also likely to make more use of CCT to compete for Sacramento-area business, as it expands its role in the Sacramento area.

The merger will strengthen competition for this traffic, as for all Northern California traffic, thanks to shorter Central Corridor routes, new I-5 Corridor single-line service, and other pro-competitive benefits.

Stockton. Stockton is located in Central California, approximately 100 miles east of San Francisco. It is a center for canned goods traffic, and there is also a bulk commodity port there. Stockton is on BN/Santa Fe's mainline from the Bay Area to the east, is a major yard location on UP's Central Corridor mainline, and is on SP's north-south Pacific Coast mainline.

There were 36,937 carloads at Stockton in 1994, of which only 8,300 carloads were competitive. Much of the competitive Stockton traffic is canned goods moving from warehouses in Stockton and on ST&E, a neutral carrier which has submitted a statement strongly supporting the merger. (ST&E cars were all treated as "3-to-2.")

Rail intermodal and truck compete very heavily for the transcontinental canned goods business. There is also trucking of canned goods to warehouses served by each of the major carriers, especially to BN/Santa Fe and UP points. Stockton is such a situation. Stockton is one of the relatively few origins of canned goods directly served by UP, and it is UP's primary canned goods loading point, including some canned goods trucked

in from outlying points. As a location of a major UP terminal, it is a location where UP can switch cars directly into trains destined to the east. As a result,

. As is the case throughout California, BN/Santa Fe's aggressive intermodal programs are its primary weapon to secure canned goods and other food products traffic. BN/Santa Fe handles sizeable volumes of canned goods traffic via its intermodal terminals at Stockton, Richmond, Modesto and Fresno.

A UP/SP merger will dramatically improve carload service from Stockton to the Midwest. BN/Santa Fe will be a much stronger competitor through its merger and its settlement with UP/SP, which will give it new single-line routes to the Pacific Northwest and Western Canada, via the Central Corridor, and to New Orleans.

Modesto. Modesto is located in Central California on the SP and BN/Santa Fe Bay Area-Southern California mainlines. UP reaches Modesto via a branch line south from Stockton. Most industry in Modesto is on a shortline, the Modesto and Empire Traction Company ("MET"), which connects with BN/Santa Fe, UP and SP. Gallo generates large volumes of outbound wine and other traffic, and there are several other important customers on the MET as well.

There were 17,550 carloads at Modesto in 1994. Our process identified 12,408 as competitive. The heavy volumes shipped to the major population centers in

the Northeast and Southeast are competitive, and result in Modesto's being one of the very few locations where more than half of the rail carload traffic is competitive among UP, SP and another major Western railroad.

BN/Santa Fe handled

BN/Santa Fe provides top-notch service and equipment to Gallo and other Modesto customers via its high-speed mainline. UP handled and SP, as is often the case, handled a very low percentage, here only competitive traffic.

A UP/SP merger, including the settlement with BN/Santa Fe, will be highly beneficial to Modesto customers, for the same reasons referred to in regard to Stockton.

Fullerton. Fullerton, California, is located 26 miles east of Los Angeles on BN/Santa Fe's mainline. UP and SP each serve Fullerton via a branch line. Only one shipper at Fullerton is served by three railroads -- Hunt-Wesson, a subsidiary of ConAgra, which supports the merger. BN/Santa Fe accesses the Hunt-Wesson facility directly, while a UP/SP joint facility agreement covers UP and SP access. There were 3,628 carloads at the Hunt-Wesson facility in 1994. After eliminating movements to and from locations served by one or two railroads or involving undue circuitry, there were 1,979 competitive carloads. Due to its advantageous mainline service, Santa Fe handled

. Clearly, a UP/SP merger will be pro-competitive -- which is the customer's

very well situated to increase its share of El Paso traffic, as it will have direct routes to California, the Pacific Northwest, Canada, the Midwest, the East and the Southeast. El Paso is the junction of SP's Tucumcari line with SP's Southern Corridor Sunset Route, and these routes enable SP to compete for traffic to the West Coast, the Midwest, the Northeast and the Southeast. UP's line is a long, dead-end extension from Fort Worth, Texas, which handles about one train per day each way. This enables UP to compete primarily for traffic moving to and from the Southeast, and to a lesser extent for traffic moving to and from the Midwest and East.

On the strength of its copper-related business, El Paso generated 47,461 carloads in 1994, of which we found that only 14,803 were competitive. Among the major non-competitive moves were

The railroad shares for the competitive traffic were

. The 1994 data do not reflect the very major El Paso competitive benefits that BN/Santa Fe will obtain from its merger, including new single-line routes from El Paso to the Upper Midwest, the Pacific Northwest, the Intermountain Area, Western Canada, and the Southeast via Memphis and Birmingham. El Paso is a prime example of a location where BN/Santa Fe is poised to increase its share greatly versus UP, and especially SP. I fully expect BN/Santa Fe to handle a volume

equivalent to UP/SP and be highly competitive in all major markets.

The UP/SP merger and the settlement will greatly benefit El Paso shippers. UP/SP will upgrade three important main lines radiating from El Paso: the Colton-El Paso line, the El Paso-Fort Worth line, and the Tucumcari line. This will make possible improved service to points such as Memphis, Dallas, Kansas City, St. Louis and Chicago, as well as California points. New single-line service will be opened up to UP Intermountain and West Coast points that today are deprived of the benefits of single-line service due to the extreme circuitry of UP's existing route structure. The settlement will enable BN/Santa Fe to provide new single-line service to New Orleans, and via California to Portland, Seattle and British Columbia, and to serve numerous points now served only by UP and SP. For example, BN/Santa Fe will be granted access to all UP/SP customers between El Paso and Sierra Blanca, and this will further increase Santa Fe's traffic base in El Paso leading to even more service improvements.

The UP/SP merger will intensify competition for intermodal traffic at El Paso. Currently, BN/Santa Fe and SP have intermodal ramps at El Paso, and BN/Santa Fe is the predominant carrier. UP has no intermodal facility west of Dallas. With the merger and the upgrading of lines west, east and north from El Paso, the combined UP/SP system will greatly strengthen its El Paso intermodal service. (None of the three

western railroads has an automotive facility at El Paso. BN/Santa Fe has automotive facilities at both Belen and Albuquerque, New Mexico, which handle the vast majority of the automotive business to the El Paso area.)

Pueblo. Pueblo is located in Southern Colorado. BN/Santa Fe lines radiate north to Denver, east to Kansas City, southeast to Dallas, and southwest to El Paso and California. Pueblo is on SP's Central Corridor mainline, and SP also has lines to Denver and Southwestern Colorado. UP, on the other hand, serves Pueblo only with tri-weekly service on a long-distance branch line from Central Kansas.

The largest customer in the Pueblo area is CF&I Steel, which is located south of Pueblo at Minnequa. It is served only by BN/Santa Fe and SP, and is thus not a "3-to-2" shipper. There were only 1,063 carloads at Pueblo itself, and our analysis identified 334 as having three-railroad competition. BN/Santa Fe and SP

with BN/Santa Fe handling

. UP handled

. Clearly, a UP/SP merger will be beneficial, especially considering the new service that UP/SP will be providing in the Pacific Northwest-Denver-Pueblo-Fort Worth corridor.

Hutchinson. Hutchinson is located in Central Kansas, and is one of the major terminal elevator locations for hard red winter wheat produced in Western Kansas. Hutchinson is also the location of three active salt mines, which generate considerable rail traffic. Hutchinson accounted for 29,032 carloads in 1994.

BN/Santa Fe has long been in Hutchinson, as the Santa Fe east-west mainline across Kansas passes through Hutchinson, and BN/Santa Fe directly serves most of the major grain elevators. Hutchinson is located on SP's Tucumcari line, and SP directly serves two grain elevators and a salt producer. UP's access to Hutchinson is via a shortline, the Kansas Southwestern ("KSW"). KSW directly serves little industry in Hutchinson, and is dependent on reciprocal switching with BN/Santa Fe and, to a lesser extent, SP.

We found that 16,828 of the 29,032 carloads of Hutchinson traffic in 1994 were competitive. BN/Santa Fe handled . UP, suffering from its lack of direct industry access and branch line operation, and SP, with its pervasive service and equipment problems, . As is often the case for SP, it handled more Hutchinson traffic to and from points that it exclusively served than to and from points served by two or more railroads.

The BN/Santa Fe merger's impacts are not reflected in the 1994 data. That merger will greatly strengthen BN/Santa Fe's grain network throughout the Midwest and provide new single-line service to a host of important destinations for Hutchinson salt traffic in the upper Midwest, which is a heavy user of this salt for melting ice and snow on highways during the winter. Also, BN/Santa Fe gained the right to use SP's Tucumcari line between Hutchinson and El Paso, which will provide for much more direct

service between Hutchinson and that important Mexican gateway. While SP gained trackage rights on BN/Santa Fe from Kansas to Texas, these rights will not generate sizable amounts of new SP grain traffic because, unlike BN/Santa Fe and UP, SP lacks a grain gathering network in Kansas. SP does originate a modest volume of wheat traffic on the Tucumcari line in Southwestern Kansas, some of which is transited through Hutchinson and can now move via SP to the Gulf. However, as part of the BN/Santa Fe settlement, SP allowed BN/Santa Fe access to three of these grain originations, Liberal, Kansas, and Guymon and Hooker, Oklahoma, which will add to BN/Santa Fe's already greatly expanded wheat traffic potential.

The UP/SP merger will create a much more effective competitor against BN/Santa Fe at Hutchinson. UP/SP will be able to utilize the most efficient SP or UP lines in Central Kansas to construct a network that will provide Hutchinson customers with direct service to Texas (via an upgraded OKT line); the Southwest (via an upgraded Tucumcari line); Kansas City, the Midwest and Northeast (via the upgraded Tucumcari line); and the Pacific Northwest (via the new Topeka Bypass route). This will result in much more balanced competition at Hutchinson, with UP/SP fighting an uphill battle against a BN/Santa Fe system that will be strengthened by its merger, its settlement with SP, and its settlement with UP/SP.

McPherson. McPherson is located in Central Kansas on SP's Tucumcari line and on a UP secondary line. BN/Santa Fe

accesses McPherson via the Central Kansas Railway ("CKRY"). There were 3,719 carloads at McPherson in 1994. Most are at closed industries. SP lists no open industries in its switching tariff, and the primary source of traffic at McPherson, an oil refinery owned by National Co-op Refining, is served by SP and closed to reciprocal switching.

Our analysis revealed at most 541 McPherson carloads open to three-railroad competition. As the only mainline railroad in McPherson, SP handled
 , with UP shown as handling

 . I know from many personal dealings with CKRY that it generates sizable volumes of traffic in the McPherson area that are interchanged to BN/Santa Fe nearby at Newton, Kansas. CKRY, in conjunction with an expanding BN/Santa Fe system, will continue to provide strong competition to UP/SP in the McPherson area in the future.

Wichita. Wichita is an important grain terminal and grain processing location in Central Kansas. Wichita lies on UP's OKT line, and on a principal Santa Fe line to Texas via Newton (prior to its merger with Santa Fe, BN was also a very small factor in Wichita, operating via a fragile branch line from Eastern Kansas). As part of the overall SP-BN/Santa Fe settlement in the BN/Santa Fe case, SP gained trackage rights over BN/Santa Fe's line with the right to serve BN/Santa Fe-switched industries in Wichita. SP recently initiated this

operation through an agent, the South Kansas and Oklahoma Railroad ("SKOL"), which operates via BN/Santa Fe trackage between Hutchinson and Winfield, Kansas, on behalf of SP. SP does not have access to UP-switched Wichita industries. Two other shortlines also serve Wichita, KSW and the CKRY.

BN/Santa Fe and UP handled in 1994. I anticipate SP's participation in future Wichita traffic will be small, reflecting a limited presence similar to that which BN had before the BN/Santa Fe merger. Competitive traffic in 1994 totaled at most 12,975 carloads, of which

. SP, operating via SKOL, should not significantly impact these shares. A UP/SP merger will strengthen competition by enabling UP to compete more effectively against BN/Santa Fe.

Fort Worth. Located in North Texas, Dallas/Fort Worth is one of the nation's major metropolitan areas. Fort Worth has long been a major grain terminal and livestock center. While cattle have not moved into Fort Worth by rail for decades, there is still a considerable amount of rail grain traffic at Fort Worth.

As BN/Santa Fe, KCS, SP and UP all currently have access to industries in Dallas, there are no "3-to-2" industries there. In Fort Worth, the situation is much more complex. Historically, Fort Worth has been served by BN/Santa Fe, UP and SP. However, as a result of the BN/Santa Fe merger and the applicants' settlement with KCS in that case, KCS was granted the right to handle traffic at Fort Worth industries switched by

BN/Santa Fe and SP that moves to or from the Southeast. That body of traffic, therefore, also has four-railroad competition. The remaining Fort Worth traffic is not open to KCS, and we identified it as potentially competitive "3-to-2" traffic. It totaled 28,333 carloads in 1994.

Of these cars, we found that only 11,494 were competitive. The shares for this traffic were

BN/Santa Fe and UP each have extensive route structures radiating from Fort Worth. SP, on the other hand, has traditionally had limited access to Fort Worth -- its only line has entered Fort Worth from the south, resulting in SP being a non-factor for Fort Worth grain. SP gained access to Fort Worth from the north over BN/Santa Fe in its settlement with the applicants in the BN/Santa Fe case, but, as I have previously explained, SP's role as a grain handler over these rights is likely to be limited. SP also gained access to Fort Worth via BN/Santa Fe's line via Pueblo, Colorado.

BN/Santa Fe's merger will result in its becoming an even more formidable competitive force in Fort Worth, with an impressive array of lines in several directions, and greatly expanded grain-originating capabilities on BN's grain-gathering network extending from north Texas to that of its settlement with BN/Santa Fe.

The UP/SP merger and the settlement with BN/Santa Fe will greatly strengthen competition at Fort Worth. UP/SP will

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upgrade the T&P main line from Fort Worth, its historic headquarters city, to El Paso, making possible greatly improved service to California. Upgrading the OKT line from Fort Worth north to Kansas, coupled with the new Topeka Bypass, will make possible vastly improved service to Fort Worth from the Upper Midwest and from the Powder River Basin. UP/SP will also put in place a totally new carload service for traffic from the Pacific Northwest and Denver via Amarillo. Directional operations on UP and SP mainlines in East Texas and Arkansas will mean improved service between Fort Worth and Houston, Memphis, St. Louis and Chicago. Under the settlement, BN/Santa Fe will now connect Fort Worth with New Orleans, the Eastern Mexican gateways, and numerous other major cities, such as San Antonio and Corpus Christi.

SP is a minor factor in Fort Worth that will face increasing competition from BN/Santa Fe. However, by merging some key SP routes into the UP system, upgrading certain UP lines and coordinating operations, UP/SP will be situated to provide strong head-to-head competition with BN/Santa Fe between Fort Worth and all major Western markets.

Sherman. Sherman is located north of Dallas on BN/Santa Fe's Dallas-Kansas City main line. Sherman is also at the end of an SP branch line, and UP serves Sherman via a short line, the Texas Northeastern Railroad ("TNER"). Sherman generated 6,740 carloads in 1994, of which 1,346 were competitive.

The primary open traffic involves two customers who support the UP/SP merger, ConAgra and Ag Processing. ConAgra's flour mill, which is jointly switched by BN/Santa Fe and TNER, receives wheat and ships flour, while Ag Processing receives vegetable oil. TNER and BN/Santa Fe

. SP handled only

With Sherman situated on the end of a light-density SP branch line and high BN/Santa Fe switch charges for SP, SP is a limited and declining competitor at Sherman. A UP/SP merger will be pro-competitive by broadening and strengthening both UP/SP and BN/Santa Fe, as already discussed in connection with Fort Worth.

Galveston. Galveston is an important port and tourist area situated on an island along the Texas Gulf coast south of Houston. Most industries, including the export grain elevators, are switched by the port-owned Galveston Railroad. BN/Santa Fe, UP and SP reach the island via a long causeway, SP reaching the causeway on trackage rights over UP's line from Houston. KCS accesses Galveston for grain traffic via the UP haulage that it secured in connection with the UP/MKT merger. Therefore, for grain traffic, Galveston's export elevators draw from four major railroads (BN/Santa Fe, UP, SP and KCS), and following the UP/SP merger there will be three-railroad competition. For traffic other than grain, Galveston is a "3-to-2" point.

Apart from its sizable grain volumes, Galveston accounted for 36,539 carloads of non-grain traffic in 1994, of

which a mere 3,239 carloads were competitive. Of this,

. Clearly, a UP/SP merger will be beneficial by enabling UP/SP to become a better competitor against BN/Santa Fe at Galveston.

Integrating UP and SP operations in South Texas will greatly improve efficiency and service quality for rail movements to and from the Port of Galveston. Directional operation of UP and SP lines will mean that grain traffic from north of Fort Worth and merchandise traffic from the Midwest and Northeast will move much more efficiently to Galveston. Importantly, UP/SP will be able for the first time to handle 286,000-lb. loadings of grain and other traffic from Fort Worth directly to Galveston.

BN/Santa Fe's capabilities with regard to Galveston will also be greatly improved by the settlement. BN/Santa Fe will gain a direct route from Alcoa (near Galveston) to Corpus Christi and Brownsville, and to Laredo via the Tex Mex. BN/Santa Fe will also gain a totally new Galveston-New Orleans capability, as well as the ability to operate directly from Galveston to San Antonio and Eagle Pass (with trackage rights instead of haulage) via a new track connection at Sealy. The UP/SP merger and settlement will provide the Port of Galveston with many new opportunities provided by two strong, comprehensive Western systems.

Texas City. Texas City is located along the Gulf Coast between Houston and Galveston. SP directly serves Texas City, and UP and BN/Santa Fe serve it via the jointly-owned TCT. All

Texas City traffic, which is primarily petrochemicals and bulk mineral exports, is switched by TCT and open to SP.

There were 23,931 carloads at Texas City in 1994, of which we found that 11,429 were competitive. This competitive traffic was handled

The reasons outlined in connection with Galveston and Houston why competition will be stronger as a result of the merger and settlement apply equally to Texas City. BN/Santa Fe will certainly build upon its current share and provide strong head-to-head competition to UP/SP for the modest level of Texas City competitive traffic.

Texarkana. Texarkana straddles the Texas-Arkansas border and is located on the main lines of SP, UP and KCS. The largest industry in the area, International Paper's mill at South Texarkana, is jointly served by UP and KCS and not accessed by SP, and competition there can only be strengthened as a result of a UP/SP merger.

There were 2,464 carloads of competitive carload traffic at Texarkana in 1994. The shares for this traffic were

. Much of the Texarkana competitive traffic moves to or from the East. KCS will become a much more effective competitor for this traffic as a result of its settlement with BN/Santa Fe, which is not reflected in this 1994 data. KCS obtained access to St. Louis via haulage over BN/Santa Fe's main line from Neosho, Missouri, to St. Louis. This provides it with an excellent direct route between Texarkana and

St. Louis for connections with Conrail, NS and CSX. In addition, KCS is continuing to upgrade the physical plant and service on its MidSouth route to Meridian, Mississippi, which will over time make KCS an even stronger competitor for traffic from Texarkana to the Southeast. For the smaller flows of competitive traffic involving Western locations, KCS will be working on an end-to-end basis with a stronger BN/Santa Fe system via the Fort Worth and Kansas City gateways.

UP/SP will, following merger, improve its service to Texarkana as well, with directional running on the SP and UP lines through the city, and use of UP's North Little Rock Yard for northbound classification and SP's Pine Bluff Yard for southbound classification. At the end of the day, Texarkana shippers will enjoy much stronger competition than they do now.

Shreveport. Shreveport is located in Northwestern Louisiana and is served by UP, SP and KCS. Shreveport is the location of an important KCS classification facility, with KCS lines radiating in all four directions. It is on UP's Dallas-New Orleans line and SP's Houston-St. Louis line.

We found that there were 10,611 cars of competitive carload traffic at Shreveport in 1994. The primary inbound traffic to open industries involves

a supporter of the merger, and
Primary outbound movements from open industries are petroleum products

As a result of its route and service advantages at Shreveport, KCS handled

and SP, as is often the case, handled a very low percentage of competitive business, only .

KCS has an intermodal ramp at Shreveport which handled in 1994. SP has no ramp in the area and UP operates a small intermodal facility at Marshall, Texas, 42 miles to the west. KCS is clearly the dominant intermodal player in this area.

As indicated in connection with Texarkana, KCS will become a much stronger competitor following its settlement in the BN/Santa Fe merger, which gives KCS new single-line service to St. Louis, the primary gateway between the Southwest and Northeast. This will allow KCS to build upon its already sizable traffic share. A UP/SP merger, with all of its benefits, will enable UP/SP to compete more effectively with KCS.

Lake Charles and West Lake. In the Lake Charles area in Southwestern Louisiana, there are many petrochemical plants and a Gulf Coast port. The railroad switching arrangements in the Lake Charles area are complex. The Calcasieu River splits the area into two parts. SP's Houston-New Orleans mainline crosses the river and serves all of the Lake Charles area. UP directly serves the area east of the Calcasieu River via a branch line, and KCS directly serves the area west of the Calcasieu River.

The primary rail traffic on the east side of the river involves the Port of Lake Charles, which has two locations. The first is at Harbor, Louisiana, which is served via a UP/SP joint facility agreement. This is a "2-to-1" point and will be opened to BN/Santa Fe.

The port's other operation, near downtown Lake Charles, is switched by UP and open to KCS and SP via reciprocal switching. UP also provides a haulage operation for KCS between KCS' mainline at DeQuincy and Lake Charles.

The third part of the Lake Charles area lies west of the Calcasieu River at West Lake. West Lake is jointly served through a KCS-SP joint facility agreement. However, the primary customer, PPG, is open to UP via reciprocal switching. In addition, KCS provides a haulage operation for UP from West Lake to UP's mainline at DeQuincy.

The fourth part of the Lake Charles area is the site of most Lake Charles area industry. It is known as West Lake Charles and it is served through a KCS-SP joint facility agreement and not open to UP. A UP/SP merger will be strongly pro-competitive for West Lake Charles customers, by addressing SP's service and equipment problems and making SP more competitive with KCS.

The "3-to-2" customers in the Lake Charles area are located at Lake Charles and West Lake. There were 40,620 cars of carload traffic at these points in 1994, of which 20,793 were competitive. KCS for this business,

handling
remaining traffic

. Of the

A UP/SP merger will be pro-competitive for the Lake Charles area. At Harbor, SP will be replaced by a stronger BN/Santa Fe. At West Lake Charles, the strengthened SP will be better able to compete with KCS, and at Lake Charles and West Lake, the merged UP/SP will be better able to compete with the dominant carrier, KCS. KCS can be expected to increase its already large traffic share even further because of its new access to the St. Louis gateway via haulage over BN/Santa Fe and continued upgrading of its MidSouth route into the Southeast.

West Memphis. West Memphis is located in Arkansas on the west bank of the Mississippi River opposite Memphis, Tennessee. BN/Santa Fe, UP and SP mainlines serve West Memphis. The industries there are covered by a joint facility agreement among these three carriers, which specifies that BN/Santa Fe performs the switching. The primary customer is

served by rail and barge. West Memphis generated 5,206 carloads in 1994, of which 362 were competitive. BN's direct switching of the industries helped it handle

this competitive traffic . UP handled and SP, as is so often the case with competitive business, handled a very low percentage, here only . Clearly, a UP/SP merger will benefit competition by creating a stronger competitor to BN/Santa Fe at West Memphis.

Jonesboro. Jonesboro is in Northeastern Arkansas, where SP's Chicago-Texas mainline crosses BN/Santa Fe's Memphis-Kansas City mainline. It is also served by UP's St. Louis-Memphis line. Jonesboro accounted for only 3,956 cars in 1994, of which 2,751 cars were competitive. SP directly switches the primary industry at Jonesboro, Riceland Foods, and handled of competitive traffic. BN/Santa Fe handled and UP handled only . Clearly, a UP/SP merger will be pro-competitive, since UP is hardly participating at all in Jonesboro business and the merger will result in significant improvement to the service SP is currently providing to its customer. Additionally, BN/Santa Fe will be strengthened as a result of its merger and its settlement with UP/SP and will continue to provide the primary competitive alternative to SP. BN/Santa Fe's position will be further strengthened by the Applicants' commitment to decrease SP's reciprocal switch charges significantly.

* * *

What this detailed discussion shows is that, for "3-to-2" shippers as for all other shippers, the UP/SP merger and the settlement with BN/Santa Fe will increase rail competition. In most cases, SP is a weak competitor for the traffic it theoretically could handle in competition with UP and BN/Santa Fe, and BN/Santa Fe (occasionally, KCS) is a formidable competitor that will only be further strengthened by its merger.

The merger will produce more equal, stronger, more lasting competition for this traffic.

L. Source Competition Will Be Stronger

In this subpart, I discuss the widespread positive impact of the merger and settlement on source competition, and I also address selected issues with respect to whether the merger would have any harmful effect on source competition. Mr. Barber looks systematically at source competition for all the commodities carried by UP and SP, and I have not attempted to recover that ground.

1. Source Competition Generally

The fundamental point to be made about source competition is that the UP/SP merger and the settlement with BN/Santa Fe will increase it. Source competition is strengthened when consumers can draw economically upon a wider range of suppliers, and producers can market their goods economically to a wider range of buyers. The shorter routes, faster transit times, wider single-line service, lower costs and other pro-competitive benefits I have described will have exactly these effects. For example, Eastern consumers of chemicals, lumber, food products, minerals and other products originated on the UP and SP systems will find UP/SP sources for those products more competitive with alternative national and world sources. Industries served by UP and SP will have a greater ability to penetrate new markets, as many shippers have testified.

A particular way that the merger intensifies source competition is by making producers on UP and SP lines more competitive with producers served by BN/Santa Fe. Thus, to cite just a few examples, SP perishables and canned goods will be more competitive against PN/Santa Fe perishables and canned goods in the Upper Midwest; SP lumber will be more competitive against BN/Santa Fe lumber in the Upper Midwest; UP grain will be more competitive against BN/Santa Fe grain in the San Joaquin Valley; and UP paper products will be more competitive against BN/Santa Fe paper products in California and Arizona.

The BN/Santa Fe settlement will have further positive effects on source competition of the same nature. Shippers on the BN/Santa Fe system will gain more competitive access to end markets, as will shippers who use BN/Santa Fe's new routes from Mexico to the Upper Midwest, Pacific Northwest and Southeast, and from Canada to the West Coast, among others.

2. Gulf Coast Chemicals and Petroleum Products

One source competition issue that some have raised concerns Gulf Coast chemicals and petroleum products. I have already explained that the merger will produce significant pro-competitive benefits for producers of these products, who will gain shorter routes, expanded single-line service, much improved operations in the Houston-Memphis-St. Louis-Chicago corridor, and faster return times for empty cars, as well as the assurance -- so important to many chemicals producers -- that UP/SP will have the financial resources to ensure transport safety. The

settlement will add BN/Santa Fe competition at many Gulf Coast chemical plants, including plants in Amelia, Orange, Mont Belvieu and Baytown, Texas. It will also create a stronger single-line competitor to New Orleans and Memphis, and open additional single-line destinations to Gulf Coast producers.

Here, I explain why the merger will not have any offsetting harmful effects on source competition. It will not allow UP/SP to "monopolize" Gulf Coast chemicals and petroleum products, as some have irresponsibly claimed. After the merger, UP/SP will continue to face vigorous rail, modal and source competition for this traffic, and the merger will therefore be entirely positive from a competitive standpoint.

To respond to assertions that the merger would enable UP/SP to "monopolize" Gulf Coast chemical and petroleum product shipments, we analyzed 24 7-digit STCC chemical (STCC 28) and petroleum products (STCC 29) commodities for which UP and SP accounted for more than half of Texas/Louisiana rail originations in 1994. We selected these commodities using the "50/10" screen that has sometimes been used by parties in past merger cases as a means of identifying traffic worthy of further competitive analysis. This screen selected commodities for which UP and SP each accounted for at least 10% of Texas/Louisiana rail originations and UP and SP together accounted for more than 50% of those originations. (I do not mean to suggest that traffic identified by this "screen" will actually suffer a harmful loss of competition. As I have testified in great detail in prior

cases, the "50/10" screen very often identifies traffic that will in fact experience no reduction in competition.) From the commodities that were identified by the "50/10" screen, we selected, in rank order based on volume shipped by rail, those accounting for 80% of the total rail tonnage of all commodities identified by the screen. In addition, we spot-checked several other commodities for which rail volumes were smaller, and found that the same types of competitive forces discussed below apply to them as well.

Our analysis of these commodities, which drew upon data provided by SRI International as well as the knowledge of UP and SP marketing personnel, confirmed what UP and SP know to be the reality of the marketplace -- that UP and SP do not now and will not after the merger have market power over any of these products. Even where UP and SP combined account for over 50% of current Texas/Louisiana rail originations of a particular chemical, they are under continual competitive pressure from other rail, water, pipeline, truck and source alternatives to preserve and increase their business. UP/SP will be forced to remain competitive by (1) substantial direct competition from other Gulf Coast rail carriers; (2) substantial competition from other Gulf Coast non-rail carriers; (3) the fact that chemicals produced in the Gulf Coast represent only a fraction of total U.S. consumption of those chemicals; (4) leverage available to Gulf Coast chemical producers through their ability to require contracts on a multiplant or multicommodity basis for traffic at

points throughout the United States, and their ability to "swap" chemicals to reduce transportation costs; and (5) the fact that the specific destinations for Gulf Coast chemicals will continue to have alternative non-UP/SP rail sources for those chemicals.

The 24 commodities that we studied were:

<u>STCC</u>	<u>Commodity</u>	<u>UP and SP Tons Originated in 1994</u>
2821142	Polyethylene	
2821139	Polypropylene	
2813966	Vinyl chloride	
2812815	Chlorine	
2818546	Ethylene glycol	
2818342	Styrene	
2911415	Petroleum lubricating oil	
2899610	Carbon black	
2911791	Petroleum oil, not elsewhere classified	
2818662	Adipic acid	
2818265	Propylene oxide	
2818668	Vinyl acetate	
2819315	Sulfuric acid	
2818169	Hexamethylenediamine	
2911610	Liquid Asphalt	
2818555	Polypropylene glycol	
2911982	Petroleum naphtha	
2815111	Phenol	
2871235	Diammonium or monoammonium phosphate	
2818115	Acrylates	
2818239	Ethylene oxide	
2818170	Urea	
2911990	Paraffin or petroleum wax, not elsewhere classified	
2818429	Propyl or isopropyl alcohol	

Details on a commodity-by-commodity basis are contained in Appendix B. Here, I will summarize our conclusions.

Petroleum Products. We found that rail shipments of petroleum products (STCC 29) are only a tiny fraction -- about 2 or 3 percent -- of total shipments of petroleum products.

Petroleum products are shipped almost exclusively by pipeline, barge and truck. Pipeline, barge and truck alternatives are so overwhelming that any exercise of rail market power over Gulf Coast originations is inconceivable. Gulf Coast producers of petroleum products can and do use the opportunities created by these alternatives to obtain the lowest shipping rates, by swapping among pipelines, selling product to other nearby shippers, or switching (or threatening to switch) among alternatives, especially barge and pipeline.

As I explain in more detail in Appendix B, our analysis revealed that each of the STCC 29 petroleum products identified by the "50/10" screen is subject to overwhelming non-rail competition (and other competitive constraints as well). For example, in 1994, for petroleum naphtha, UP and SP shipped only 2.7% of total Gulf Coast shipments (357,514 of 13.5 million tons); for asphalt, UP and SP shipped 7.4% (410,344 of 5.6 million tons); for petroleum lubricating oil, 15.4% (832,610 of 5.4 million tons); and for petroleum wax and paraffin, 38.9% (205,213 of 527,000 tons).

We also examined destinations for UP and SP Gulf petroleum products shipments to ensure that traffic that moved on UP or SP will have a non-UP/SP option after the merger. As I explain in detail in Appendix B, our analysis demonstrated that this was the case. We found that destinations of specialty petroleum products -- petroleum naphtha, petroleum lubricating oil and petroleum wax -- have various rail and non-rail sources

of these products independent of UP and SP. These products are shipped primarily by water and pipeline from petroleum refiners to blending facilities. In general, large blending facilities ship by pipeline and barge; small facilities ship by truck. Most blending facilities are large, many are served by pipeline or water, and many are served by more than one railroad. For example, there are several large blending facilities in Phoenix, Arizona, that are served by both SP and BN/Santa Fe. Smaller local blending facilities often use truck exclusively, because they are too small to receive shipments by pipeline, barge or rail. The smallest rail tank car holds 10,000 gallons (the most commonly used cars hold 23,000 gallons), and most small facilities can not process that much product at once. Small or large, blending facilities have alternatives to rail.

Similarly, we found that asphalt rail shipments were subject to strong source and destination competition. Most asphalt is shipped by truck, not pipeline or barge, primarily to destinations with new construction, especially in the Southwest. Asphalt is produced throughout the United States as a petroleum refining by-product, primarily from "sour" crude oil. Little asphalt is produced in the Gulf Coast, where most crude oil is "sweet." Competition from non-Gulf sources is further magnified by competition among asphalt brokers. Few producers market their own asphalt; rather, brokers match asphalt production with

consumption. Asphalt brokers force asphalt producers and shippers to compete, and offer asphalt consumers the lowest rate among various producers and shippers.

Finally, the UP/SP settlement with BN/Santa Fe will bring new rail competition to Exxon in Baytown, Texas, and Mobil in Orange, Texas, two of the largest Gulf Coast producers of the petroleum products we studied.

Chemicals. With respect to STCC 28 products, an examination of Gulf Coast producers' transportation options and other competitive factors demonstrates that, following the merger, Gulf Coast shippers of each of these chemicals will continue to benefit from fierce competition.

-- First, Gulf Coast producers of the chemicals that we analyzed will have extensive access to rail carriers other than UP/SP. Gulf Coast chemicals are originated not only by UP and SP, but also by IC, KCS and BN/Santa Fe. Where the merger would have eliminated two-railroad competition, the settlement with BN/Santa Fe guarantees that producers will continue to have a strong rail alternative. Also, at facilities BN/Santa Fe now serves, the UP/SP merger will provide Gulf Coast chemical producers with an even stronger competitive alternative than 1994 data indicate, because of the new single-line routes and other benefits resulting from the BN/Santa Fe merger and the settlement.

Other railroads place a significant constraint on UP/SP. For eleven of the nineteen STCC 28 commodities that we

analyzed, UP and SP originations at Gulf Coast facilities that will not be open to other railroads accounted for less than 50% of 1994 Gulf Coast rail originations for these chemicals. For most of the other eight chemicals, UP and SP originations accounted for an amount not much above 50%.

These figures demonstrate that, even considering only rail originations within these two states, other railroads have ample ability to originate the product, such that any attempt by UP/SP to increase rates (or allow service to decline) would be self-defeating, as producers could simply switch to a different rail carrier.

In addition, in many instances, the same manufacturer that operates a Gulf Coast plant served by only UP or SP at one location also has another Gulf Coast plant that will be served by a railroad other than UP/SP. For example, Formosa Plastics manufactures vinyl chloride in Baton Rouge, Louisiana (served by IC and open to KCS and UP), as well as in Point Comfort, Texas (UP-exclusive). Hoechst Celanese manufactures acrylates in Pampa, Texas (BN/Santa Fe-exclusive), as well as in Bayport, Texas (SP-exclusive). Sid Richardson manufactures carbon black in Borger, Texas (BN/Santa Fe-exclusive), as well as in Big Spring, Texas (UP-exclusive).

-- Second, UP/SP will face strong competition for Gulf Coast originations from other modes of transportation, particularly barges, trucks and tankers. For fully seventeen of the nineteen STCC 28 commodities that we analyzed, UP and SP

originations at facilities that will not be open to other railroads after the BN/Santa Fe settlement accounted for less than 50% of 1994 Gulf Coast shipments by rail and non-rail modes. For the remaining two, UP and SP originations were not much more than 50%. Based on 1994 data, for all nineteen STCC 28 commodities, Gulf Coast producers will have alternatives to UP/SP for at least 30% of their originations.

These numbers demonstrate that Gulf Coast producers have competitive rail and non-rail alternatives to UP/SP origination of their products. In particular, most Gulf Coast chemical producers have located their facilities on water to take advantage of barge and tanker opportunities. Shippers often choose barge over rail because barge companies supply equipment and personnel for loading and unloading, whereas shipments by rail are typically made in cars that are leased or owned by the producer and must be loaded or unloaded by the producer. Barge is also cheaper than rail for shippers of large volumes, because a single barge holds the equivalent of 16 rail cars of a commodity. Most producers ship by barge and tanker, as well as by rail, today, and they can and do easily switch between modes depending on transport rates. Again, because of these very substantial transportation alternatives, any attempt by UP/SP to raise rates (or degrade service) would be self-defeating.

Examples of the effects of barge competition abound. For example, UP recently lost more than of acrylate business when barge offered a lower

rate. had negotiated a rail contract that allowed it to increase its use of barge relative to rail. This contracting practice is widespread in the chemicals industry and makes barge competition a continual threat. Barge competition was an important factor in the rate UP recently quoted for shipment of ethylene glycol. Barge rates also have been crucial in recent UP negotiations for a contract to ship propylene oxide

and in setting rates for shipments of vinyl chloride to. And which operates a PTRAserved plant in Houston as well as a UP-exclusive plant has threatened to barge phenol if UP's rates are not competitive.

Producers can also use barge to create rail competition for originations at exclusively-served facilities.

UP lowered its rates for Gulf Coast chemical shipments in response to threat to ship the traffic using a roll-on-roll-off barge. Recently, has threatened to use a similar operation to access other rail carriers.

Ocean vessels used to ship Gulf Coast product to West Coast or East Coast locations also provide a competitive constraint on rail carriers. For example, before 1988, shipped styrene by tanker through the Panama Canal contracted with UP to ship styrene

by rail at an annually-increasing rate. That contract threatened to resume shipping by tanker unless UP reduced its rates. UP, responded with a reduced rate -- to near-1988 levels -- to keep has shipped substantial volumes of vinyl acetate by oceangoing tanker to and then by truck to the ultimate destination. Although UP currently moves vinyl acetate from facility in to by rail, our rates must remain competitive with water in order to retain the business. Other products as well, such as ethylene glycol, move in substantial quantities by tankers to East Coast and West Coast ports.

Another constraint on UP/SP rail rates is export by tanker. The U.S. is a significant exporter of chemicals, and for Gulf Coast producers, the option to send their product overseas provides a potential response to a rise in rail rates. In 1994, Gulf Coast producers exported significant amounts of polyethylene (299,248 tons), vinyl chloride (951,456 tons), ethylene glycol (452,115 tons), styrene (1,262,534 tons), vinyl acetate (511,175 tons) and propylene oxide (195,580 tons), as well as smaller but significant amounts of most of the other 19 chemicals.

-- Third, most of the chemicals that we analyzed are produced outside the Gulf Coast, and UP/SP Gulf Coast originations account for only a small portion of shipments nationwide. For eighteen of the 19 STCC 28 commodities in our

analysis, UP and SP Gulf Coast originations at facilities that will not be open to other railroads after the BN/Santa Fe settlement accounted for less than 50% of nationwide shipments in 1994. For almost all of these commodities, UP and SP Gulf Coast originations were far below 50% of nationwide shipments. And in the case of the remaining chemical -- adipic acid -- the UP/SP share, 56%, was only slightly more than half.

The existence of non-Gulf, non-UP/SP sources of these commodities will provide an important competitive constraint on UP/SP in several ways. For example, DuPont produces adipic acid at two Gulf Coast facilities for use in the manufacture of nylon fibers by producers in the East. (DuPont's facility in Orange, Texas, will be opened to BN/Santa Fe as a result of the settlement agreement.) DuPont's major competitor in the nylon fibers market, Monsanto, produces adipic acid in Gonzalez, Florida. Some of this adipic acid Monsanto processes at Gonzalez and some of it is shipped to other plants. (Monsanto is served by CSX.) The UP/SP system will not, of course, serve Monsanto in Florida, and it will have a powerful incentive to control DuPont transportation costs in order to keep DuPont competitive with Monsanto.

Furthermore, many of the chemicals that we studied are generic commodities, and UP/SP Gulf Coast chemical originations must compete with other sources to supply the needs of receivers. The fact that chemicals produced in the Gulf Coast are also produced outside the Gulf Coast -- especially in locations served

by Eastern railroads, water or other modes -- means that UP/SP will compete not only with Gulf Coast shipping alternatives, but on a nationwide basis.

A large percentage of the chemicals that we analyzed were shipped to points in the East, where they compete with chemicals originated in the Northeast by Conrail, CSX and NS. Chemicals produced in Eastern facilities and originated by Eastern railroads often compete with UP and SP Gulf Coast originations for deliveries not only to Eastern destinations, but to Western destinations as well. For example, polypropylene glycol is produced by major manufacturers in Kentucky and West Virginia as well as New Jersey, Illinois and Michigan. These manufacturers ship substantial volumes to destinations throughout the East, and also to destinations in the Chicago, Houston, Los Angeles and San Francisco BEAs -- destinations that also receive Gulf Coast polypropylene glycol originated by UP and SP.

Similarly, several producers ship chlorine in significant amounts from New York and West Virginia to Eastern locations and to receivers in the Texarkana, Houston, Corpus Christi and Chicago BEAs -- all BEAs where UP or SP Gulf Coast chlorine traffic terminates.

In fact, many Gulf Coast producers also have facilities outside the Gulf Coast that they can use to ship the same product using a different carrier. For example, Occidental has a UP-exclusive chlorine facility in Taft, Louisiana, as well as a

facility in Niagara Falls, New York. IMC-Agrico has an ammonium phosphate facility in Donaldsonville, Louisiana (UP-exclusive), but it also has facilities in Mulberry and Nichols, Florida (served by CSX).

Still another example is provided by Gulf Coast carbon black producers that also have plants in non-Gulf Coast states. Cabot has a carbon black plant in West Virginia (CSX-served), Columbian in West Virginia (CSX-served), Degussa in Ohio (CSX-served), and Witco in Alabama (NS-served) and Oklahoma (BN/Santa Fe-served). Shipments from these plants compete in substantial quantities with Gulf Coast shipments to both Eastern and Western destinations.

Gulf Coast producers can use their plants outside the Gulf Coast to obtain more favorable rates for Gulf Coast originations. For example, the rate UP for shipping vinyl chloride

exceeded the rate UP charged for competing shipments UP lowered but informed

that its rate could go up after responded that it could ship vinyl chloride if UP raised the rates.

Finally, as suggested by the examples above, an analysis that focuses only on U.S. originations is incomplete because it neglects significant Canadian production and other imports. Canadian producers manufacture and ship substantial

amounts of chlorine (594,000 tons), ammonium phosphates (739,000 tons), ethylene glycol (612,000 tons), styrene (671,000 tons), polyethylene (2.1 million tons), sulfuric acid (2.8 million tons), urea (3.5 million tons), vinyl chloride (424,000 tons) and carbon black (184,000 tons), as well as lesser but still significant amounts of most of the other chemicals we studied. Many U.S. chemical companies have Canadian subsidiaries and produce the same product in both their U.S. and Canadian facilities. The 1994 Waybill Sample data indicate that Canadian shipments compete with UP and SP Gulf Coast originations of these chemicals at numerous destinations.

-- Fourth, UP/SP will face potent customer leverage. Most Gulf Coast chemical manufacturers also produce a large number of chemicals outside Texas and Louisiana. These producers use their size and geographic diversity to their advantage in contract negotiations. A prime example is UP- exclusive customer at . UP and contract for shipments that includes also ships about by rail -- a point to which it also has the option to barge some of its products -- under a single contract at one rate. These contracts allow a lower rate even for products that have fewer shipping options by including them in a single contract solicitation together with products for more transport options.

Another way shippers gain leverage over rail rates is by using, and threatening to increase their use of, a practice known as "swapping." As I have said, many of the chemicals we studied are generic -- that is, there is no difference among various producers' products. Producers often take advantage of this fact by entering into agreements with other producers to satisfy each others' customers' or in-plant needs. For example, for years shipped vinyl chloride

. A few years ago into a swap agreement pipes vinyl chloride and in exchange vinyl chloride . This arrangement eliminates all freight charge but for the short trip

. Similarly, swap styrene shipped styrene . Now, which makes styrene . In exchange, styrene by barge

In addition, many producers have the option to increase their internal consumption of intermediate chemicals used in the production of other chemical products. A producer might choose this course if the second commodity is more amenable to non-rail modes of shipment or it believes it can get a better transport rates for the second commodity because it is subject to greater source competition. For example, produces chlorine, some of which it consumes in-plant in the

production of vinyl chloride and some of which it ships

. could decrease chlorine shipments and increase production (and shipments) of vinyl chloride, which is more often shipped by non-rail modes than chlorine.

-- Finally, rail competition at destination will control UP/SP rates and service to Gulf Coast chemical shippers. Even where UP and SP have a high share of Gulf Coast originations, many of the destinations to which a given commodity is shipped are clearly in a position to obtain the product from non-UP/SP rail sources, and this would make any attempt by UP/SP to raise rates (or degrade service) self-defeating. For example, in 16 of the 32 BEAs where UP- or SP-originated Gulf Coast polypropylene glycol traffic terminated in 1994, traffic was originated on a railroad other than UP or SP. Of the remaining 16 BEAs, Eastern carriers serve 11, and the remaining five are or will be served by BN/Santa Fe following the merger. Thus, for all destination BEAs, rail carriers other than UP/SP could deliver polypropylene glycol originated on railroads other than UP/SP. Similarly, in 12 of the 17 BEAs where UP- or SP-originated Gulf Coast ethylene oxide traffic terminated in 1994, traffic was originated on a railroad other than UP or SP. In the remaining 5 BEAs, rail carriers other than UP/SP could deliver ethylene oxide originated on railroads other than UP/SP.

These constraints, which are detailed much more fully in Appendix B, are clearly ample to prevent the merger from

giving rise to any market power over Gulf Coast chemicals and petroleum products.

3. Soda Ash

Another commodity that might appear on the surface to raise source competition concerns is soda ash. The origins of the great majority of all U.S.-produced soda ash are in the Green River area of Southwestern Wyoming, where the only direct rail service is by UP -- though a BN/Santa Fe-served transload facility in Wyoming, and UP-served transload facilities in Utah that will be served by BN/Santa Fe after the merger, capture a significant share of Wyoming shipments. SP serves, through a shipper-owned railroad (the Trona), the one other domestic natural soda ash source, in Searles Lake, California, which produces about a sixth as much output as Wyoming. Since soda ash is inexpensive and bulky, each source tends to dominate sales in its immediate area. Notwithstanding that the Wyoming and California soda ash sources will both have exclusive line-haul rail service from the merged system, it is in fact clear that the merger will bring more competitive transportation to soda ash shippers and receivers, and will not diminish competitive constraints for this traffic.

The merger will bring benefits to soda ash producers in both Wyoming and California. Wyoming producers will benefit from improved Central Corridor operations, shorter routes to Texas and the Southeast, and single-line access to additional Mexican

gateways and to SP served points not served by UP.⁹⁶ California producers will enjoy shorter routes to Utah and beyond (thanks to the merged system's trackage rights over BN/Santa Fe from Mojave to Barstow), shorter routes to Dallas and Memphis, and new single-line access to Laredo. Equipment supply for all soda ash shippers will also improve, as a result of better repositioning opportunities and the overall greater operating efficiency of the merged system.

Soda ash producers and consumers uniformly support the merger. Support statements have been submitted by FMC, the world's largest soda ash producer, Owens-Illinois, one of the largest soda ash receivers, and American National Soda Ash Corporation, the export association of all six United States soda ash producers, as well as by a variety of other soda ash shippers and receivers.⁹⁷ FMC endorses the merger as a means of improving service at the lowest rates possible. It expects substantial new capacity and improved service for soda ash shipments, especially for eastbound traffic from Green River. It notes that the merger will preserve competitive options -- including transload, the

⁹⁶ See, for example, the statement of Ball-Foster Glass Container, p. 2: "Our SP-served plant in Lincoln, Illinois, receives soda ash from Green River, Wyoming. These shipments move over UP east to Kansas City. The Kansas City interchange between UP and SP regularly produced delays of three to five days, and we experienced erratic service on the SP movement."

⁹⁷ See statements of Rhone-Poulenc North American Chemicals, Ball-Foster Glass Container, Mexalit Industrial, AFG Industries, Harcros Chemical Group, Grupo IRSA, Clorox Company, TransWood and Anchor Hocking Speciality Glass.

current check on both UP and SP rates -- and that freight rates will remain competitive. Owens-Illinois supports the merger for similar reasons. It purchases most of its soda ash from Wyoming, but its California plants purchase primarily Searles Lake soda ash. It notes that UP/SP will ship soda ash more efficiently, especially to points on the Central Corridor and in Northern California. It currently moves all its California soda ash by truck because of concerns about poor SP service. It believes the merger will improve rail alternatives, and that competition will remain strong, as transload alternatives will be preserved. ANSAC supports the merger because it will improve service, create shorter, more direct, and more efficient routes to Mexican gateways, and open new routes to West Coast ports. ANSAC also cites transload as an effective alternative to rail.

UP and SP will gain no market power over soda ash by merging, because of the powerful constraints imposed by transloading and trucking. BN/Santa Fe operates a transload facility at Bonneville, Wyoming, which captures a significant share of Wyoming soda ash traffic. There are also three transloading facilities on SP's lines in Salt Lake City and Ogden, and BN/Santa Fe will have the right to continue such Utah transloading under the settlement agreement. As for Searles Lake soda ash, substantial volumes move by truck to Los Angeles, and to other ports for export, and BN/Santa Fe also moves transloaded Searles Lake soda ash from a facility at Boron, California.

These options are what constrains both Wyoming and California rail rates and service for soda ash.⁹⁸

This can be seen clearly in the history of rail rates for Wyoming soda ash. Before 1985, there was essentially no transloading. Since 1985, as transloading has grown, rail rates for Wyoming soda ash have dropped. From 1985 to 1991, the Bonneville transload grew

and UP's real rail rates for Wyoming soda ash declined by more than 20 percent. Also, during the same period the use of contract incentives increased dramatically. Contract incentives were rare before 1985, and most traffic moved under tariff. In the late 1980s, UP responded to the transload threat by

Taking account of these refunds, the real cost of shipping soda ash has declined even further.

After the merger, competition will only increase, as BN/Santa Fe continues to exploit transloading opportunities. All five existing transload facilities have unused capacity, and additional facilities could begin operating almost immediately. Start-up costs are minimal, and there are no barriers to entry. For Wyoming product, in addition to its current Bonneville

⁹⁸ See, for example, the statements of FMC, p. 7, Rhone-Poulenc North American Chemicals, p. 2, and Owens-Illinois, p. 4.

facility BN/Santa Fe will be able to serve the SP facilities at Salt Lake City and Ogden. BN/Santa Fe will thus offer efficient service to both Eastern and West Coast destinations via transload. For California product, truck will continue to be highly competitive and BN/Santa Fe will continue to compete through the Boron transload. There is also a continuing potential for additional natural soda ash production, and for competition from other sources and products.

4. Houston-Area Aggregates

Source competition will also remain strong for the transportation of aggregates in the Houston area, a market that was the subject of Commission attention in the UP/MKT case. At that time, DOJ expressed concern that the UP/MKT merger would reduce this market from three railroads to two, but the Commission rejected this concern, pointing out that Santa Fe also had a significant role in delivering aggregates in the area, and that major shippers were confident that there were competitive constraints applicable to their traffic.⁹⁹

Competition for this traffic will remain strong after the UP/SP merger for several reasons. First, under the settlement agreement, BN/Santa Fe will gain access to the largest area producer, Texas Crushed Stone at Georgetown, Texas, via an interchange at Kerr, Texas, with the Georgetown Railroad, the shortline owned by Texas Crushed Stone. BN/Santa Fe will have

⁹⁹ 4 I.C.C.2d at 464-71.

direct routes into the Houston area and will serve a wide range of destinations for aggregates, including "2-to-1" points on the line of the former Galveston, Houston & Henderson Railroad.

Second, Mexican aggregates, delivered by water and trucked to destination, have in the past year become extremely competitive in the Houston market. Mexican stone deliveries are up 40% in 1995, and are now approaching 15% of Texas production. This recent development will force UP/SP and BN/Santa Fe to be doubly competitive to retain their business in this market.

Finally, with intrastate deregulation, trucks are becoming a much larger factor in the market.

Affected shippers strongly support the merger. Texas Crushed Stone says that it "looks forward to working with the merged company to increase rail traffic" and "to the connection with Burlington Northern Santa Fe, which will protect our present two carrier status." Gifford-Hill, another major area producer, expects to gain "greater access to the Houston metropolitan area." Other shippers of Houston area aggregates, including Vulcan Materials, Gulf Coast Limestone, Texas Industries, Capitol Aggregates, Colorado Materials and Vernor Material & Equipment, also support the merger.

II. THE TRAFFIC STUDY

A Traffic Study was conducted under my direction and supervision to determine the traffic impacts of the UP/SP merger and the settlement with BN/Santa Fe. In order to make these determinations, as well as to provide traffic flows for use in

preparing the Operating Plan, it was also necessary as a preliminary step to adjust the base-year 1994 traffic data for the impacts of the UP/CNW merger, the BN/Santa Fe merger, and the conditions that were granted in settlement agreements between the applicants in the BN/Santa Fe case and SP, KCS and UP.

I was responsible for the traffic diversion judgments in the Traffic Study, and was personally involved in all aspects of the work. I was assisted by my staff, who have extensive experience in conducting such studies. We also benefitted from input and consultations with numerous UP and SP marketing personnel.

The base year for our study was 1994. We generated the traffic file for the study from 100% 1994 traffic data for UP (including CNW) and SP, and the 1994 ICC Waybill Sample. We assembled these data sources into a single file in a way that avoided double-counting.

This discussion of the Traffic Study begins by describing the assumptions that we made as to the post-transaction competitive environment and the basic extended-haul diversion rules that we used in all phases of the study (and have used in prior cases) (Subpart A). I then review how we developed the adjusted 1994 traffic base (Subpart B). Next, I detail the various components of our analyses of the UP/SP merger and the settlement with BN/Santa Fe, and set forth the results of those analyses (Subparts C and D). Finally, I explain how revenue

figures were generated for use in preparing the pro forma financial statements (Subpart E).

A. Basic Assumptions and Extended-Haul Rules

Our Traffic Study rested on certain basic assumptions as to the post-merger competitive environment which were applied throughout. These included the assumptions that (a) the railroad industry would continue to be highly competitive, with the full range of Staggers Act freedoms -- including rights to contract and price traffic competitively -- available to all railroads, (b) equipment to handle subject traffic would be available (the validity of this assumption in regard to the UP/SP merger is supported by the Operating Plan), (c) unduly circuitous routes would not be used, (d) railroads would not cancel joint rates or close through routes that are currently available, (e) the existence of a transportation contract would not preclude diversion of traffic to a different route, and (f) customer relations can influence the diversion of traffic.

One part of any traffic study -- and indeed, the only matter that was analyzed in traditional traffic studies -- is the extent to which the transaction will give the parties to it an opportunity to extend their hauls on existing traffic. Our Traffic Study in this case, like the traffic studies that we presented in the UP/MKT and UP/CNW cases, employed certain basic diversion rules to determine what percentage of particular movements would divert as a result of the transaction under

consideration to a route that would give the parties to the transaction an extended haul.

The basic extended-haul diversion rules that we used were a 75% rule, a 50% rule, and a 90% rule. Other rules were developed to take account of special situations (the principal ones are discussed at the appropriate points below), but the basic 75%, 50% and 90% rules accounted for the great bulk of our extended-haul diversion judgments. As I will be referring to these rules at several points in the ensuing discussion, it is useful to describe them at the outset.

These rules, which focus on what railroads serve the origin and destination of a movement and what railroads handled the movement in the base period, were applied by computer to 100% of the traffic records being studied (as were all of our rules). Thus, as in UP/MKT and UP/CNW, the data processing capabilities of modern computers allowed us to address all traffic, in lieu of the traditional traffic study methodology, under which a small sample of movements were reviewed and diverted using subjective judgment and the results then inflated statistically.

The simplest way to describe these basic extended-haul rules is to think of Railroad A and Railroad B as the merging railroads, and Railroad C as a railroad not party to the merger. (The rules also apply where a railroad gains new access to a point by trackage rights, as opposed to by merging, but it helps simplify matters to speak of a merger.)

The first of our basic extended-haul rules, the 75% rule, applies when traffic is moving via an A-C joint-line routing between an exclusively-served point of Railroad A and a point jointly served by Railroad C and Railroad B. (There could also be other railroads serving the latter point; that is immaterial.) An example in the context of the UP/SP merger would be a movement from Pocatello, Idaho (UP local), to Bakersfield, California (jointly served by SP and BN/Santa Fe), moving UP-Barstow-BN/Santa Fe. In this circumstance, we divert 75% of the traffic to the merged system's single-line route. The remaining 25% of the traffic stays on the A-C joint-line route. The rationale for this rule is that the merged system is gaining a new single-line route, which most shippers will find more attractive than a joint-line route. We leave 25% of the traffic on the joint-line route to recognize the possibility that in a fraction of the cases the destination facility will in fact be a closed facility on Railroad C even though the facility is located at a station that both Railroad B and Railroad C serve, and because even if the facility is open there may be other reasons, such as equipment supply, special services, clearances, storage-in-transit privileges or other traffic relationships with Railroad C, why the shipper will wish to continue to use an A-C routing. (It is important to understand that we know only whether a station has open shipper facilities, not whether each particular facility is open or closed. To determine the latter

for all traffic in the data base, or even for a reasonably-sized sample, would have been inordinately costly and time-consuming.)

One additional refinement worth noting at this point is that we deem a jointly-served point to be exclusively-served, for purposes of applying our rules, if the route of movement of the traffic indicates extraordinary influence with the shipper on the part of the incumbent carrier that is handling the traffic at that point. Thus, for example, if a particular shipment moved UP-Portland-BN/Santa Fe from Lincoln, Nebraska, to Eugene, Oregon -- a route where BN/Santa Fe has a single line -- we would treat the origin as an exclusive UP point for purposes of deciding which rule to apply to this particular movement, and would apply the 75% rule to this traffic in evaluating the effect of the UP/SP merger.

The second of our basic extended-haul rules, the 50% rule, applies where traffic is moving via an A-C routing to a point jointly served by Railroad B and Railroad C from a point jointly served by Railroad A and Railroad D. Railroads C and D can be either the same railroad or two different railroads, so long as neither is a party to the merger. (Again, it does not matter whether still other railroads serve the origin or destination.) An example in the context of the UP/SP merger would be a movement from Percy, Illinois (a UP/IC joint point), to Bakersfield, California (a point jointly served by SP and BN/Santa Fe). Here, we divert 50% of the traffic to the merged system's A-B route, and leave 50% on the A-C route. This is

because, in addition to the possibilities that the facility on Railroad C is actually closed or that the shipper may have reasons to continue to favor the A-C routing, Railroad C may be able to work to retain its portion of the haul by threatening to displace Railroad A at the origin in favor of a D-C routing. (For simplicity, we do not project what portion of the traffic would shift to an D-C routing, but such a shift is a real possibility in situations of this kind.)

The last of our basic extended-haul rules, the 90% rule, applies where traffic is routed A-C-B and could move A-B. That is, Railroad C is a bridge carrier and the merged system will be able to handle the entire movement from origin to destination. An example in the context of the UP/SP merger would be a movement routed from Midland, Texas (a local UP point), to Grand Junction, Colorado (a local SP point), on a UP-Fort Worth-BN/Santa Fe-Denver-SP routing. Here, we divert 90% of the movement to the merged-system route (via the trackage rights that SP received in its settlement with BN/Santa Fe over BN/Santa Fe's lines from Fort Worth to Pueblo) and leave 10% on the old route, recognizing that there may be special reasons why the shipper wishes to retain Railroad C in the route. We also used this rule when the same merging railroad was at both ends of the route (A-C-A) but had no non-circuitous through route between the origin and destination before the merger, and the merger will give the merged system a direct single-line route (A-B-A). An example

would be a movement from Freeport, Texas, to City of Industry, California, routed UP-Sweetwater-BN/Santa Fe-Barstow-UP.

A final point worth stressing is that these and all of our diversion rules are intended to yield our best estimates of overall diversions of the various categories of traffic that we review. They may err in diverting a particular movement and not diverting another, and they inevitably fail to take account of all the pertinent factors and peculiarities of individual traffic movements. But they are intended to be as accurate as possible on average, and we are confident, based on many years of experience with such analyses, that their overall results are a good estimate of the real-world impact of the transaction.

B. Developing the Adjusted Base

As noted, before the effects of the UP/SP merger and the settlement with BN/Santa Fe could be studied, we had to adjust the 1994 traffic for the impacts of the UP/CNW merger, the BN/Santa Fe merger, and the conditions that were granted in settlement agreements between the applicants in the BN/Santa Fe case and SP, KCS and UP. The resulting adjusted base traffic was provided to the personnel working on the Operating Plan for use as their pre-merger traffic flows, and became the basis for our analyses of the effects of the UP/SP merger and the BN/Santa Fe settlement.

1. The UP/CNW Merger

I presented testimony in the UP/CNW proceeding as to the traffic impacts of a full merger of the UP and CNW railroads.

Our approach to adjusting for the UP/CNW merger for purposes of the Traffic Study in this case was to use the same diversion assumptions that were used in my UP/CNW testimony.

Extended hauls on traffic in which UP or CNW participated in 1994 were estimated by applying the same diversion rules (largely, the basic rules described above, with some adjustments for special situations) that we applied in UP/CNW to data for 1991, the base year in that case.

"New marketing opportunities" are opportunities to gain traffic other than by extending hauls on movements in which the merging railroads participated in the base year. These include diversions of carload and intermodal traffic that moved via other railroads in the base year with no participation by the merging railroads, diversions of traffic from other modes, and stimulation of new rail traffic that did not move between points in the United States via any mode in the base year. We estimated the new marketing opportunities that would result from the UP/CNW merger by adopting the same detailed estimates that we developed in the UP/CNW case. The principal such new marketing opportunities were additional grain from CNW origins in Iowa and Minnesota to UP destinations, a larger share of Powder River Basin coal to the East as a result of instituting full single-line pricing and operations for that traffic, increased intermodal traffic from Chicago to the West Coast, and new Twin Cities intermodal traffic. We reviewed the specific movements

and concluded that it was appropriate to continue to use these traffic flows to adjust our 1994 traffic base.

The only exception to these rules was that we did not consider it necessary to adjust our 1994 traffic base for extended hauls or new marketing opportunities that would simply have shifted traffic from SP to UP, since these traffic shifts had no relevance to the diversion judgments that we would be making with respect to the UP/SP merger and the settlement with BN/Santa Fe or to the preparation of the Operating Plan.

2. The BN/Santa Fe Merger

We further adjusted our traffic base to take account of the relevant impacts of the BN/Santa Fe merger.

We estimated the extended hauls that BN/Santa Fe would attain at the expense of UP or SP by applying our basic extended-haul diversion rules. (Extended hauls not involving UP or SP that would have resulted from the BN/Santa Fe merger were not material to our study.) We did not use the extended haul estimates presented by the BN/Santa Fe applicants in the record in that case because they were based on a traffic sample and could not readily be converted to detailed traffic flows that could be used in the preparation of our Operating Plan. We followed the BN/Santa Fe applicants in not projecting any extended hauls for coal traffic.

We used the BN/Santa Fe applicants' estimates of new marketing opportunities that would involve a diversion of intermodal or carload traffic from UP or SP. (Again, new

marketing opportunities not involving UP or SP were not material to our study.) We also used, as a preliminary step toward our analysis of the rail intermodal diversions that would result from the UP/SP merger, the BN/Santa Fe applicants' estimates of their diversions of intermodal traffic from truck to rail. We reviewed the traffic and concluded that it was appropriate to use these estimates, which were derived from 1993 data, in our 1994 study. In one instance where the BN/Santa Fe applicants had not projected a traffic gain -- Houston/Dallas-Midwest intermodal traffic -- we concluded that BN/Santa Fe would in fact gain additional traffic as a result of efficiencies, cost reductions, route flexibility and terminal coordinations, and we made our own estimates of those traffic gains.

3. The Settlements in the BN/Santa Fe Case

Finally, we adjusted our traffic base to take account of the rights that SP, KCS and UP received over various BN/Santa Fe lines, and the rights that BN/Santa Fe received over SP's line to Eagle Pass, Texas, and to serve various other SP points, in settlements in the BN/Santa Fe case. (We did not adjust for other settlements in that case, which were not material to our study.)

We estimated the extended hauls that would result from these rights by applying our basic extended-haul diversion rules. In the case of two coal movements originated and terminated by SP and bridged by BN/Santa Fe, we diverted 100% of the bridge segment to SP.

The new marketing opportunities that SP would realize from its rights over BN/Santa Fe were evaluated by SP marketing personnel and reviewed by me. These included new traffic that SP would attract from other railroads by gaining trackage rights over BN/Santa Fe between Kansas City and Fort Worth, and between Hutchinson and Winfield, Kansas; by gaining trackage rights over BN/Santa Fe between Pueblo, Colorado, and Fort Worth, including access to Amarillo, Lubbock and Plainview; and by gaining the right to use BN/Santa Fe's line between Hutchinson and Chicago for intermodal and automotive traffic.

The new marketing opportunities that KCS would realize by newly entering several traffic lanes, including Lake Charles-St. Louis and Beaumont-St. Louis, through haulage over BN/Santa Fe between Neosho, Missouri, and St. Louis were estimated by diverting to KCS 30% of the competitive traffic in those lanes. This estimate reflects the uncertainty as to whether KCS can actually serve the facility at the southern point, the fact that KCS would be a new entrant to markets where other railroads have single lines, and the fact that KCS can already work with Eastern connections at New Orleans, Meridian and Kansas City. KCS also gained limited new industry access in Fort Worth and certain nearby points (for traffic to and from the Southeast) and in St. Joseph, Missouri. Reflecting the limitations on KCS' new access at these points, we diverted 15% of the traffic moving between these points and points that KCS was permitted to serve under the settlement.

The new marketing opportunities that UP would realize by gaining access to Superior, Nebraska, over BN/Santa Fe were estimated by me, with input from UP grain marketing personnel.

Finally, the new marketing opportunities that BN/Santa Fe would realize by gaining access to Eagle Pass were estimated by diverting to BN/Santa Fe's new Eagle Pass route 50% of the traffic that moved via SP between competitive points and Eagle Pass, 25% of the traffic that moved via UP or SP between competitive points and Brownsville, and 20% of the traffic that moved via UP direct or SP-Tex Mex between competitive points and Laredo. These differing percentages recognized the facts that Laredo has superior infrastructure and customs services, that Eagle Pass has the potential to pose a strong competitive challenge for the movement of traffic to and from Eastern Mexico, and that Eagle Pass and Laredo are more interchangeable gateways than Eagle Pass and Brownsville.

C. The UP/SP Merger

1. Extended Hauls

The extended hauls that UP/SP would gain as a result of the merger were estimated using our basic extended-haul diversion rules. Some of the principal markets in which new, longer, single-line hauls were projected included traffic moving between UP points in the Upper Midwest and such SP/Santa Fe common points as Fresno, Bakersfield and Phoenix; traffic moving between SP points in Utah and Colorado and UP points in the Pacific Northwest, the Upper Midwest and the South Central region; and

traffic moving between Seattle/Tacoma and other UP points and junctions in the Pacific Northwest and SP points and junctions in California, Arizona and Texas.

Coal and automotive movements were studied separately because these movements tend to be unusually large and diversion prospects often turn on multiple factors unique to a particular movement. Examples of the movements that were diverted to the merged system were: (a) a movement of autos from Nogales, Arizona, to Salt Lake City routed SP-Deming-BN/Santa Fe-Pueblo-SP, which was diverted 100% to the merged system; (b) auto movements from the Twin Cities to Denver, Salt Lake City and Benicia, California, routed CP or BN-Kansas City-SP, which were diverted 25% to the merged system; (c) movements of coal from Colorado mines to a cement plant at Louisville, Nebraska, and a utility at Valmont, Colorado, routed SP-Denver-BN/Santa Fe, which were diverted 100% to the merged system; (d) movements of coal from Utah mines to California and Washington points, also routed SP-BN/Santa Fe, which were also diverted 100% to the merged system; and (e) a movement of coal (spot tonnage) from the Powder River Basin to Southwestern Public Service's Harrington electric generating plant at Amarillo, Texas, routed UP-Denver-BN/Santa Fe, which was diverted 50% to the merged system.

The total traffic estimated to be diverted from other railroads as a result of extended hauls was 94,870 units of traffic in which UP or SP participated in the adjusted 1994 base.

Revenue gains or losses by particular railroads as a result of these extended-haul diversions were calculated based on the revenue data in the traffic file. The aggregate impacts on a railroad-by-railroad basis (in millions) were as follows:¹⁰⁰

<u>Railroad</u>	<u>Gross Revenue Gain or Loss Before Allowances</u>
UP/SP	\$90.5
BN/Santa Fe	(69.7)
KCS	(11.5)
IC	(9.8)
Tex Mex	(5.6)
WC	(2.0)
CP	(1.4)
Other	(0.3)

We estimated that the UP/SP gains from extended hauls, like all of the traffic impacts estimated in our analyses of the UP/SP merger and the BN/Santa Fe settlement, would be realized 30% in the first year following consummation of the merger and the BN/Santa Fe conditions, 40% in the second year, and 10% in the third through fifth years. This is a somewhat slower phase-in than we assumed in prior merger cases, and reflects the time that will be required for the substantial capital investments and information systems improvements that will have to be made in order to realize the full benefits of the merger.

¹⁰⁰ The figure in the table for IC represents a projected loss of revenue by IC for haulage services that it performs for SP between Chicago and Memphis. After the merger, UP/SP will route this traffic over system lines, and will discontinue use of the haulage.

2. New Marketing Opportunities

Our analysis of new marketing opportunities that would be realized as a result of the UP/SP merger had two components. The first was intermodal diversions, that is, diversion to UP/SP intermodal service of TOFC/COFC traffic being handled by other railroads in the adjusted 1994 base. The second was carload opportunities, that is, (a) diversion to UP/SP carload service of traffic that moved via carload service of other railroads in the adjusted 1994 base, (b) diversion to UP/SP carload service of traffic that moved via other modes in 1994, and (c) attraction to UP/SP carload service of traffic that did not move between points in the United States via any mode in 1994 but would be attracted to UP/SP carload service by the service improvements afforded by the merger.

A final component of the overall new marketing opportunities -- the diversion from over-the-road truck to UP/SP intermodal service that would result from the service improvements the merger will bring about -- was separately studied by Reebie Associates and Transmode Consultants, Inc., and is addressed in the verified statements of Don P. Ainsworth and Paul O. Roberts. The results of those studies are reported in the Ainsworth and Roberts verified statements, and are not included in any of the figures presented below. I consulted with Messrs. Ainsworth and Roberts to ensure that our respective intermodal analyses were based on consistent assumptions as to the service the merged system would provide, the likely

willingness of shippers to use rail service, and the overall truck and rail intermodal traffic that the merged system could realistically be expected to handle.

A single aspect of potential truck-to-intermodal diversions -- the potential to move California perishables in intermodal service in refrigerated containers -- was studied by me, rather than by Messrs. Ainsworth and Roberts, and is discussed below together with the carload new marketing opportunities. I studied this potential opportunity because of my considerable personal experience with the markets involved, and because the Ainsworth/Roberts studies focussed on dry van traffic.

One last special situation that I studied involved intermodal traffic moving between California and Portland, and between California and San Antonio. A substantial part of this traffic is actually moving to or from Seattle/Tacoma or Laredo, but is trucked between Portland and Seattle/Tacoma, or between San Antonio and Laredo, because no single-line rail service presently exists. With the help of SP marketing personnel, we estimated the portion of the traffic that is actually bound to or from Seattle/Tacoma or Laredo, and diverted that traffic to the new UP/SP single line, thus extending the rail haul at the expense of truck.

a. Intermodal Traffic

We evaluated the potential for diversions of intermodal traffic to UP/SP from other railroads by focusing on the

principal markets where the merged system will have significantly improved intermodal service. These are the corridors between:

- (a) Northern California and the Midwest (defined for purposes of these intermodal analyses as the states of Illinois, Wisconsin, Minnesota, Iowa, Missouri and eastern Kansas, and points beyond in the Northeast served via the Chicago and St. Louis gateways);
- (b) Southern California and the Midwest; (c) California (both Northern and Southern) and Memphis (defined for purposes of these intermodal analyses to include points beyond in the Southeast);
- (d) California (both Northern and Southern) and Dallas/Fort Worth; (e) Phoenix and both the Midwest and Memphis; and (f) Houston/Dallas and the Midwest.¹⁰¹

In each of these markets, we reviewed the respective shares of the total intermodal traffic moved by other railroads (generally BN/Santa Fe) and by UP and SP in the adjusted base data. We then estimated, based on the improvements that the merger would bring about, the additional share that a merged

¹⁰¹ Messrs. Ainsworth and Reebie projected diversions from over-the-road truck to UP/SP intermodal service in all of these same corridors. They also projected diversions from truck in some corridors where we did not project diversions of rail intermodal traffic. One of these was Seattle-Los Angeles, a corridor in which there is no single-line rail service today, and thus essentially no intermodal traffic now moves (though, as previously noted, we did project that some Los Angeles-Portland intermodal business which is now trucked between Portland and Seattle/Tacoma would shift to all-rail handling). Similarly, we found that present intermodal volumes between the Pacific Northwest and Texas/New Orleans were too small to merit study. And in the California-Houston and California-New Orleans corridors, although the merger would improve service, we concluded that SP's already high shares of the existing intermodal traffic would not increase further.

UP/SP system could capture. A summary of our evaluations follows.

Northern California-Midwest. By merging, UP/SP will be able to offer third-morning Chicago-Oakland service for the first time in competition against BN/Santa Fe. UP/SP will benefit from significant mileage reductions as a result of combining UP's and SP's lines. Between Oakland and Chicago, for example, the merged system will have a 2,226-mile route, compared to UP's current route of 2,415 miles and SP's current route of 2,614 miles. In addition, UP/SP will improve schedules and reliability by concentrating high-speed traffic on SP's line west of Ogden and slower bulk traffic on UP's line west of Ogden. Service will also be improved as a result of the operational flexibility afforded by being able to move UP/SP California traffic over either the Central Corridor or the Tucumcari route, thereby increasing both routes' effective capacity and efficiency of operations. BN/Santa Fe will continue to have the excellent Santa Fe route, which, while 289 miles longer between Oakland and Chicago than the UP/SP route, is in large part double-track, has less curvature, and has extremely well-developed high-speed operations. Our conclusion was that the merged system would improve its share of intermodal traffic in this corridor by

to of the adjusted-base rail

traffic.

Southern California-Midwest. In this corridor, which is the largest intermodal market in the country, the merged

system will benefit from the more efficient operations resulting from route specialization, from the ability to handle traffic through top-quality intermodal facilities in both Southern California and Chicago (as well as other merged-system terminal coordinations and improvements in Chicago, Kansas City and St. Louis), and from modest mileage savings over UP's current route. BN/Santa Fe will continue to have an extremely competitive route, with top-quality terminal facilities in the Chicago area and the Los Angeles Basin and soon-to-be-expanded access to new on-dock terminals of the Ports of Los Angeles and Long Beach. Our conclusion was that the merged system would improve its share of intermodal traffic in this corridor by to
of the adjusted-base rail traffic.

California-Memphis. In this corridor, the merged system will be able to match or surpass the direct single-line route that BN/Santa Fe have gained from their merger -- a route which is far superior to the separate routes of either SP or UP today. By combining SP's line from Colton to El Paso with UP's line from El Paso to Memphis via Dallas, the merged system will gain new California-Memphis routes that cut more than 200 miles off SP's current routes, and even more off UP's. The merged system's route will be nearly identical in mileage to BN/Santa Fe's between Oakland and Memphis, and 135 miles shorter between Los Angeles and Memphis. Investments to upgrade the Colton-El Paso and El Paso-Dallas lines will further improve the merged system's service, and the ability to serve Dallas en route will

BN/Santa Fe has direct, efficient routes, the best schedules, and better facilities than SP. We concluded that the merged system's shorter routes, increased service frequency on the Southern Corridor and upgrading of the SP line from Arizona to El Paso and the UP line from El Paso to Dallas would improve its share of the traffic by to of the total adjusted-base rail traffic.

Houston/Dallas-Midwest. Following the merger, UP/SP will be able to offer improved intermodal service in these highly truck-competitive lanes. Coordinating UP and SP intermodal terminals in Houston and Dallas and at the Midwest gateways and taking advantage of the flexibility afforded by alternative routes will result in greater efficiency and reliability. Schedule times will be reduced by an hour and a half. BN had exited the Texas intermodal markets to deal with equipment and service issues, but had determined to re-enter those markets -- and the BN/Santa Fe merger partners have confirmed that they will re-emphasize this market. As already mentioned, we projected gains in this corridor by BN/Santa Fe as a result of their merger, but still left them with a relatively small share of the traffic; in fact, their share could grow to be higher over time. We concluded that the merged system's improved service in this market would allow it to increase its share of the traffic by to of the total adjusted-base rail traffic.

The total diversions from BN/Santa Fe in these intermodal markets would be 235,061 units, accounting for \$177.9 million in annual gross revenues.

b. Carload Traffic

Our analysis of new carload marketing opportunities had two aspects.

New Single-Line City Pairs. First, we studied non-UP/SP traffic from the Waybill Sample moving in city-pairs where the merged system will obtain a new single-line route, such as Fresno-Omaha or Phoenix-Minneapolis. We diverted 15% of movements where the existing movement was single-line via a competitor (generally, BN/Santa Fe), and 30% of movements where the existing movement was joint-line via more than one competitor. These diversion percentages reflected uncertainty as to whether the shipper facilities at either end of the route were actually open to UP/SP, and the fact that the complete non-participation by both UP and SP in the existing routing might well reflect factors causing the shipper to favor the incumbent carrier or carriers which would continue to dictate the routing after the merger. This component of the study led to the diversion of 5,972 units of traffic, accounting for \$5.4 million in annual gross revenues.

Other Carload New Marketing Opportunities. Second, we consulted with all the UP and SP marketing groups for specific instances where the merger had a likelihood of attracting new carload traffic from other railroads or other modes, or

stimulating new carload traffic that is not presently moving at all. We identified numerous potential traffic movements, and carefully reviewed them in light of the improved service that would result from the merger, the prospects that the merged system could be competitive with the transportation alternatives available for the traffic in question, and the realistic volume of traffic associated with the particular opportunity. We weeded out any items that were doubtful, and winnowed the list down to a firm core of new carload marketing opportunities that we felt reflected a reasonable estimate of the genuine prospects to gain additional traffic that did not move via either UP or SP in the adjusted base. In winnowing down our list of possible new marketing opportunities, we also recognized the very real prospect that our railroad and modal competitors would respond to our merger with their own competitive initiatives.

A detailed listing of these traffic movements is contained in my workpapers. The following paragraphs describe the various categories of traffic involved, and offer some examples of the specific traffic movements.

Food Products. Food products was the largest category of new marketing opportunities. These traffic opportunities encompassed eastbound flows of fresh fruits and vegetables, frozen foods, and canned goods and wine, and related westbound loads.

California produces a large share of the fresh fruits and vegetables consumed in the United States. SP directly serves

all the important growing areas in California, such as the San Joaquin, Imperial and Salinas Valleys, while UP does not serve most of these areas. Since the turn of the century, eastbound shipments of this traffic, moving in refrigerated boxcars, had been the centerpiece of SP's transcontinental traffic base, both via the Overland and Tucumcari routes. However, in recent years SP has lost virtually all of this important traffic to truck, and to a lesser extent Santa Fe intermodal service, because of the deterioration of SP's equipment and service quality. These losses continue, with SP's revenues from fresh perishables falling from \$14.7 million in 1992, to \$11.0 million in 1993, to \$6.0 million in 1994. SP now has fewer than 1,100 mechanical reefers in its fleet, a substantial portion of which require repairs. Without major capital investment, SP's fleet is projected to drop to less than 500 by 1998. As recently as 1990, SP's mechanical reefer fleet was 1,832, and it was much larger in earlier years. Its service is unreliable and slow; transit time to the Chicago gateway has been averaging nearly 14 days -- far too long to be competitive.

UP, in contrast, has demonstrated its ability to compete for this type of traffic. From the Pacific Northwest, UP has successfully maintained and expanded the volume of rail-handled transcontinental fresh produce (principally potatoes and onions). UP has done this by maintaining a high-quality fleet of

over 4,000 refrigerated boxcars and providing dedicated perishables service via its Central Corridor route to eastern markets.

The service improvements that will result from the merger will bring a significant amount of California fresh fruits and vegetables traffic back to rail refrigerated boxcar service. By combining, upgrading and commonly managing the UP and SP car fleets, cycling cars much more rapidly, and exploiting differing seasonal use patterns and repositioning capabilities, the merged system will be able to make much more refrigerated equipment available to California fresh fruit and vegetable shippers. The merged system will recreate the shorter, more efficient Overland Route, which traditionally handled this traffic, and will offer new carload train services to North Platte and beyond to major markets.

SP's marketing personnel were able to identify a large body of fresh fruits and vegetables traffic that would return to carload rail transportation once adequate service and equipment were provided. These include movements of broccoli, carrots, celery, citrus, melons, onions, pears and potatoes from California growing areas. They also included some movements from other SP-served Western growing areas that are not served by UP, such as Arizona.

In addition, I estimated, based on my own in-depth familiarity with the California perishables market and consultations with SP marketing personnel, that the merged system

could divert from truck to an Oakland-Chicago intermodal service 5,000 units of California perishables.

The production of frozen foods in SP-served Western regions is rapidly increasing. Here again, SP, as a result of its equipment and service shortcomings, is not handling the transcontinental traffic flows that ought to move by rail. Again, SP marketing personnel identified a variety of traffic movements that would return to boxcar service with the equipment and service improvements that the merger will bring, including frozen vegetables from California's Salinas Valley and frozen fruits from Oregon's Willamette Valley.

California also produces large volumes of canned goods, dried fruits and wine. SP serves many of the important producers in the San Joaquin Valley and other parts of the state, while UP reaches far fewer producers. Again, this traffic traditionally moved by rail in insulated boxcars, but SP has lost substantial volumes to truck, intermodal and Santa Fe boxcar service. The merger's equipment and service benefits will attract considerable volumes of this traffic back to UP/SP carload service.

With the growing population in California, there is an increasing demand for food products produced in the Midwest. This offers ideal opportunities for two-way hauls in insulated boxcars, but SP's service problems have kept it from securing the business. The merger will create new single-line routes between Upper Midwest producers and California distribution centers local to SP, and the merged system will be able to move this westbound

traffic in hauls complementing the new eastbound hauls that will be generated. Traffic opportunities of this type that we identified included canned vegetables, beer and animal feed from Wisconsin, Minnesota, Illinois and Nebraska points.

Our total food products new marketing opportunities were 23,667 units, accounting for \$53.6 million in annual gross revenues. Most of this traffic would come from truck (and represents only a small fraction of the transcontinental truck flows of these commodities), with the remainder coming from BN/Santa Fe intermodal and boxcar service.

Forest Products. A second large category of new marketing opportunities was forest products traffic. Historically, lumber and wood products formed the other major component, along with food products, of SP's transcontinental traffic base. As with food products, SP has lost much of this traffic because of its service and equipment deficiencies. This traffic, which is less service-sensitive than the perishables, has been lost to production in areas not served by SP; to reload centers, particularly the BN reload centers in Portland, Eugene and Salem; and, in lesser degree, to truck. The merged system's much-improved new Central Corridor manifest schedules via Roseville and via Hinkle, Oregon, together with the merger's major equipment utilization benefits, will attract substantial volumes of this traffic to UP/SP carload service. We identified a long list of specific movements that we projected the merged system would recapture.

Forest products also move in large volumes from the Pacific Northwest and Canada to California and Arizona. This has long been the principal southbound commodity moved on SP's Portland-Los Angeles route. This route has moved production from SP's track network in Oregon, as well as traffic from Washington and Canada, which has largely been handled in interline service with BN. SP has lost much of this traffic to truck, as well as to oceangoing barge movements, which now handle half the lumber traffic between Seattle/Vancouver and Southern California. UP and SP marketing personnel identified numerous forest products movements that would be attracted to the merged system by its new single-line service between far Northwest points such as Seattle, Spokane, and Lewiston, Idaho, and the Pacific Southwest, and by the service and equipment utilization improvements that the merger will bring to the I-5 corridor. This traffic moved in 1994 both via truck (e.g., lumber from Eugene to Las Vegas, paper from the Portland area to Southern California, and particleboard and pulpboard from Idaho and Washington to the Bay Area) and via water (e.g., newsprint from Seattle to Los Angeles, and lumber from Vancouver, B.C., to Los Angeles). Return hauls were also identified. One notable example involved the much-talked-about "urban forest" -- that is, the use in papermaking of paper scrap generated in large metropolitan areas. We projected that the merged system could fill northbound equipment with scrap paper from Los Angeles to UP-served Oregon and Washington paper mills. This is traffic that is not moving at all today but would be

stimulated by the availability of single-line rail service and improved round-trip car utilization opportunities.

Another area of forest products opportunities lies in linking UP forest products producers in the South Central region with California markets via the merged system's direct Southern Corridor route. Examples that we identified included pulpboard from east Texas, Arkansas and Louisiana points to Southern California, newsprint from Louisiana to Phoenix, and plywood from Arkansas to Southern California.

Our forest products new marketing opportunities totalled 18,610 units, accounting for \$47.5 million in annual gross revenues. Much of this traffic would come from BN/Santa Fe, with additional volumes from truck and water, and from the stimulation of entirely new traffic.

Chemicals. We identified a variety of new marketing opportunities in the chemicals area.

One category of opportunities involved the expanding chemicals production in Western Canada. With the merged system's new single-line service in the I-5 corridor, we projected handling movements of LPG, methanol and fertilizer that are now moving from Western Canada to California by water, and thence to destination by truck. This diversion will take hazardous cargoes off the highway. We also projected that potash that is not now moving would move all-rail from Canadian sources to California.

Other important chemicals opportunities included additional plastics traffic from Houston to the Midwest and

Northeast, which we projected would be diverted from BN/Santa Fe as a result of UP/SP service improvements in the Houston-St. Louis-Chicago corridor; soda ash from California to Eastern destinations, which is now moving via truck-BN/Santa Fe transload; and the diversion to a UP/SP rail haul from all-water handling via the Panama Canal of a large movement of MTBE (a gasoline additive) from Channelview, Texas, to Los Angeles.

Our chemicals new marketing opportunities totalled 18,640 units, accounting for \$33.4 million in annual gross revenues. This traffic would come from water, other railroads, truck-rail transloading, and stimulation of new traffic.

Grain. Just as the UP/CNW merger did, the UP/SP merger will link Midwestern grain sources on a single-line basis with important new markets. We identified a number of new marketing opportunities for the transportation of grain, including movements of corn from Iowa to the Imperial Valley and other California and Arizona markets (principally stimulation of new production, and also diversions from BN/Santa Fe sources), corn and soybeans from Iowa to the Nogales gateway for onward rail movement to northwestern Mexican cattle feeders (a diversion from barge movement to the Gulf and onward ship movement to northwestern Mexico ports), and wheat from various UP origins to an SP-served flour mill in Phoenix (now moving BN/Santa Fe to a Phoenix-area transload), corn from the Pontiac, Illinois, area to the Gulf for export (now moving truck-barge).

Our grain new marketing opportunities totalled 14,750 units, accounting for \$30.6 million in annual gross revenues. This traffic would come from rail, water, rail-truck transloading, and stimulation of new traffic.

Coal. We projected five new marketing opportunities involving coal traffic.

One concerned long-term base-load coal tonnage moving from the Powder River Basin to Southwestern Public Service Company's Harrington plant at Amarillo, Texas, served by BN/Santa Fe and SP (under trackage rights obtained in the BN/Santa Fe case). The UP/SP merger would give the combined system a single-line haul from the origin. We estimated that the pricing and operational efficiencies of having a single line would give UP/SP a ten-percentage-point greater probability of securing this tonnage when it next came up for bid.

The second concerned Texas Utilities Electric Company's Monticello plant, located between Winfield and Leesburg, Texas. The plant operates a private railroad, and connects with SP at Winfield and KCS at Leesburg. The utility is analyzing whether to convert some of its capacity from locally-produced lignite to Powder River Basin coal. The new single-line service from the Powder River Basin made possible by the merger will, in our judgment, increase by 10 percentage points the likelihood that UP/SP will move Powder River Basin coal to the plant.

The third concerned the Mossville plant of Great South Utilities Company at West Lake Charles, Louisiana. This plant is

exclusively served by KCS, and in 1994 the utility was preparing to build out to a nearby SP track. Coal is presently moving to the plant from the Powder River Basin via a BN-KCS routing. We concluded that the single-line pricing and operations that the merger would make possible would increase by 10 percentage points the merged system's probability of capturing this traffic the next time it came up for bid.

The fourth was a movement of coal from an SP-served mine in Utah, now being trucked some 300 miles to a fertilizer plant exclusively served by UP at Rock Springs, Wyoming. We projected that the efficiencies of UP/SP single-line service would capture this movement.

The final coal new marketing opportunity was the stimulation of additional Utah coal exports as a result of the merged system's direct single-line route from Utah to Los Angeles, which will eliminate the costs and delay associated with interchanging these movements in Provo or hauling them on SP's circuitous single-line route via Sacramento and the Tehachapis. The Pacific Rim steam coal market is intensely competitive, with lower-cost Australian coal the leading contender in end markets and U.S. production a factor on the margin that is highly sensitive to transportation cost. We projected that the improvements in the merged system's route would allow Utah coal to capture an additional 1 million tons, or about a third of one percent of the Pacific Rim market.

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In addition to these specific, immediate new marketing opportunities, both Utah/Colorado and Powder River Basin coals will enjoy greater long-run competitiveness as a result of expanded single-line access to a broad range of destinations. While these further opportunities could not be readily quantified, they are very real, and are discussed in detail in Mr. Sharp's verified statement.

Our coal new marketing opportunities totalled 20,219 units, accounting for \$32.5 million in annual gross revenues. This traffic would come from other railroads and truck, as well as new U.S. production.

Autos. Several new marketing opportunities were identified involving automobile traffic.

One concerned the General Motors auto plant at Oklahoma City, which is served by BN/Santa Fe and UP. UP's present service to this plant is poor, but the merger will significantly improve it. The merged system will upgrade UP's former OKT line between Herington, Kansas, and Fort Worth and offer new North Platte-Texas train service, serving Oklahoma City en route, using a combination of UP and SP lines. This will make possible new high-speed single-line service from Oklahoma City to UP's auto ramps in the West and in Wisconsin, attracting substantial additional traffic that is now moving on a slower and more circuitous BN/Santa Fe-Kansas City-UP joint-line route.

Another opportunity concerned Toyota autos bound to Houston from Japan. These autos primarily moved all-water via

the Panama Canal in 1994. We projected that by combining UP's automotive facilities at Long Beach and Houston with SP's direct Southern Corridor route, the merged system would divert this movement to rail service from the West Coast to the Gulf.

Further automotive opportunities related to traffic now moving via truck. Toyota autos for the California market are now moved by water from Japan to Long Beach and trucked throughout the state. Toyota vehicles produced in the Bay Area are also transported by truck. We projected that the merged system's ability to combine UP's excellent auto facilities in the Los Angeles Basin and the Bay Area with SP's direct north-south route in California would attract this traffic as a two-way rail haul. We also projected that Toyota truck beds, fabricated at Paramount in Southern California on UP and now moving via truck to Toyota's Bay Area assembly plant, would move via the merged system.

Our new marketing opportunities for automotive traffic totalled 10,900 units, accounting for \$16.3 million in annual gross revenues. This traffic would come from rail, water and truck.

Metals. We identified a number of new marketing opportunities for metals traffic.

First, we projected that the merged system's improved routes in the Central and Southern Corridors would divert movements from BN/Santa Fe, including tin plate moving from Gary, Indiana, to Bay Area points and sheet steel moving from the Los Angeles area to Dallas.

Second, we projected that new single-line routes, more efficient routes and improved car supply would attract metals traffic from truck, including steel bars, rods and sheet moving from an SP-served steel minimill at McMinnville, Oregon, and an SP-served facility in Pinole, California, to destinations in Washington served by UP, and steel pipe moving from an SP-served fabricator in Southern California to a UP-served facility in Fort Collins, Colorado.

Third, new single-line routes and efficiencies will allow users of metal scrap to draw upon a wider array of origins. For example, we projected the stimulation of such new traffic to the UP-served Oregon Steel Mill facility at Portland from SP origins in California.

Finally, more direct routes would allow steel producers to displace imported steel. For example, we projected that Geneva Steel at Geneva, Utah, would supplant imports and move more steel to SP-served Southern California destinations using the merged system's direct single-line route over UP's line from Provo to Los Angeles.

Our new marketing opportunities for metals traffic totalled 7,417 units, accounting for \$12.3 million in annual gross revenues. This traffic would come from other railroads, trucks and stimulation of new domestic production in the United States.

Aggregates. We identified a number of new marketing opportunities for aggregates such as sand, asphalt rock, roofing

granules and crushed stone. We projected that new single-line routes would elicit frac sand movements from UP origins in the Upper Midwest to SP destinations such as Grand Junction, Colorado; at present, the traffic is moving joint-line from BN origins in Illinois. We also projected that the merged system's new single-line service, and its more efficient operations and faster equipment turnaround in corridors where UP and SP both now operate, would divert aggregates traffic from truck, including roofing granules from North Little Rock to Texas and asphalt rock moving between UP origins and SP destinations in Southern Texas, and would capture some crushed stone movements in the Houston area that are now imported from the Yucatan in Mexico by water. And we concluded that cement producers at UP and SP points would reach new markets thanks to expanded direct single-line haul opportunities -- including movements from the SP-served cement plant at Permanente, California, to UP destinations in Seattle; from the SP-served cement plant at Creal, California, to UP destinations in Las Vegas; and from UP-served cement plants in Texas to SP destinations in Arizona and, via SP's trackage rights over BN/Santa Fe's Amarillo-Pueblo line, to both SP and UP destinations in the Denver area.

Our new marketing opportunities for aggregates traffic totalled 6,440 units, accounting for \$6.5 million in annual gross revenues. This traffic would come from other railroads, trucks and new production.

* * *

These and various other carload new marketing opportunities involving such disparate commodities as tires, military equipment and rock salt totalled, in all, 122,803 units, accounting for \$236.3 million in annual gross revenues. Of this, 36,266 units, accounting for \$74.8 million in annual gross revenues, would be diverted from other railroads (including truck-rail transload movements); 35,213 units, accounting for \$65.9 million in annual gross revenues, would be diverted from trucks; 14,040 units, accounting for \$32.2 million in annual gross revenues, would be diverted from water; and 37,284 units, accounting for \$63.4 million in annual gross revenues, represents new production. The gains and losses by affected railroads (in millions) break down as follows:

<u>Railroad</u>	<u>Gross Revenue Gain or Loss Before Allowances</u>
UP/SP	\$419.6
BN/Santa Fe	(249.8)
KCS	(3.9)
Other	(0.1)

Our new marketing analysis clearly did not identify every new traffic movement that the merged system would handle. Some opportunities -- such as the greater potential for moving SP-originated Utah and Colorado coal to a wide range of power plant users -- while very real, are difficult to identify and quantify precisely. Others involve small movements that would have been much too difficult and time-consuming for us to identify and study individually. Others that we excluded to be

conservative might in fact be captured by the merged system (while, of course, some that we projected would be handled might not be). But overall, we believe that these estimates reasonably depict the potential for a merged UP/SP system to handle additional traffic in which UP and SP are not participating today.

D. The BN/Santa Fe Settlement

We also analyzed the potential traffic diversion impacts of the various line sales and trackage rights provided for in the applicants' settlement agreement with BN/Santa Fe. The diversion rules developed in this analysis were applied to the traffic flows following the application of our diversion rules for the UP/SP merger itself. This analysis had a number of elements.

Right to Serve 2-to-1 Facilities. The settlement agreement gives BN/Santa Fe the right to serve all shipper facilities that would go from two serving railroads to one in an unconditioned UP/SP merger. BN/Santa Fe will also be able to handle intermodal and auto traffic at 2-to-1 points. We identified the traffic subject to these rights, and diverted to BN/Santa Fe 90% of each movement that was to or from an exclusive BN/Santa Fe point and 50% of each movement that was to or from a competitive point or gateway. We did not divert movements that were to or from UP/SP points not served by BN/Santa Fe.

I-5 Corridor Rights. Under the settlement agreement, BN/Santa Fe will purchase UP's line from Bieber to Keddie, and,

with associated trackage rights, gain a single-line route between the Pacific Northwest and California. Also, to give UP/SP a continued opportunity to compete on a joint-line basis with BN/Santa Fe over Portland for I-5 Corridor traffic moving to and from BN/Santa Fe-served points and junctions in the far Northwest, BN/Santa Fe will provide UP/SP with proportional rates for such traffic. To reflect the effects of these rights, we applied several diversion rules.

First, we diverted to a BN/Santa Fe single-line haul 100% of the small volume of traffic that was routed BN-Bieber-UP-Stockton-Santa Fe.

Second, for I-5 Corridor traffic that was routed BN-SP (the interchange point was generally Portland), we diverted to BN/Santa Fe's new single-line route 50% of each movement that was between a BN/Santa Fe exclusively-served point at the north and a competitive point (such as Fresno, Phoenix or Los Angeles) at the south. We also diverted to BN/Santa Fe's new single-line route 90% of each movement that was between a competitive point or junction at the north and a competitive point at the south. (We had already, in our UP/SP merger study, diverted to a UP/SP single-line haul 50% of the traffic that was routed BN-SP between competitive points in the adjusted base; thus, this 90% diversion had the effect of splitting the original traffic roughly 50/50 between the new UP/SP single-line route and the new BN/Santa Fe single-line route.) We did not divert movements that were to or from SP local points.

Finally, traffic that moved single-line via UP between points that are open to BN/Santa Fe (such as a movement from Lewiston, Idaho, to Los Angeles) was diverted 50% to BN/Santa Fe's new single line. (The remainder would move over UP/SP's new, significantly shorter single line.)

Houston-New Orleans Rights. Under the settlement agreement, BN/Santa Fe will obtain a competitive route between Houston and New Orleans through the purchase of most of SP's line across Southern Louisiana, and related trackage rights. To evaluate the traffic impact of these rights, we identified the traffic susceptible to movement over this corridor. This was done by selecting all movements between regions essentially defined as the Sunbelt states at the west and New Orleans, Southern Mississippi, Southern Alabama, Southern Georgia and Florida at the east, where the western end of the movement was a point or junction served by BN/Santa Fe. We conservatively concluded that BN/Santa Fe would capture 40% of the total intermodal traffic, for which SP is the only real competitor today. As to carload traffic, if BN/Santa Fe was in the route, we diverted to BN/Santa Fe 90% of each movement that was to or from an exclusive BN/Santa Fe point at the western end and 50% of each movement that was to or from a competitive point or gateway at the western end. Carload traffic where BN/Santa Fe was not in the route was analyzed in two segments. We concluded that BN/Santa Fe would attract 50% of carload traffic moving between jointly-served points in the Houston area and New Orleans (or

beyond); for this traffic, UP and SP have the only direct routes today, whereas the settlement will give BN/Santa Fe a route that is highly competitive with that of the merged UP/SP system. For the remaining carload traffic, largely involving California and Arizona common points, we diverted to BN/Santa Fe an additional 15 percentage points of the total traffic flow; this reflected the fact that BN/Santa Fe already participates in a high percentage of this low-volume total traffic flow, via interline service with KCS over Dallas.

We also separately took account of the fact that exclusively-served shippers located on the SP Southern Louisiana line that BN/Santa Fe will purchase will gain new two-railroad competition, since UP/SP will retain trackage rights to serve shippers on the line. We diverted to BN/Santa Fe 50% of the business moving between these shippers and competitive points and gateways.

Houston-Memphis Rights. The settlement agreement gives BN/Santa Fe trackage rights between Houston and Memphis. We estimated the traffic impact of these rights in a fashion similar to our analysis of the Houston-New Orleans rights. We selected all movements between Southeast Texas (SPLC 68) at the southern end and Northern Mississippi, Northern Alabama, Northern Georgia, South Carolina, North Carolina and Tennessee at the northern end, where the southern end of the movement was a point or junction served by BN/Santa Fe. We conservatively judged that BN/Santa Fe would capture 40% of the intermodal traffic. As to carload

traffic, where BN/Santa Fe was in the route, we diverted to BN/Santa Fe 90% of each movement that was to or from an exclusive BN/Santa Fe point at the southern end and 50% of each movement that was to or from a competitive point or gateway served by BN/Santa Fe at the southern end. Where BN/Santa Fe was not in the route, we diverted to BN/Santa Fe an additional 15 percentage points of the total traffic flow; this reflected the fact that BN/Santa Fe already handles a high percentage of this low-volume total traffic flow in its own single-line service via Springfield, Missouri.

In addition, traffic moving between Longview, Texas, and Memphis was separately studied, and 50% of all 1994 traffic between these points was diverted to BN/Santa Fe. The Houston-Memphis rights will give BN/Santa Fe a competitive route for this traffic, whereas today, although BN/Santa Fe has a route between Longview and Memphis, it is far too circuitous to be competitive.

Central Corridor Rights. Under the settlement agreement, BN/Santa Fe will receive trackage rights between Northern California and Denver, with the right to handle through business as well as to serve the "2-to-1" points in Utah, Nevada and California. I have already addressed our diversion of traffic at the "2-to-1" points. We estimated the diversions from UP/SP as a result of BN/Santa Fe's right to handle through business in the Central Corridor in a fashion similar to our analysis of the Houston-New Orleans and Memphis-Houston rights. We selected all movements between BN/Santa Fe-served points in

Northern California (SPLC 87) at the west and BN/Santa Fe-served points and junctions in Colorado, Nebraska, Iowa, Minnesota, South Dakota and Wyoming at the east in which BN/Santa Fe did not participate. (Movements in which BN/Santa Fe did participate had already been studied as potential extended hauls in the BN/Santa Fe merger via Santa Fe's single-line route to California, and we did not feel that BN/Santa Fe's acquisition of an alternative Central Corridor route would materially affect these judgments.) For carload traffic, we diverted 15% of movements where the existing movement was single-line via UP or SP and 30% of movements where the existing movement was joint-line via UP or SP and a connection. These diversion percentages reflected uncertainty as to whether the shipper facilities at either end of the route were actually open to BN/Santa Fe, and the fact that the non-participation by BN/Santa Fe in the existing routing might well reflect factors causing the shipper to favor the incumbent carrier or carriers. For Northern California-Denver intermodal traffic, we concluded that BN/Santa Fe would handle 50% of the total.

The settlement would also give BN/Santa Fe additional competitiveness in handling Northern California-Midwest intermodal traffic. This would result from the flexibility of having alternative routes, and from better access to the planned Oakland joint intermodal terminal. We estimated that BN/Santa Fe would recover _____ of this traffic, increasing to _____ of the total.

We also estimated the new marketing opportunity that BN/Santa Fe would gain to move grain from its Nebraska origins to destinations in California, displacing grain that would otherwise move from UP/SP origins.

Mexican gateways. Under the settlement agreement, BN/Santa Fe will receive trackage rights between Houston and the Mexican gateway of Brownsville, and the right to interchange with the Tex Mex at Corpus Christi for movement to and from Mexico over Laredo. BN/Santa Fe will also receive trackage rights access to the Mexican gateway of Eagle Pass, in lieu of the haulage that it secured in its settlement with SP in the BN/Santa Fe merger case, and a guarantee of parity and equal access to the Mexican border at both Eagle Pass and Brownsville. We estimated that BN/Santa Fe would divert to a Corpus Christi-Tex Mex-Laredo routing 25% of the traffic moving via UP direct or SP-Tex Mex between competitive points and Laredo. (An exception was finished autos and intermodal traffic moving UP direct, which we felt would continue to move on this route.) For Brownsville traffic to and from competitive points, which we had previously diverted 25% to an Eagle Pass route as a result of BN/Santa Fe's acquisition of Eagle Pass rights in its settlement with SP in the BN/Santa Fe case, we estimated that the traffic would return to a Brownsville routing and that the total Brownsville traffic would divert 50% to BN/Santa Fe.

In total, our analyses indicated that the settlement with BN/Santa Fe would have the following revenue impacts (in millions) on UP/SP and other railroads:

<u>Railroad</u>	<u>Gross Revenue Gain or Loss Before Allowances</u>
UP/SP	\$(444.5)
BN/Santa Fe	438.5
KCS	(10.3)
Tex Mex	6.0

* * *

The combined impact of the UP/SP merger and the settlement with BN/Santa Fe on affected railroads (in millions) was as follows:

<u>Railroad</u>	<u>Gross Revenue Gain or Loss Before Allowances</u>
UP/SP	\$65.6
BN/Santa Fe	119.0
KCS	(25.7)
WC	(2.0)
CP	(1.4)
Tex Mex	0.4
Other	(0.4)

The overall results of our study of the impact on UP/SP traffic of the UP/SP merger and the settlement with BN/Santa Fe were provided to the personnel working on the Operating Plan for their use in projecting post-merger operations.

E. Revenue Data for the Pro Forma Financial Statements

The following steps were taken to generate revenue impacts for inclusion in the pro forma financial statements.

For the gross and net revenue impacts of the UP/CNW merger on UP and SP, the figures in the application in the UP/CNW

case were used. We concluded that there was no material difference between using these figures and preparing new 1994 revenue calculations, which would have involved substantial work.

For the gross revenue impacts of the BN/Santa Fe merger on UP and SP, the figures in the application in the BN/Santa Fe case were used. To derive net revenue impacts, costs were estimated by Richard F. Kauders, UP's Manager-Economic Research.

For the gross and net revenue impacts on SP of the rights that SP received from and granted to BN/Santa Fe in the settlement between SP and the applicants in the BN/Santa Fe case, we used SP's estimates. We calculated the gross revenue impacts on UP of those rights, and of the rights received by UP and KCS in settlements in BN/Santa Fe, using the revenue data in the traffic file. To derive net revenue impacts, costs were estimated by Richard F. Kauders, UP's Manager-Economic Research.

We calculated the gross revenue impacts of the extended hauls and new marketing opportunities that would result from the UP/SP merger using the revenue data in our traffic file. To derive net revenue impacts, costs were estimated by Richard F. Kauders, UP's Manager-Economic Research.

We calculated the gross revenue impacts of the traffic losses by UP/SP that would result from the Applicants' settlement agreement with BN/Santa Fe using the revenue data in the traffic file. To derive net revenue impacts, costs were estimated by Richard F. Kauders, UP's Manager-Economic Research. The gross revenue impacts of BN/Santa Fe settlement agreement on other

railroads were estimated based on input from UP and SP marketing personnel.

F. The Traffic Diversions Reflect Public Benefits

Finally, I wish to stress that the traffic impacts quantified in our studies clearly reflect public benefits of the merger and the settlement. This is not a transaction in which any significant traffic gains will occur because the merged system will gain additional routing influence. Only a small part of the diverted traffic represents extended hauls, and even as to that traffic diversions will generally occur because of improved route efficiencies and the benefits of single-line service. The larger part of UP/SP's gains will come from new marketing opportunities -- intermodal and carload traffic now being handled entirely by other railroads or other modes, or not moving at all. All of these opportunities, which we measured conservatively, represent traffic that will be attracted to the merged system solely because it will offer better service and better economics to shippers. Shippers will save on transportation and inventory cost, will enter new markets, and will have their own production stimulated. All of this is clearly in the public interest.

The same is also true with regard to the traffic that BN/Santa Fe will gain under the settlement. These diversions will occur because the rights to be granted to BN/Santa Fe will yield even stronger competition, even more efficient routes and even wider single-line service, attracting substantial traffic away from UP/SP. Thus, the two diversion stages that we measured

-- the merger, and then the settlement -- each quantify gains to shippers and the general public.

APPENDIX A

REGIONAL TRAFFIC FLOW DATA

West Coast-Midwest/Northeast

FLOW	SP TONS	UP TONS	OTHER TONS	TOTAL TONS	SP %	UP %	OTHER %	TRUCK TONS	WATER TONS
Pacific Northwest-Chicago/Kansas City/St. Louis/Chicago North/Kansas City North/Northeast									
PNW-CHI				8,452,644					
PNW-CHI N				614,025				3,033,604	0
PNW-KC				1,061,803				2,079,758	0
PNW-KC N				9,534,833				334,960	0
PNW-NE				4,482,866				2,208,095	0
PNW-ST L				664,257				5,003,730	22,663
								952,741	0
TOTAL				24,820,428				13,612,868	22,663
Northern California-Chicago/Kansas City/St. Louis/Chicago North/Kansas City North/Northeast									
N CA-CHI				6,343,872				1,972,356	0
N CA-CHI N				323,092				1,501,836	0
N CA-KC				1,484,431				375,902	0
N CA-KC N				2,851,232				1,503,600	0
N CA-NE				4,252,775				8,033,442	60,188
N CA-ST L				607,710				384,303	0
TOTAL				15,864,012				13,771,824	60,188
Southern California-Chicago/Kansas City/St. Louis/Chicago North/Kansas City North/Northeast									
S CA-CFI				11,310,032				3,112,038	0
S CA-CHI N				152,799				2,228,959	0
S CA-KC				3,177,460				518,235	0
S CA-KC N				1,619,287				1,991,885	0
S CA-NE				3,758,826				11,214,502	0
S CA-ST L				1,189,648				590,140	0
TOTAL				21,208,052				19,655,779	0

APPENDIX A

REGIONAL TRAFFIC FLOW DATA

West Coast-South Central/Southeast

FLOW	SP TONS	UP TONS	OTHER TONS	TOTAL TONS	SP %	UP %	OTHER %	TRUCK TONS	WATER TONS
Pacific Northwest-Texas									
PNW-E TX				1,170,341				389,666	46,029
PNW-N TX				819,406				342,251	0
TOTAL				1,989,747				731,917	46,029
Pacific Northwest-New Orleans									
PNW-NO				253,732				200,361	43,774
Pacific Northwest-Memphis/Southeast									
PNW-MEM				1,206,334				189,509	0
PNW-SE				2,621,441				1,447,797	11,524
TOTAL				3,827,775				1,637,306	11,524
California-Texas									
N CA-E TX				1,874,169				956,122	441,111
N CA-N TX				1,115,762				848,892	0
S CA-E TX				5,150,853				1,383,958	1,271,872
S CA-N TX				2,677,098				1,307,186	0
TOTAL				10,817,882				4,496,168	1,712,983
California-New Orleans									
N CA-NO				647,979				345,629	10,396
S CA-NO				3,426,369				377,452	107,723
TOTAL				4,074,368				723,081	117,709
California-Memphis/Southeast									
N CA-MEM				717,822				280,564	0
N CA-SE				2,815,219				2,358,950	96,429
S CA-MEM				2,615,567				438,981	0
S CA-SE				2,022,724				3,426,774	0
TOTAL				6,171,332				6,505,269	96,429

APPENDIX A

REGIONAL TRAFFIC FLOW DATA

Midwest-South Central City Pairs

FLOW	SP TONS	UP TONS	OTHER TONS	TOTAL TONS	SP %	UP %	OTHER %	TRUCK TONS	WATER TONS
Chicago/Northeast-Kansas City									
CHI N-KC				299,656				3,198,245	0
CHI-KC				1,530,908				2,052,412	6,375
NE-KC				3,382,912				13,337,736	90,756
TOTAL				5,213,476				16,588,393	97,131
Chicago-St. Louis									
CHI N-ST L				578,168				8,070,703	0
CHI-ST L				5,949,052				12,422,336	1,364,336
TOTAL				6,527,220				20,493,039	1,364,336
Chicago-Dallas									
CHI N-N TX				482,485				1,280,303	0
CHI-N TX				2,296,220				1,709,206	0
TOTAL				2,778,705				2,989,509	0
Chicago-Memphis									
CHI N-MEM				350,705				1,576,135	0
CHI-MEM				1,398,916				2,328,949	109,861
TOTAL				1,749,621				3,907,084	109,861
Chicago-Houston									
CHI N-E TX				443,150				1,715,681	0
CHI-E TX				3,073,874				2,431,059	616,509
TOTAL				3,517,024				4,146,740	616,509
Chicago-New Orleans									
CHI N-NO				370,816				1,133,386	239,377
CHI-NO				2,937,893				1,677,033	3,932,326
TOTAL				3,308,709				2,810,419	4,171,703

APPENDIX A

REGIONAL TRAFFIC FLOW DATA

Midwest-South Central City Pairs

FLOW	SP TONS	UP TONS	OTHER TONS	TOTAL TONS	SP %	UP %	OTHER %	TRUCK TONS	WATER TONS
Kansas City-St. Louis/Southeast									
KC N-SE				5,811,855				15,689,110	2,178,027
KC N-ST L				6,803,437				0	1,042,697
KC-SE				2,481,854				7,134,914	87,148
KC-ST L				1,053,048				9,956,242	124,529
TOTAL				16,150,194				32,780,266	3,432,401
Kansas City-Dallas									
KC N-N TX				2,006,506				3,015,349	0
KC-N TX				1,106,550				1,311,416	0
TOTAL				3,113,056				4,326,765	0
Kansas City-Memphis									
KC N-MEM				984,829				1,528,561	120,595
KC-MEM				214,738				1,359,131	66,825
TOTAL				1,199,567				2,887,692	187,420
Kansas City-Houston									
KC N-E TX				3,812,979				2,085,188	132,951
KC-E TX				1,319,678				1,220,870	3,702
TOTAL				5,132,657				3,306,058	136,653
Kansas City-New Orleans									
KC N-NO				1,708,833				771,920	3,922,964
KC-NO				597,736				511,679	885,100
TOTAL				2,306,569				1,283,599	4,808,064
St. Louis/Northeast-Dallas									
NE-N TX				2,193,519				6,033,145	0
ST L-N TX				631,755				882,363	0
TOTAL				2,835,274				6,915,508	0

APPENDIX A

REGIONAL TRAFFIC FLOW DATA

Midwest-South Central City Pairs

FLOW	SP TONS	UP TONS	OTHER TONS	TOTAL TONS	SP %	UP %	OTHER %	TRUCK TONS	WATER TONS
St. Louis-Memphis									
ST L-MEM				1,178,165				1,181,778	1,954,756
St. Louis/Northeast-Houston									
NE-E TX				9,471,372				8,295,068	5,324,678
ST L-E TX				1,232,343				843,927	1,006,961
TOTAL				10,703,715				9,138,995	6,331,639
St. Louis-New Orleans									
ST L-NO				887,483				436,309	7,754,187
Dallas-Memphis/Southeast									
N TX-MEM				536,501				1,174,219	0
N TX-SE				1,839,717				4,516,849	0
TOTAL				2,376,218				5,691,068	0
Dallas-Houston									
N TX-E TX				6,155,202				0	0
Dallas-New Orleans									
N TX-NO				778,490				3,357,804	0
Memphis-Houston									
MEM-E TX				1,128,773				1,538,431	402,736
Memphis-New Orleans									
MEM-NO				1,797,047				2,948,749	2,221,802
Houston-New Orleans/Southeast									
E TX-NO				3,906,911				1,997,363	8,968,443
E TX-SE				10,135,760				6,970,825	7,760,936
TOTAL				14,042,671				8,968,188	16,729,379

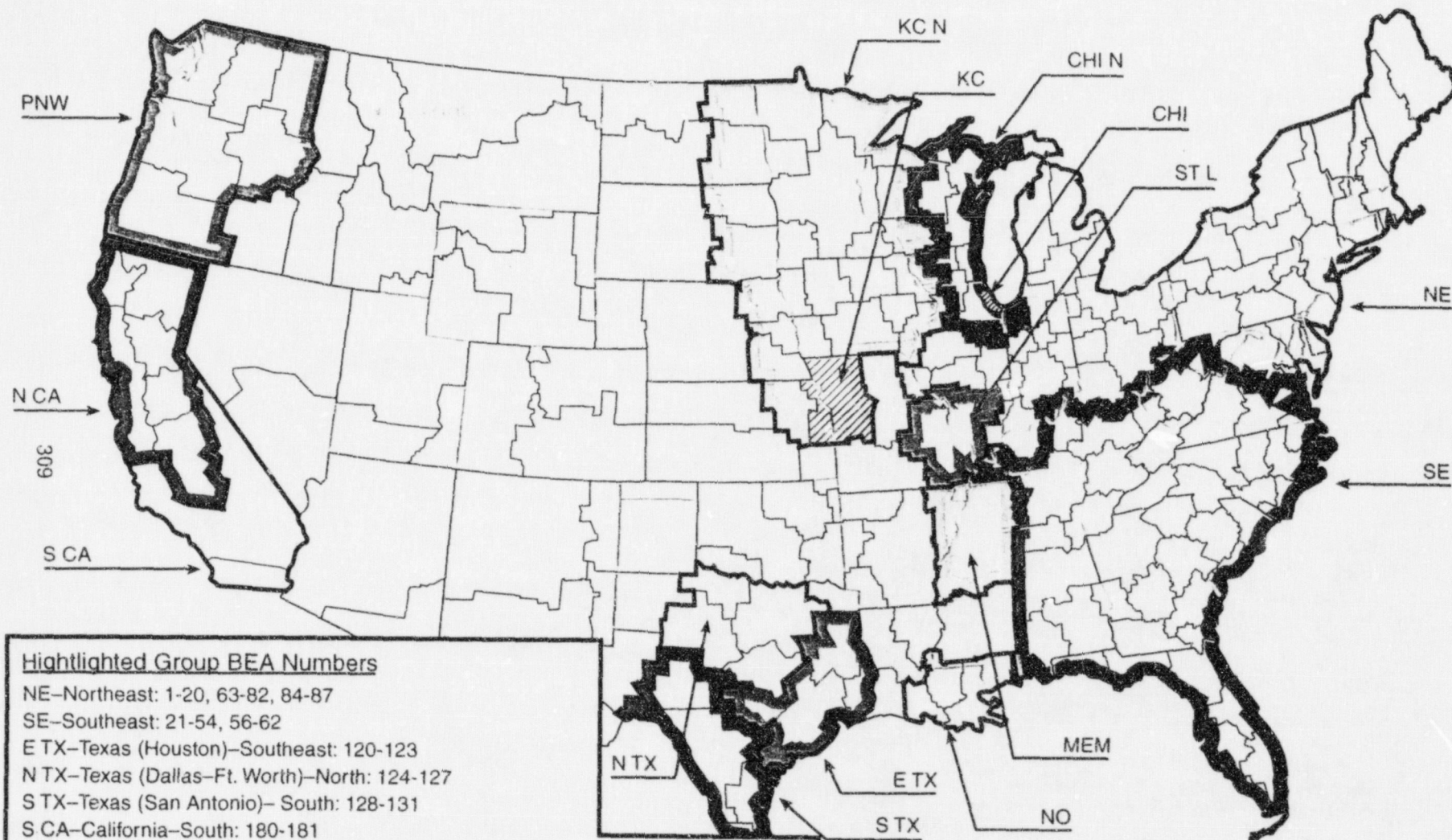
APPENDIX A

REGIONAL TRAFFIC FLOW DATA

West Coast North-South

FLOW	SP TONS	UP TONS	OTHER TONS	TOTAL TONS	SP %	UP %	OTHER %	TRUCK TONS	WATER TONS
N CA-S CA				4,673,515				33,689,342	1,913,165
PNW-N CA				5,642,458				11,454,362	1,456,473
PNW-S CA				5,101,369				8,442,099	1,207,971
TOTAL				15,417,342				53,586,003	4,577,609

Regions Used in Compiling Regional Traffic Flow Data



Highlighted Group BEA Numbers

NE-Northeast: 1-20, 63-82, 84-87

SE-Southeast: 21-54, 56-62

E TX-Texas (Houston)-Southeast: 120-123

N TX-Texas (Dallas-Ft. Worth)-North: 124-127

S TX-Texas (San Antonio)-South: 128-131

S CA-California-South: 180-181

N CA-California-North: 174-179

PNW-Pacific Northwest: 168 (WA only), 169-173

KC N-Kansas City: 91, 92, 95-104, 105, 141-143, 147, 148-150

CHI N-Chicago: 83, 88, 89, 90, 93, 94

NO-New Orleans: 113-115

Individual BEA's

CHI-Chicago: 83

KC-Kansas City: 105

MEM-Memphis: 55

ST L-St. Louis: 107

APPENDIX B
GULF COAST CHEMICALS

This Appendix provides more detail about each of the Gulf Coast STCC 28 and STCC 29 commodities that we studied.¹⁰²

For the STCC 28 chemicals in the study, UP and SP marketing personnel reviewed actual 100% data for their respective railroads and matched originations to particular Gulf Coast producers. This process provided a measure of the total amount of each commodity originated by each producer, and this number was used in calculations for the remainder of the study. Most shipments could be identified as originations from a particular producer. Those that could not be identified frequently represented imports rather than Gulf Coast production.

This process could not be repeated for other rail carriers, because the Applicants did not have access to actual data. Instead, 1994 Waybill Sample data were used to establish the total tons of each commodity that were originated by other railroads.¹⁰³

¹⁰² In this appendix, as in the text, "Gulf Coast" and "Texas/Louisiana" are used interchangeably to describe production and shipments from Texas and Louisiana combined. Several of the chemicals in the study are considered hazardous materials and thus have a corresponding STCC 49 code. We took account of this dual system of classification both to ensure that we accounted for all shipments and to avoid double counting.

¹⁰³ Shortline tonnage was an issue only with respect to polypropylene and polyethylene, where Point Comfort and Northern Railroad, which connects with UP, serves Formosa Plastics. This
(continued...)

Additional data for the study were provided by SRI. SRI provided information on the production capacity for each plant of the producers of commodities in the study. Production data were derived from the capacity figures using SRI data on industry-wide capacity utilization, or based on more specific information when available. SRI then calculated the total shipments from each plant by estimating the in-plant consumption of the commodity under study and subtracting that number from the production figure.¹⁰⁴

Figures for non-rail originations were derived by subtracting from SRI data on total shipments the 100% UP and SP originations data and the Waybill Sample data for originations by other railroads.

UP and SP personnel also provided information regarding the rail service alternatives available to the various shippers that were identified.

STCC 2821142 - POLYETHYLENE

SRI data indicate that 1994 Gulf Coast capacity for polyethylene production was 11,941,000 tons, and actual production was 11,202,000 tons. Of the total production, 11,000 tons were consumed on-site and 11,191,000 tons were shipped.

¹⁰³ (...continued)
tonnage was included in the UP totals.

¹⁰⁴ This process did not always produce perfect results. There were several facilities for which UP and SP data indicated more shipments than did the SRI data, which were based on estimates of production capacity shipped. Overall, however, the different data sources mesh quite well.

UP and SP originations together thus accounted for 71% of Gulf Coast polyethylene production and 67% of capacity.

Fourteen of the 26 Gulf Coast polyethylene producers are either not served by UP or SP or will have a rail alternative to UP/SP service following the merger. As a result of the merger, several producers that would have been served only by UP/SP will be served by BN/Santa Fe, including

, Mobil in

Amelia, Texas, and , Exxon in Mont Belvieu, Texas. In fact, 54% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 39% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from

¹⁰⁵ UP and SP data for STCC 2821142 and for the next commodity discussed, STCC 2821139, were refined to include polyethylene originations classified in two "basket" STCCs for plastic products, STCCs 2821163 and 2821144. Because a similar adjustment was not made for other railroads' originations, UP's and SP's shares of the polyethylene market appear larger than they actually are, and the share of rail as against other modes appears smaller than it actually is.

facilities that will be exclusively served by UP/SP after the merger accounted for only 39% of Gulf Coast polyethylene production and only 36% of capacity.

Furthermore, several producers with UP- or SP-exclusive facilities have Gulf Coast facilities served by other railroads. DuPont has a facility in Orange, Texas, that will be open to BN/Santa Fe after the merger, as well as a UP-exclusive facility in Victoria, Texas. Lyondell has an BN/Santa Fe-served facility in Wadsworth, Texas, as well as an SP-exclusive facility in Bayport, Texas, and a UP-exclusive facility in Victoria, Texas. And Quantum has a facility in Houston served by BN/Santa Fe (and UP and SP), as well as a UP-exclusive facility in Chocolate Bayou, Texas, and an SP-exclusive facility in Port Arthur, Texas.

Gulf Coast polyethylene represents most of the polyethylene produced in the United States, but Quantum has two facilities in Illinois and one in Iowa that together produce a little under 1 million tons of polyethylene.

UP and SP polyethylene shipments from Gulf Coast producers accounted for 66% of national polyethylene shipments.

In addition, there is a substantial amount of polyethylene production in Canada. Dow Chemical Canada (Dow has UP-exclusive facilities in Freeport, Texas, and Plaquemine, Louisiana) produces polyethylene in Fort Saskatchewan, Alberta,

and Sarnia, Ontario. Novacor Chemicals produces polyethylene in Corunna, Ontario, Joffre, Alberta, and Mooretown, Ontario. Petromont manufactures polyethylene in Montreal, Quebec. Canadian shipments of polyethylene total 2.1 million tons.

The Waybill Sample data also indicate that in 1994, polyethylene traffic originated by UP or SP in the Gulf Coast terminated in 119 BEAs across the country. In 89 of these BEAs, inbound polyethylene traffic was originated on a railroad other than UP or SP. Of the other BEAs, 14 are served by Eastern carriers, and all but 2

will be served by rail carriers other than UP/SP will serve the BEA after the merger.

Moreover, in all of the 44 BEAs where UP or SP Gulf Coast polyethylene traffic terminated and such terminations exceeded 50,000 tons (which accounted for 7,649,600 of the 9,458,900 tons terminated in BEAs where UP-or SP-originated Gulf Coast polyethylene terminated), polyethylene could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill Sample data show that polyethylene produced nationwide and in Canada will in fact compete with UP/SP Gulf Coast polyethylene originations.

Statements in support of the merger have been submitted by numerous polyethylene producers and consumers. A statement has been submitted by Exxon, which is, according to SRI, the largest U.S. shipper of polyethylene, with facilities in Baton Rouge (served by IC and KCS (and UP)) and Mont Belvieu (which will be served by UP/SP and BN/Santa Fe after the merger). Statements supporting the merger have also been submitted by Rexene, which has a UP-exclusive facility in Odessa, Texas, and Exxon Chemical Canada, which manufactures polyethylene in Sarnia, Canada (served by CN and CSX). Receivers submitting statements include Norpak, which ships polyethylene from Louisiana and Texas to its California facilities; Heritage Bag Company, which ships polyethylene from origins in Texas, Louisiana and Calgary to facilities in Texas, Georgia, Ohio, California and New Jersey; Consolidated Thermoplastics and AEP Industries, which manufacture polyethylene film; Allied Extruders, which receives polyethylene

from Chevron in Texas; Anderson Die & Manufacturing in Milwaukie, Oregon, Southern Polymer in Atlanta, Georgia; Polymer Service in China, Texas; and Bettermade Plastics in City of Industry, California. Statements have also been received from Pacific Chemical Distribution, in California, which operates break-bulk terminals for plastics.

STCC 2821139 - POLYPROPYLENE

SRI data indicate that 1994 Gulf Coast capacity for polypropylene production was 4,730,000 tons, and actual production was 4,063,000 tons. All 4,063,000 tons were shipped.

UP and SP originations together thus accounted for 81% of 1994 Gulf Coast production and 69% of capacity.

Nine of the sixteen Gulf Coast polypropylene production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. As a result of the UP/SP settlement agreement with BN/Santa Fe,

Exxon in Baytown, Texas, which is today served by both UP and SP, will be open to BN/Santa Fe. The SP-exclusive Amoco facility in Cedar Bayou, Texas, will also be opened to BN/Santa Fe. In fact, 55% of 1994 Gulf Coast rail

shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 40% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 40% of Gulf Coast polypropylene production and only 34% of capacity.

Furthermore, several producers with UP- or SP-exclusive facilities have facilities served by other railroads. Montell has a KCS-served facility in Lake Charles, Louisiana (also served by SP), as well as an SP-exclusive facility in Bayport, Texas. Amoco has a facility in Cedar Bayou that will be served by BN/Santa Fe (and UP/SP), as well as a UP-exclusive facility in Chocolate Bayou, Texas.

Gulf Coast polypropylene represents most of the polypropylene shipped from United States producers. Approximately 629,000 tons of polypropylene is manufactured in the U.S. outside the Texas/Louisiana region by such producers as Aristech in Kenova, West Virginia, Epsilon Products in Marcus Hook, Pennsylvania, Huntsman Polypropylene in Woodbury, New Jersey, Novacor Chemicals in Marysville, Michigan, and Quantum Chemical in Morris, Illinois.

. UP and SP

polypropylene shipments from Gulf Coast producers accounted for 70% of national polypropylene shipments.

In addition, Montell Canada ships from facilities in Corunna, Ontario, and Varnnes, Quebec.

The Waybill Sample data also indicate that in 1994, polypropylene traffic originated by UP or SP in the Gulf Coast terminated in 82 BEAs across the country. In 47 of these BEAs, inbound polypropylene traffic was originated on a railroad other than UP or SP. Of the other BEAs, 16 are served by Eastern carriers, and all but two

will be served by rail carriers other than UP/SP.

. In addition, competition at these points will not be lessened as a result of the merger, because both areas were served only by UP and no nearby SP access is being eliminated. Moreover, in all 12 of the BEAs in which UP or SP polypropylene traffic terminated and that had polypropylene terminations greater than 50,000 tons (which accounted for 1,742,251 of the 2,914,952 tons terminated in BEA's where UP- or SP-originated Gulf Coast polypropylene terminated), customers were able to ship polypropylene over a route in which neither UP nor SP participated. In fact, in only 7 BEAs that received more than 20,000 tons of polypropylene was UP or SP in the route for all of the shipments.

Furthermore, UP and SP compete with Eastern railroads for polypropylene originations for moves to several of the BEAs that received the largest volume of polypropylene in 1994.

A statement in support of the merger has been submitted by Exxon, which has a polypropylene facility in Baytown that will be open to BN/Santa Fe after the merger. A statement supporting the merger has also been submitted by Rexene, which has a UP-served polypropylene facility in Odessa. Statements have also been submitted by a number of plastics receivers, as described above in the discussion of polyethylene.

STCC 2813966 - VINYL CHLORIDE

SRI data indicate that 1994 Gulf Coast capacity for vinyl chloride production was 6,304,000 tons, and actual production of vinyl chloride was 5,883,000 tons. Of the total production, 1,535,000 tons were consumed on-site by producers and 4,349,000 tons were shipped.

UP and SP originations together thus accounted for only 25% of 1994 Gulf Coast vinyl chloride production and 23% of capacity.

Six of the eleven Gulf Coast vinyl chloride production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 61% of 1994 rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 20% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options.

In addition, Formosa Plastics has a facility in Baton Rouge that is served by IC and KCS (and UP), as well as a UP-exclusive facility in Point Comfort, Texas.

Gulf Coast vinyl chloride represents most of the vinyl chloride shipped by United States manufacturers. Approximately

A statement in support of the merger has been submitted by Occidental Chemical ("OxyChem"), which ships vinyl chloride from its plant in Deer Park (PTRA-served).

STCC 2812815 - CHLORINE

SRI data indicate that 1994 Gulf Coast chlorine production capacity was 9,847,000 tons, and actual production was 8,936,000 tons. Of this total production, 6,745,000 tons were consumed on-site by producers and 2,192,000 tons were shipped.

UP and SP originations together thus accounted for only 13% of 1994 Gulf Coast chlorine production and 12% of capacity.

Nine of the fifteen Gulf Coast chlorine production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 49% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 37% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively

served by UP/SP after the merger accounted for only 9% of 1994 Gulf Coast chlorine production and 8% of Gulf Coast capacity.

Furthermore, several producers with UP- or SP-exclusive facilities in the Gulf Coast have other Gulf Coast facilities served by other railroads. Oxychem has a IC-exclusive facility in Convent, Louisiana, and PTRAserved facilities in Deer Park and La Porte, Texas, as well as a UP-exclusive facility at Taft, Louisiana, and an SP-exclusive facility at Gregory, Texas. Formosa Plastics has a plant in Baton Rouge, Louisiana, that is served by IC and KCS (and UP), as well as a UP-exclusive facility in Point Comfort, Texas.

Gulf Coast chlorine represents only a small fraction of the chlorine shipped by United States manufacturers. Approximately 3,677,000 tons of chlorine are produced in the U.S. outside the Texas/Louisiana region, primarily in the Eastern United States by producers such as Niachlor in Niagara Falls, New York, OxyChem in Mobile and Muscle Shoals, Alabama, and Niagara Falls, Olin in Charleston, Tennessee, and McIntosh, Alabama, and PPG Industries in Natrium, West Virginia, to name some of the largest.

UP and SP Gulf Coast chlorine originations accounted for only 23% of national chlorine shipments.

Several manufacturers with Gulf Coast facilities, including OxyChem, Pioneer Chlor Alkali, PPG and Vulcan, also have facilities outside the Gulf Coast.

In addition, Canadian manufacturers produce approximately 1.2 million tons of chlorine and ship almost 600,000 tons.

The Waybill Sample data also indicate that in 1994, chlorine traffic originated by UP or SP in the Gulf Coast terminated in 30 BEAs across the country

with the majority in the Eastern states. In 24 of these BEAs, inbound chlorine was originated on railroads other than UP or SP, and in the remaining six, rail carriers other than UP/SP will serve the BEA and could deliver chlorine originated on railroads other than UP/SP.

The Waybill Sample data show that chlorine produced nationwide will in fact compete with UP/SP Gulf Coast chlorine originations.

A statement in support of the merger has been submitted by OxyChem, whose five Gulf Coast facilities make it the largest chlorine producer in the Gulf. OxyChem produces chlorine in Convent (KCS-served), Taft (UP-served), Gregory (SP-served), Deer Park (PTRA-served) and Pasadena (PTRA-served). Statements in support of the merger have also been submitted by Pioneer Chlor Alkali Company, a major shipper of chlorine from both St. Gabriel, Louisiana (IC-served) and Henderson, Nevada (UP-served); by Vulcan, which ships chlorine from its facility in Geismar, Louisiana (IC-exclusive); by Clorox, a manufacturer of chlorine products; by JTS Enterprises, a chlorine shipper; by Grupo Cydsa, a Mexican chlorine producer; and by Gilman Paper, a chlorine receiver.

STCC 2818546 - ETHYLENE GLYCOL

SRI data indicate that 1994 Gulf Coast capacity for ethylene glycol production was 3,472,000 tons, and actual production was 2,672,000 tons. All of the ethylene glycol produced by Gulf Coast manufacturers was shipped.

UP and SP originations together thus accounted for only 35% of 1994 Gulf Coast ethylene glycol production and 27% of capacity.

Five of the eleven Gulf Coast ethylene glycol production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 53% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 21% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 21% of 1994 Gulf Coast ethylene glycol production and 16% of capacity.

Gulf Coast ethylene glycol represents nearly all of the ethylene glycol shipped by United States manufacturers.

Canadian producers such as Dow Chemical Canada (Dow has a UP-exclusive facility in Plaquemine, Louisiana) in Fort Saskatchewan, Alberta, and Union Carbide (which has UP-exclusive facilities in Seadrift, Texas, and Taft, Louisiana) in Prentiss, Alberta, ship approximately 612,000 tons of ethylene glycol.

The Waybill Sample data indicate that in 1994, ethylene glycol traffic originated by UP or SP in the Gulf Coast terminated in 25 BEAs across the country. In 14 of these BEAs, inbound ethylene glycol traffic originated on railroads other

than UP or SP, and in the remaining 11, rail carriers other than UP/SP will serve the BEA and ethylene glycol could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill data show that non-UP/SP Gulf Coast ethylene glycol will in fact compete with UP/SP Gulf Coast ethylene glycol originations.

Statements supporting the merger have been submitted by Hoechst Celanese Chemical Group, which ships Gulf Coast ethylene glycol from a facility in Bayport, Texas (SP-served), and Hoechst Celanese Polyester Intermediates, which receives ethylene glycol from Hoechst Celanese Chemical Group. Statements have also been submitted by Old World Industries, a

Northbrook, Illinois, company that markets ethylene glycol and other chemicals, and Kalama International, a glycol broker.

STCC 2818342 - STYRENE

SRI data indicate that 1994 Gulf Coast capacity for styrene production was 5,833,000 tons, and actual production was 5,391,000 tons. Of the total production, 66,000 tons were consumed on-site by producers and 5,325,000 tons were shipped.

UP and SP originations together thus accounted for only 17% of 1994 Gulf Coast styrene production and 16% of capacity.

Four of the nine Gulf Coast styrene producers are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 30% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 14% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 14% of 1994 Gulf Coast styrene production and 13% of capacity.

Gulf Coast styrene represents all of the styrene produced by United States manufacturers.

Approximately 671,000 tons of styrene are shipped by Canadian manufacturers such as Dow Chemical Canada (Dow has a UP-exclusive facility in Freeport, Texas) and Novacor Chemicals (Canada), both in Sarnia, Ontario, and Shell Canada Products in Scotford, Alberta.

The Waybill Sample data indicate that in 1994, styrene traffic originated by UP or SP in the Gulf Coast terminated in 23 BEAs. In 14 of those BEAs, inbound styrene was originated on railroads other than UP or SP. Six of the remaining nine BEAs are served by Eastern carriers, and in the remaining three, rail carriers other than UP/SP will serve the BEA. Thus for all of the BEAs where UP or SP Gulf Coast styrene terminated in 1994, styrene could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill Sample data show that styrene produced in Canada will in fact compete with UP/SP Gulf Coast styrene originations.

A statement supporting the merger has been submitted by Rexene, which ships styrene from its UP-exclusive facility in Odessa, Texas.

STCC 2899610 - CARBON BLACK

SRI data indicate that 1994 Gulf Coast capacity for carbon black production was 1,299,000 tons, and actual production was 1,169,000 tons. All of the 1,169,000 tons produced were shipped.

UP and SP originations together thus accounted for 59% of Gulf Coast carbon black production and 53% of capacity.

Nine of the fourteen Gulf Coast carbon black facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. Three of the nine, Cabot in Franklin, Louisiana, Columbian in North Bend, Louisiana, and Degussa in Ivanhoe, Louisiana, will be served by BN/Santa Fe, as well as UP/SP, as a result of the settlement agreement. In fact, 65% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source

alternatives to UP/SP, only 28% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 28% of 1994 Gulf Coast carbon black production and 26% of Gulf Coast capacity.

Furthermore, several producers with UP- or SP-exclusive facilities in the Gulf Coast have or will have other Gulf Coast facilities served by other railroads. Cabot has a BN/Santa Fe-exclusive facility in Pampa, Texas, and will have a facility in Franklin served by BN/Santa Fe and UP/SP (which is currently an SP-exclusive facility), as well as a UP/SP-exclusive facility (now UP-exclusive) in Tate Cove, Texas. Sid Richardson has a BN/Santa Fe-exclusive facility in Borger, Texas, as well as UP-exclusive facilities in Addis, Louisiana, and Big Spring, Texas.

Gulf Coast carbon black represents only a portion of carbon black produced in the United States. Approximately 456,000 tons of carbon black are produced outside the Texas/Louisiana region. Several manufacturers with UP- or SP-exclusive facilities in the Gulf Coast also have facilities outside the Gulf Coast served by other railroads. Degussa has a facility in Belpre, Ohio (CSX), as well as SP-exclusive facilities in Aransas Pass, Texas, and Ivanhoe, Louisiana. Cabot has a facility in Waverly, West Virginia (CSX), as well as a UP-exclusive facility in Tate Cove. And Witco has facilities in Ponca City, Oklahoma (BN/Santa Fe), and Phenix City, Alabama

(NS), as well as Sunray, Texas (on the Texas North Western, a BN/Santa Fe shortline).

. UP and SP Gulf Coast carbon black originations accounted for only 42% of national carbon black shipments.

In addition, several Gulf Coast shippers also have Canadian plants that produce carbon black. Cabot and Columbian also have Canadian facilities in Sarnia, Ontario, and Hamilton, Ontario, respectively. Also, Carncarb has a facility in Medicine Hat, Alberta. In all, Canadian manufacturers ship approximately 184,000 tons of carbon black.

The Waybill Sample data indicate that in 1994, carbon black traffic originated by UP or SP in the Gulf Coast terminated in 41 BEAs across the country. In 31 of these BEAs, inbound carbon black was originated on railroads other than UP or SP. Eastern carriers serve 6 of the remaining BEAs, and in the others, with the exception of rail carriers other than UP/SP will serve the BEA and carbon black could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

Although carbon black producers and receivers take advantage of the fact that both producers and receivers are

spread throughout the U.S., the Waybill Sample data show that carbon black produced nationwide can and does compete with UP/SP Gulf Coast carbon black originations.

Statements in support of the merger has been submitted by several of the largest Gulf Coast carbon black producers. Degussa, which has SP-served facilities (via the Louisiana & Delta Railroad, open to BN/Santa Fe after the merger) in Ivanhoe, Louisiana, and Aransas Pass, Texas (SP-exclusive), has submitted a statement, as has Columbian Chemicals, which has facilities in El Dorado, Arkansas (UP-exclusive), North Bend, Louisiana (SP-served, via the Louisiana & Delta Railroad, open to BN/Santa Fe after the merger), Hamilton, Ontario (CN-served), Hickok, Kansas (BN/Santa Fe-served), and Marshall, West Virginia (CSX-served). Cabot Corporation has also submitted a statement in support of the merger. Cabot's facility in Bayou Sale, Louisiana, which is currently served by SP (via the Louisiana & Delta Railroad), will be open to BN/Santa Fe after the merger. Statements supporting the merger have also been submitted Continental General Tire and

Cooper Tire & Rubber, carbon black receivers, as well as Grupo Irsa, a Mexican carbon black producer.

STCC 2818662 - ADIPIC ACID

DuPont is the only producer of adipic acid in the Gulf Coast. It has two facilities, one in Orange, Texas, which is served by UP and SP, and one in Victoria, Texas, which is served by UP. The UP/SP settlement with BN/Santa Fe ensures that DuPont will retain its current rail alternatives. As part of the settlement, BN/Santa Fe will be granted access to DuPont's facility in Orange.

Moreover, although DuPont is the only Gulf Coast producer of adipic acid, adipic acid is also produced by Monsanto in Gonzales, Florida, by AlliedSignal in Hopewell, Virginia, and by DuPont Canada in Maitland, Ontario.

STCC 2818265 - PROPYLENE OXIDE

SRI data indicate that 1994 Gulf Coast capacity for propylene oxide production was 2,125,000 tons, and actual production was 1,850,000 tons. Of the total production, 841,000 tons were consumed on-site by producers and 1,009,000 tons were shipped.

UP and SP originations together thus accounted for only 27% of 1994 Gulf Coast propylene oxide production and 23% of capacity.

Only one of the five Gulf Coast propylene oxide production facilities will not be exclusively served by UP/SP after the merger.

. In every BEA in which UP- or SP-originated Gulf Coast propylene oxide terminated, rail carriers other than UP/SP will serve the BEA

STCC 2818668 - VINYL ACETATE

SRI data indicate that 1994 Gulf Coast capacity for vinyl acetate production was 1,538,000 tons, and actual production was 1,517,000 tons. Of the total production, 132,300 tons were consumed on-site by producers and 1,384,000 tons were shipped.

UP and SP originations together thus accounted for only 31% of 1994 Gulf Coast vinyl acetate production and 31% of capacity.

Four of the five Gulf Coast vinyl acetate production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 97% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And

even excluding other transport and source alternatives to UP/SP, only 1% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 1% of 1994 Gulf Coast vinyl acetate production and 1% of capacity.

Gulf Coast vinyl acetate represents all of the vinyl acetate shipped by United States manufacturers.

The Waybill Sample data indicate that in 1994, vinyl acetate traffic originated by UP or SP in the Gulf Coast terminated in 20 BEAs across the country. In 7 BEAs, inbound vinyl acetate originated on railroads other than UP or SP. Of the 13 remaining BEAs, 10 are served by Eastern carriers, and in the other three rail carriers other than UP/SP will serve the BEA. Thus, for all BEAs where UP or SP Gulf Coast vinyl acetate traffic terminated, vinyl acetate could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill data also show that vinyl acetate produced in Canada will compete to some extent with UP/SP Gulf Coast vinyl acetate originations.

A statement supporting the merger has been submitted by Hoechst Celanese Chemical Group, which ships

vinyl acetate and has facilities in Bayport (SP-served) and Bay City (UP- and BN/Santa Fe-served).

STCC 2819315 - SULFURIC ACID

SRI data indicate that 1994 Gulf Coast capacity for sulfuric acid production was 10,113,000 tons, and actual production was 8,800,000 tons. Of the total production, 5,234,000 tons were consumed on-site by producers and 3,585,000 tons were shipped.

UP and SP originations together thus accounted for only 5% of 1994 Gulf Coast sulfuric acid production and 5% of capacity.

Sixteen of the nineteen Gulf Coast sulfuric acid production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 98% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 1% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP/SP shipments from facilities that will be

exclusively served by UP/SP after the merger accounted for less than 1% of 1994 Gulf Coast sulfuric acid production and less than 1% of Gulf Coast capacity.

Furthermore, the two producers with UP-exclusive facilities in the Gulf Coast, DuPont in Darrow, Louisiana, and IMC-Agrico in Donaldsonville, Louisiana, have other Gulf Coast facilities served by other railroads. DuPont has a facility in La Porte, Texas, which is served by BN/Santa Fe (as well as UP and SP). IMC-Agrico has a facility in Uncle Sam, Louisiana, which is served by IC.

Gulf Coast sulfuric acid represents only a small portion of sulfuric acid produced and shipped by United States manufacturers. Approximately 9,328,000 tons of sulfuric acid (or 72% of all sulfuric acid shipped in the United States) is shipped from producers outside the Gulf Coast. Sulfuric acid is shipped in substantial amounts by numerous producers across the United States. Several Gulf Coast producers, including Asarco, DuPont, ICI Americas, IMC-Agrico and Rhone-Poulenc also have facilities outside the Gulf Coast.

UP and SP Gulf Coast originations accounted for only 4% of national sulfuric acid shipments.

Canadian producers ship more than 2.8 million tons of sulfuric acid.

The Waybill Sample data also indicate that in 1994, sulfuric acid traffic originated by UP or SP in the Gulf Coast terminated in 27 BEAs, primarily in the South and Southwest. In 22 of those BEAs, inbound sulfuric acid was originated on railroads other than UP or SP, and in the remaining 5, rail carriers other than UP/SP will serve the BEA and sulfuric acid could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill Sample data show that sulfuric acid produced nationwide can in fact compete with UP/SP Gulf Coast sulfuric acid originations, although the distribution of sulfuric acid producers across the United States generally makes long hauls unnecessary.

Statements in support of the merger have been submitted by sulfuric acid producers such as Rhone-Poulenc, a major producer of sulfuric acid with facilities in the Gulf and other U.S. locations; El Dorado Chemical, a UP-served sulfuric acid producer in Arkansas; and OxyChem, which produces sulfuric acid in White Springs, Florida. Statements supporting the merger have also been submitted by Sulphuric Acid Trading, a Tampa, Florida,

company that is a nationwide buyer and seller of sulfuric acid; Shrieve Chemical in Woodlands, Texas, which markets sulfuric acid to large industrial companies; Marsulex and Boliden Intertrade, also marketers of sulfuric acid; Harcros Chemicals, a receiver of sulfuric acid in Kansas City; and Nu-West Industries and Cypress Chemical, also receivers.

STCC 2818169 - HEXAMETHYLENEDIAMINE

DuPont is the only producer of HMD in the Gulf Coast. It has two facilities, one in Orange, Texas, which is served by UP and SP, and one in Victoria, Texas, which is served by UP. The UP/SP settlement with BN/Santa Fe ensures that DuPont will retain its current rail alternatives. As part of the settlement, BN/Santa Fe will be granted access to DuPont's facility in Orange, which is the larger of the two. Under the settlement agreement, DuPont will have BN/Santa Fe as an alternative carrier for its 1994 Gulf Coast rail shipments.

Moreover, although DuPont is the only Gulf Coast producer of HMD, HMD is also produced by Monsanto in Decatur, Alabama, and Gonzales, Florida. DuPont competes directly with Monsanto, which both uses HMD in its own facilities and ships interplant. In addition, DuPont Canada ships

HMD from its facility in Maitland, Ontario

STCC 2818555 - POLYPROPYLENE GLYCOL

SRI data indicate that 1994 Gulf Coast capacity for polypropylene glycol production was 977,000 tons, and actual production was 556,000 tons. All 556,000 tons were shipped.

UP and SP originations together thus accounted for 68% of Gulf Coast production, but only 39% of capacity.

Four of the seven Gulf Coast producers of polypropylene glycol are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 30% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 60% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for 60% of Gulf Coast polypropylene glycol production and only 34% of capacity. Facilities that will be served by a railroad other than UP/SP after the merger have a total capacity of 269,000 tons.

Gulf Coast polypropylene glycol represents only a little more than two-thirds of the polypropylene glycol in the United States. Approximately 239,000 tons of polypropylene glycol are produced outside the Texas/Louisiana region, primarily in Eastern states. Two of three Gulf Coast producers with facilities that will be UP/SP-exclusive after the merger have polypropylene glycol facilities outside the Gulf: Arco has a facility in South Charleston, West Virginia (as well as a UP-exclusive facility in Channelview), and Dow has a facility in Midland, Michigan (in addition to its UP-exclusive facility in Freeport). Of the four other Gulf Coast producers, two have Eastern facilities (Miles in New Martinsville, West Virginia, and BASF in Washington, New Jersey). Other Eastern producers of

polypropylene glycol include Olin in Brandenburg, Kentucky, and Union Carbide in South Charleston, West Virginia. Three companies produce smaller amounts of polypropylene glycol in Illinois (Caigene, Pelron and PPG).

. UP and SP Gulf Coast

polypropylene glycol originations accounted for only 48% of national polypropylene glycol shipments.

In addition, Dow Chemical Canada (Dow has UP-exclusive facilities in Freeport, Texas, and Plaquemine, Louisiana) ships from its facility in Sarnia, Ontario.

Rhone-Poulenc and Huntsman also have Canadian production facilities

The 1994 Waybill Sample also indicate that in 1994, polypropylene glycol traffic originated by UP or SP in the Gulf Coast terminated in 32 BEAs across the country from New York to Los Angeles, with a majority of BEAs in the Eastern states. In 16 of the BEAs, inbound polypropylene glycol traffic was originated on a railroad other than UP or SP. Of the remaining 16, Eastern carriers serve 11 of the BEAs, and the remaining five are or will be served by BN/Santa Fe following the merger. Thus, for all BEAs, polypropylene glycol could be sourced from non-UP/SP origins and delivered by rail carriers other than UP/SP.

The Waybill Sample data show that polypropylene glycol produced nationwide will in fact compete with UP/SP Gulf Coast

polypropylene glycol originations.

A statement in support of the merger has been submitted by Bayer, which ships polypropylene glycol from its facility in Baytown (served by UI/SP and BN/Santa Fe after the merger), and Kalama International and Copeq Trading, glycol brokers.

STCC 2815111 - PHENOL

SRI data indicate that 1994 Gulf Coast capacity for phenol production was 892,000 tons, and actual production was 815,000 tons. Of the phenol produced, 183,000 tons were consumed on-site by producers and 632,000 tons were shipped.

UP and SP originations together thus accounted for 43% of 1994 Gulf Coast phenol production and 39% of capacity.

Three of the five Gulf Coast phenol producers are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger,

. In fact, 45% of Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 33% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 26% of 1994 Gulf Coast phenol production and 24% of capacity.

In addition, Georgia Gulf has a facility in Pasadena, Texas, that is PTRAserved, as well as a UP-exclusive facility in Plaquemine, Louisiana.

Gulf Coast phenol represents only a fraction of the phenol shipped by United States manufacturers. Approximately 1,090,000 tons of phenol are shipped from U.S. producers outside the Texas/Louisiana region. These producers include AlliedSignal in Philadelphia, Pennsylvania, Aristech in Ironton, Ohio, and General Electric in Mount Vernon, Indiana, as well as smaller producers in Kalama, Washington (Kalama Chemical), Beulah, North Dakota (Dakota Gasification), Blue Island, Illinois (BTL Specialty Resins), and El Dorado, Kansas (Texaco Refining).

. UP and SP Gulf Coast phenol originations accounted for only 24% of national phenol shipments.

The Waybill Sample data also indicate that in 1994, phenol traffic originated by UP or SP in the Gulf Coast terminated in 25 BEAs across the country,

. In 14 of those BEAs, inbound phenol was originated on a railroad other than UP or SP, and in the remaining 11, rail carriers other than UP/SP will serve the BEA and phenol could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP. Moreover, of the top 10 BEAs by volume terminated, inbound phenol was originated on a railroad other than UP or SP in all but one.

The Waybill Sample data show that phenol produced nationwide will in fact compete with UP/SP Gulf Coast phenol originations. In 1994, shipments of phenol moved by rail from non-Gulf Coast points to locations that also received Gulf Coast shipments originated by UP or SP.

Statements in support of the merger have been submitted by Dyno Polymers, which receives phenol from Georgia-Gulf in Plaquemine (UP-served) and Shell in Bayport (PTRA-served), and Spurlock Adhesives, also a phenol receiver.

STCC 2871235 - DIAMMONIUM OR MONOAMMONIUM PHOSPHATE

SRI data indicate that 1994 Gulf Coast capacity for diammonium and monoammonium phosphate ("ammonium phosphate") production was 3,478,000 tons, and actual production was 3,083,000 tons. All of this production was shipped.

UP and SP originations together thus accounted for only 9% of 1994 Gulf Coast production and 8% of capacity.

Two of the four Gulf Coast ammonium phosphate production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 77% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 4% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for

only 4% of 1994 Gulf Coast ammonium phosphate production and 3% of Gulf Coast capacity.

Furthermore, IMC-Agrico, which has two UP-exclusive facilities in the Gulf Coast, has three facilities in Florida (all CSX-served)

Gulf Coast ammonium phosphate represents only a small fraction of the ammonium phosphate produced and shipped by United States manufacturers. Approximately 13,418,000 tons of ammonium phosphate (or 81% of U.S. shipments), are shipped by producers outside the Gulf Coast, primarily in Florida. These producers include Cargill Fertilizer in Bartow and Riverview, Florida, IMC-Agrico in Mulberry, Bartow and Nichols, Florida, Mississippi Phosphates in Pascagoula, Mississippi, Mulberry Phosphates in Mulberry and Piney Point, Florida, and Texasgulf in Aurora, North Carolina.

UP and SP Gulf Coast originations accounted for only 2% of national ammonium phosphate shipments.

In addition, Canadian producers in New Brunswick and Alberta ship approximately 738,000 tons of ammonium phosphate.

The Waybill Sample data also indicate that ammonium phosphate traffic originated by UP or SP in the Gulf Coast terminated in 27 BEAs, mostly west of the Mississippi. In 20 of those BEAs, inbound ammonium phosphate was originated on

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railroads other than UP or SP, and in the remaining 7, rail carriers other than UP/SP will serve the BEA and ammonium phosphates could be originated from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill Sample data show that ammonium phosphate produced in Florida, and other locations, will compete with UP/SP Gulf Coast ammonium phosphate originations.

Statements in support of the merger have been submitted by numerous fertilizer manufacturers, processors and distributors, including Texas Liquid Fertilizer, Nu-West Industries, J.R. Simplot and International Chemical.

STCC 2818115 - ACRYLATES

SRI data indicate that 1994 Gulf Coast capacity for acrylate production was 775,000 tons, and actual production was 609,000 tons. All 609,000 tons produced were shipped.

UP and SP originations together thus accounted for 43% of 1994 Gulf Coast acrylate production and 34% of capacity.

Two of the five Gulf Coast acrylate production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger.

Rohm & Haas, has a PTRAserved facility in Deer Park, Texas. In fact, 55% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 24% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 24% of 1994 Gulf Coast acrylates production and 19% of Gulf Coast capacity.

In addition,

Hoechst Celanese, has a BN/Santa Fe-exclusive facility in Pampa, Texas, as well as an SP-exclusive facility in Bayport.

Gulf Coast acrylates appear to represent the entire U.S. production of acrylates.

The Waybill Sample data indicate that in 1994, acrylates traffic originated by UP or SP in the Gulf Coast terminated in 17 BEAs

. In only 5 of these BEAs was inbound traffic originated on a railroad other than UP or SP. However, 10 of the other 12 BEAs are served by Eastern or Canadian carriers, and for the remaining two

rail carriers other than UP or SP serve the BEA and acrylates could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

A statement in support of the merger has been submitted by Hoechst Celanese Chemical Group, which

has facilities in Pampa, Texas (BN/Santa Fe-exclusive) and Bayport, Texas (SP-exclusive).

STCC 2818239 - ETHYLENE OXIDE

SRI data indicate that 1994 Gulf Coast capacity for ethylene oxide production was 3,913,000 tons, and actual production was 3,350,000 tons. Of the total production, 2,789,000 tons were consumed on-site and only 564,000 tons were shipped.

UP and SP originations together thus accounted for only 7% of Gulf Coast ethylene oxide production and 6% of capacity.

Five of the eleven Gulf Coast ethylene oxide production facilities are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 41% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 42% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 7% of 1994 Gulf Coast ethylene oxide production and 6% of Gulf Coast capacity.

Gulf Coast ethylene oxide represents much of the ethylene oxide shipped by United States manufacturers.

. UP and SP Gulf Coast ethylene oxide originations accounted for only 37% of national shipments.

Canadian producers, including Dow Chemical Canada (Dow has a UP-exclusive facility in Plaquemine, Louisiana) in Fort Saskatchewan, Alberta, and Union Carbide (Union Carbide has UP-

exclusive facilities in Seadrift, Texas, and Taft, Louisiana) in
Prentiss, Alberta, produce ethylene
oxide

The Waybill Sample data also indicate that in 1994, ethylene oxide traffic originated by UP or SP in the Gulf Coast terminated in 17 BEAs, mostly east of the Mississippi. In 12 of those BEAs, inbound ethylene oxide was originated on railroads other than UP or SP, and in the remaining 5, rail carriers other than UP/SP will serve the BEA and ethylene oxide could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill Sample data show that ethylene oxide produced in the U.S. outside the Gulf Coast and in Canada will compete with UP/SP Gulf Coast ethylene oxide originations.

A statement supporting the merger has been submitted by Hoechst Celanese Chemical Group, which produces 8% of Gulf Coast ethylene oxide in Bayport (SP-exclusive).

STCC 2818170 - UREA

SRI data indicate that 1994 Gulf Coast capacity for urea production was 2,995,000 tons, and actual production was

2,861,000 tons. Of this total production, 286,000 tons were consumed on-site by producers and 2,574,000 tons were shipped.

Four of the seven Gulf Coast producers of urea are either not served by UP or SP or will have a rail alternative to UP/SP service after the merger. In fact, 42% of 1994 Gulf Coast rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 8% of 1994 Gulf Coast shipments would remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 8% of Gulf Coast urea production and 7% of capacity.

Gulf Coast urea represents only a small fraction of urea shipped by United States manufacturers. More than 5 million tons of urea, or 65% of U.S. production, is produced outside the Texas/Louisiana region, by producers such as Arcadian Fertilizer in Augusta, Georgia, and Memphis, Tennessee (among other locations), Farmland Industries in Enid, Oklahoma, Terra Nitrogen in Blytheville, Arkansas, and Unocal in Kenai, Alaska. Canadian producers ship approximately 3.5 million tons of urea.

. UP and SP Gulf Coast urea originations accounted for only 3% of national urea shipments.

The Waybill Sample data also indicate that in 1994, urea traffic originated by UP or SP in the Gulf Coast terminated in 18 BEAs, primarily in the South. In 12 of those BEAs, inbound urea was originated on railroads other than UP or SP, and in the remaining 6, rail carriers other than UP/SP will serve the BEA and urea could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill Sample data show that urea produced outside of the Texas/Louisiana region will compete with UP/SP Gulf Coast originations.

A statement in support of the merger has been submitted by Unocal

. Statements in support of the merger have also been submitted by numerous fertilizer manufacturers, processors and distributors, including Terra International and Texas Liquid Fertilizer.

STCC 2818429 - PROPYL OR ISOPROPYL ALCOHOL

SRI data indicate that 1994 Gulf Coast propyl and isopropyl alcohol ("propyl") production capacity was 1,213,000 tons, and actual production was 833,000 tons. Of this total production, 307,000 tons were consumed on-site by producers and 526,000 tons were shipped.

UP and SP originations together accounted for only 16% of 1994 Gulf Coast production and 11% of capacity.

Six of the eight Gulf Coast propyl production facilities will have a rail alternative to UP/SP service after the merger. In fact 87% of 1994 rail shipments originated at facilities that will be open to a railroad other than UP/SP after the merger. And even excluding other transport and source alternatives to UP/SP, only 6% of 1994 Gulf Coast shipments would

remain on UP/SP if manufacturers exercised their non-UP/SP rail options. Combined UP and SP shipments from facilities that will be exclusively served by UP/SP after the merger accounted for only 4% of Gulf Coast propyl production and 3% of capacity.

In addition, Hoechst Celanese has a facility in Bay City, served by BN/Santa Fe (and UP), as well as a UP-exclusive facility in Bishop, TX.

Gulf Coast propyl represents all of the propyl shipped by United States manufacturers. Shell Canada Products in Corunna, Ontario, ship propyl.

The Waybill Sample data indicate that in 1994, propyl traffic originated by UP or SP in the Gulf Coast terminated in 21 BEAs. In 8 of those BEAs, inbound propyl traffic was originated on a rail carrier other than UP or SP. Of the remaining 13, nine are served by Eastern carriers, and the remaining four are served, or will be served after the merger, by a carrier other than UP/SP, and propyl could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

Statements supporting the merger have been submitted by Hoechst Celanese Chemical Group, which ships propyl from a facilities in Bay City (UP- and BN/Santa Fe-served) and Bishop (UP-exclusive), and by Exxon, which ships propyl and has a facility in Baton Rouge, Louisiana (served by KCS and IC, as well as UP).

STCC 29 COMMODITIES - PETROLEUM PRODUCTS

Because the petroleum products identified by the "50/10" screen are overwhelmingly moved by water and pipeline, we did not engage in as detailed an analysis of these commodities. Nonetheless, did examine the issue of competition at destination to explore whether petroleum products receivers who receive Gulf shipments by rail will have the ability to receive petroleum products by rail from non-UP/SP origins.

STCC 2911415 - PETROLEUM LUBRICATING OIL

SRI data indicate that 1994 Gulf Coast capacity for petroleum lubricating oil production was 6,237,000 tons, and actual production was 5,403,000 tons. All 5,403,000 tons were shipped.

In addition, as a result of the settlement, Exxon in Baytown, Texas, will be served by BN/Santa Fe as well as UP/SP.

Gulf Coast petroleum lubricating oil represents only a fraction of lubricating oil shipped by United States manufacturers. Approximately 4,374,000 tons are shipped from U.S. producers outside the Texas/Louisiana region. There are

major petroleum lubricating oil producers in Eastern states such as Indiana (Amoco), Kentucky (Ashland), New Jersey (Mobil), Ohio (Toledo), Pennsylvania (Penzoil, Witco) and West Virginia (Quaker State). There are also major producers in Western states, such as California (Chevron, San Joaquin Refining, Shell, Unocal, Witco). In addition, two large Gulf Coast producers also produce petroleum lubricating oil outside the Gulf Coast -- Mobil has a facility in Paulsboro, New Jersey, as well as Beaumont, Texas, and Pennzoil has a facility in Rouseville, Pennsylvania, as well as Shreveport, Louisiana.

UP and SP Gulf Coast shipments accounted for only 9% of national lubricating oil shipments.

The Waybill Sample data indicate that petroleum lubricating oil traffic originated by UP or SP in the Gulf Coast terminated in 48 BEAs. In 40 of those BEAs, inbound lubricating oil was originated on a railroad other than UP or SP, and in the remaining 8, rail carriers other than UP/SP will serve the BEA and lubricating oil could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

The Waybill Sample data show that petroleum lubricating oil produced nationwide will in fact compete with UP/SP Gulf Coast originations.

A statement in support of the merger has been submitted by San Joaquin Refining in Bakersfield, California, a petroleum lubricating oil producer.

STCC 2911610 - LIQUID ASPHALT

SRI data indicate that 1994 Gulf Coast capacity for liquid asphalt production was 9,417,000 tons, and actual production was 5,554,000 tons. All 5,554,000 tons were shipped.

In addition, as a result of the settlement, Exxon in Baytown, Texas, will be served by BN/Santa Fe as well as UP/SP.

Gulf Coast asphalt represents only a fraction of the asphalt shipped by United States manufacturers. Approximately 30,768,000 tons are shipped from U.S. producers outside the Texas/Louisiana region. There are major asphalt producers in Eastern states such as Kentucky (Ashland), New Jersey (Bayway Refining, Chevron, Citgo Asphalt Refining), Pennsylvania (Sun Refining, United Refining). There are other producers spread throughout the United States in such places as Wyoming (Frontier

Oil), Ohio (BP Oil), California (Huntway, San Joaquin Refining, Shell Oil, Texaco Refining and Witco, to name a few) and Oklahoma (Sinclair Oil, Total Petroleum), among many others. In addition, several Gulf producers have facilities outside the Gulf Coast. Chevron has facilities in Mississippi, New Jersey, Oregon and Washington, as well as a facility in El Paso. Coastal Refining has a facility in El Dorado, Kansas, as well as one in Corpus Christi, Texas. Exxon has a facility in Billings, Montana, as well as one in Baytown, Texas.

UP and SP Gulf Coast shipments accounted for only 1% of national asphalt shipments.

The Waybill Sample data also indicate that in 1994, asphalt traffic originated by UP or SP in the Gulf Coast terminated in 22 BEAs. In 15 of those BEAs, inbound asphalt was originated on a railroad other than UP or SP, and in 5 of the remaining BEAs, rail carriers other than UP/SP will serve the BEA and asphalt could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP. The two remaining BEAs

receivers who will be exclusively served by UP/SP after the merger are exclusively served by UP today, so there will be no lessening of competition. In addition, they can receive asphalt by truck. Receivers in Tucson, who will be served by UP/SP after the merger, are exclusively served by SP today, so they, too, will

not face any lessening of competition. These receivers, too, could receive asphalt shipped by truck.

The Waybill Sample data show that asphalt produced at locations across the nation will compete with UP/SP Gulf Coast originations.

Statements in support of the merger have been submitted asphalt producers, shippers and marketers including San Joaquin Refining, Petro Source Refining, Navajo Western Asphalt, Moose Jaw Asphalt, Longview Asphalt, Frontier Terminal & Trading, Edginton Oil, Oxnard Refinery, Total Petroleum, Lion Oil, Neste Trifinery, Petrolite and Consolidated Oil & Transport.

STCC 2911982 - PETROLEUM NAPHTHA

SRI data indicate that 1994 Gulf Coast capacity for petroleum naphtha production was 68,154,000 tons, and actual production was 64,750,000 tons. Of the naphtha produced, 13,492,000 tons were shipped.

In addition, as a result of the settlement, Exxon in Baytown, Texas, will be served by BN/Santa Fe as well as UP/SP.

Gulf Coast petroleum naphtha represents only a fraction of the petroleum naphtha shipped by United States manufacturers. Approximately 18,957,000 tons are shipped from U.S. producers outside the Texas/Louisiana region. There are major petroleum naphtha producers throughout the United States. In addition, many Gulf producers have facilities outside the Gulf Coast. Amoco has facilities in Indiana, North Dakota, Utah and Virginia, as well as in Texas City, Texas. Chevron has facilities in California, Mississippi and Utah, as well as in Port Arthur and El Paso, Texas. Conoco has facilities in Colorado, Montana and Oklahoma, as well as Westlake, Louisiana. Exxon has facilities in California and Montana, as well as Baton Rouge, Louisiana, and Baytown, Texas. Marathon, Mobil, Phillips, Shell and other producers have both Gulf Coast and non-Gulf facilities.

UP and SP Gulf Coast shipments accounted for only 1% of national petroleum naphtha shipments.

The Waybill Sample data also indicate that in 1994, petroleum naphtha traffic originated by UP or SP terminated in 33 BEAs. In 21 of those BEAs, inbound petroleum naphtha originated on a rail carrier other than UP or SP. In 11 of the remaining 12

BEAs, rail carriers other than UP/SP will serve the BEA and petroleum naphtha could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP. The one remaining BEA

is presently served exclusively by UP, and thus will not lose rail competition as a result of the merger. Furthermore, truck transport is a viable alternative to rail for petroleum naphtha shipments

The Waybill Sample data show that petroleum naphtha produced across the United States could in fact compete with Gulf Coast petroleum naphtha.

Statements in support of the merger have been submitted by petroleum naphtha producers such as San Joaquin Refining in Bakersfield, California, Total Petroleum, Lion Oil, and Petrolite.

STCC 2911990 -- PARAFFIN OR PETROLEUM WAX

SRI data indicate that 1994 Gulf Coast capacity for petroleum was production was 732,000 tons, and actual production was 527,000 tons. Of the petroleum wax produced, all 527,000 tons were shipped.

In addition, as a result of the settlement, Exxon in Baytown, Texas, will be served by BN/Santa Fe as well as UP/SP, as will Mobil in Beaumont, Texas.

Gulf Coast petroleum wax represents less than half of the petroleum wax shipped by United States manufacturers. Approximately 568,000 tons are shipped from U.S. producers outside the Texas/Louisiana region. There are petroleum wax producers in the East in Kentucky (Ashland Petroleum), Pennsylvania (Pennzoil, Petrowax, Witco), and West Virginia (Quaker State). There are also producers in California (Chevron, Unocal), Oklahoma (Petrolite, Sun), and Indiana (Amoco). In addition, several Gulf producers have facilities outside the Gulf Coast. Pennzoil has facilities in Rouseville, Pennsylvania, as well as Shreveport, Louisiana, and Petrolite has a facility in Barnsdall, Oklahoma, as well as one in Kilgore, Texas.

. UP and SP Gulf Coast shipments accounted for only 19% of national petroleum wax shipments.

The Waybill Sample data indicate that in 1994, petroleum wax traffic originated by UP or SP terminated in 32 BEAs. In 16 of those BEAs, inbound petroleum. In all 16 of the remaining rail carriers other than UP/SP will serve the BEA and petroleum wax could be sourced from non-UP/SP origins and delivered by a railroad other than UP/SP.

Statements supporting the merger have been submitted by Petrolite, a petroleum wax manufacturer in Kilgore, Texas, and by Pine Mountain and California Cedar Products, petroleum wax receivers.

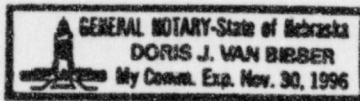
VERIFICATION

STATE OF NEBRASKA)
) SS.
COUNTY OF DOUGLAS)

I, Richard B. Peterson, 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 B. Peterson
RICHARD B. PETERSON

Subscribed and sworn to before me this 17th day of November, 1995.



Doris J. Van Bibber
NOTARY PUBLIC

My Commission Expires:

Nov. 30, 1996

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