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SPI - 11

BEFORE THE
SURFACE TRANSPORTATION BOARD

UNITED STATES DEPARTMENT OF TRANSPORTATION

FINANCE DOCKET NO. 32760

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

COMMENTS OF

THE SOCIETY OF THE PLASTICS INDUSTRY, INC.

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MANAGEMENT
D.C.

Larry L. Thomas, President
Lewis R. Freeman, Vice President,
Government Affairs
Maureen A. Healey, Director,
Federal Environment and
Transportation Issues
THE SOCIETY OF THE PLASTICS
INDUSTRY, INC.
1275 K Street, NW, Suite 400
Washington, DC 20005
Tel: (202) 371-5200

Martin W. Bercovici
Douglas J. Behr
Arthur S. Garrett, III
Leslie E. Silverman
KELLER AND HECKMAN
1001 G Street, NW
Suite 500 West
Washington, DC 20001
Tel: (202) 434-4100
Fax: (202) 434-4646

Attorneys for The Society
of the Plastics
Industry, Inc.

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Attorneys for The Society
of the Plastics
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COMMENTS OF
THE SOCIETY OF THE PLASTICS INDUSTRY, INC.
IN OPPOSITION, OR ALTERNATIVELY,
REQUEST FOR IMPOSITION OF CONDITIONS

INTRODUCTION

The Society of the Plastics Industry, Inc. (hereinafter generally referred to as "SPI"), respectfully submits its Comments in opposition to the application of the Union Pacific Corporation (UP), et al. and the Southern Pacific Rail Corporation (SP), et al., seeking Board approval to merge, said application filed November 30, 1995 in the proceeding captioned above. As an alternative to denial of merger authority, SPI respectfully urges the Board to impose conditions to ameliorate the adverse effects on competition between and among rail carriers which otherwise would flow from the proposed merger. SPI submits its evidence and opposition in this proceeding in accordance with 49 U.S.C. §§ 11341, et seq., the regulations promulgated at 49 C.F.R. Part 1180, and the decisions governing

this proceeding issued by the Interstate Commerce Commission and this Board.[1]

SPI is the major trade association of the plastics industry. Its members consist of more than 2,000 companies which supply raw materials, process or manufacture plastics and plastics products, and engage in the manufacture of machinery used to make plastic products or materials of all types. Its members are responsible for an estimated 75% of total sales of plastics materials and plastic products in this country.[2]

The plastics industry is one of the leading economic sectors of the United States. Overall, the industry in 1994 accounted for more than 870,000 jobs and $176 billion in product shipments. See Lippincott, SPI V.S.-1 at 3. Including captive plastic product operations, e.g., milk processors who blowmold their own milk jugs, and upstream industry suppliers, the industry accounts

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[1] The ICC Termination Act of 1995, Pub. L. No 104-88, 109 Stat. 803 (the Act), which was enacted on Decemb 29, 1995, and took effect on January 1, 1996, abolished the Interstate Commerce Commission (ICC) and transferred certain functions and proceedings to the Surface Transportation Board (Board). Section 204(b)(1) of the Act provides, in general, that proceedings pending before the ICC on the effective date of that legislation shall be decided under the law in effect prior to January 1, 1996, insofar as they involve functions retained by the Act. This pleading relates to a proceeding that was pending with the ICC prior to January 1, 1996, and to functions that are subject to Board jurisdiction pursuant to sections 11323-27 of the Act. Therefore, this pleading cites to the law in effect prior to the Act, and citations are to the former sections of the statute, unless otherwise indicated.

[2] The standing of an industry association to represent its members on matters of common interest is well recognized, particularly in regulatory proceedings. See, e.g., Warth v. Seldin, 422 U.S. 490, 511 (1975); Hunt v. Washington State Apple Advertising Comm'n, 432 U.S. 333, 343 (1977).

for more than 2.1 million jobs and $318 billion in shipments. Id. Within Texas and Louisiana, the key states of interest to SPI, the plastics resins segment of the industry alone accounted for more than 17,000 jobs and $15 billion in shipments in 1994; and the industry invested new capital of more than $1 billion just in Texas. Id. at 3-4.

Plastics resins, STCC 28211, the primary material of interest to SPI in this proceeding, constitute approximately 52 billion pounds of railroad traffic, amounting to almost 300,000 carloads of traffic in 1994. See Crowley, SPI V.S.-4 at 6. The overwhelming majority of plastics resins production (70% of rail originations, Id.) occurs in the Gulf Coast region, and the two primary railroads which handle plastics resins at origin are the Union Pacific and the Southern Pacific. Moreover, transportation is second only to raw materials among the cost elements for plastics resins, amounting to approximately 20% of the delivered costs. See Bowles, SPI V.S.-2 at 2. SPI, on behalf of its member companies, thereby has a substantial interest in the proposed merger of the UP and SP.[3/]

[3/] Several members of SPI and producers of plastics resins, as Applicants have touted in their application and likely will point out to the Board in response to these Comments, have filed statements tendered by Applicants as evidence of shipper support of the application. The Board undoubtedly recognizes that organizations such as SPI operate on democratic principles, by their operational units and boards of directors; and the independent views of a limited number of members of the organization or non-member producers do not serve to eviscerate the views of the majority and of the organization itself.

Similarly, in comparing SPI's position with that of its several members which support the application, it is important

(continued...)

[3/](...continued)
for the Board to recognize that the supporting positions reflect either transportation conditions unique to those parties or, alternatively,

. Documents produced by Applicants in discovery evidence that

See, Exhibits 1, 2 and 3.

See Davidson Tr. at 63, 69-73, 100 and 102-116.

. See, Exhibit 4. The statement of Occidental Chemical Corporation (OxyChem) evidences that OxyChem received specific assurances from applicants with regard to pricing rate levels, routing options, switching charges and track conditions. Notwithstanding OxyChem expressed concerns regarding anticipated line abandonments, and reserved its right to re-evaluate or change its position with regard to the impact of the merger on the southeast region comprised of Texas, Louisiana, Arkansas and Missouri. UP/SP-25, Part 1 at 326, 329.

See, Exhibit 5.

Gehring Tr. at 93-99. Notably, witness Peterson commented that "it would be highly unusual for the marketing department of one railroad to open up a customer that it exclusively serves." Peterson Tr. at 479.

(continued...)

In this pleading, SPI specifically addresses the impact of the proposed merger on producers of polyethylene (PE) and polypropylene (PP). These resins constitute the majority of the production of plastics resins, other than liquid, which are the building blocks for the fabrication of thousands and thousands of products utilized by industry and consumers in countless applications. See Lippincott, SPI V.S.-1 at 4. Applicants have

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3/(...continued)
As reflected in their supporting statements, several of the producers are in unique circumstances *vis-a-vis* the rest of the industry. For example, the production facility of Rexene Corporation is located in West Texas on a UP line that effectively serves as a branch line with inadequate service, and ineffective interchange with the SP. For Rexene, due to its remote location outside of the petrochemical belt, the benefits of linking the SP's Fort Worth-El Paso line with the UP's line to Los Angeles outweigh the concerns expressed in SPI's position. UP/SP-25, Part 3 at 426. Keysor-Century (not a member of SPI) also is located outside of the Gulf Coast petrochemical belt and therefore is subject to differing transportation concerns, UP/SP-25, Part 4 at 322, and Keysor-Century and Shintech both produce a form of plastics which is not addressed in these Comments. Moreover, notwithstanding they provided applicants with statements in support, both Quantum and Shintech entered appearances in this proceeding in order to preserve their options to participate; and Quantum is understood to be submitting independent comments (QCC-2) seeking the imposition of conditions to protect against loss of competitive opportunity affecting several of its facilities.

It is not only plastics resins producers and their affiliated chemical operations

also, e.g., Exhibit 6,

Accordingly, the fact that certain plastics producers have unique problems posed by their geography, and

does not serve to undermine the position expressed herein that the proposed merger would be harmful to the plastics resins industry.

addressed the impact of the merger on the PE and PP industries extensively in their verified statements (see e.g. verified statements of Peterson, Barber and Spero, UP/SP-23). Considering that PE and PP constitute the major resins and that applicants have viewed the impact of the merger on producers of these materials as significant, SPI also focuses upon these resins in its evidence submitted in this proceeding. Unless otherwise stated, reference herein to "plastics resins" means polyethylene and polypropylene.

SPI's Comments are organized, as follows:

I. Comments
II. Verified Statements
III. Documentary Evidence[4/]

Public and Highly Confidential versions of these Comments are being submitted to the Board. Consistent with the Protective Order issued by the Commission,[5/] the latter is to be filed under seal; and the public version has been redacted with regard to Highly Confidential and Confidential information of both SPI's witnesses and Applicants' testimonial and documentary evidence.

[4/] Documentary evidence, in the form of responses to written interrogatories and requests for admissions, and deposition testimony is offered into evidence pursuant to 49 C.F.R. § 1114.28 and Decision No. 6 (notes). Documentary evidence is reproduced in Section III of this document and referenced by exhibit number. For multi-page exhibits, pages are identified by the Bates number in the lower right corner, if any. Deposition testimony is identified by witness name and deposition page number, e.g., "'Witness' Tr. at XY." By stipulation among Applicants and certain parties to this proceeding, including SPI, the deposition transcripts have been filed with the Board, are part of the evidentiary record, and may be cited by parties in their comments and briefs.

[5/] Decision No. 2, served September 1, 1995.

I. COMMENTS

I. COMMENTS

A. Overview of Application.

Pending before the Board is the proposed merger of the Union Pacific and Southern Pacific railroad systems. This merger is like no prior railroad merger considered by the Interstate Commerce Commission in its 108-year life span. The parties to this application are carriers operating a total of almost 39,000 miles of rail network systems (22,000 - UP; 16,700 - SP), UP/SP-22 at 40-43, with projected first-year revenues of $10.6 billion. Id. at 129. This merger, if approved, would leave the western region of the United States, from Chicago to New Orleans, under the control of two railroads, the UP/SP and the BNSF.

Applicants argue that the merger is in the public interest by virtue that the combination of the UP and SP rail networks will result in shorter routes over certain long-haul movements, increase single-line service, produce efficiencies through the consolidation of the two railroads by reduction in duplicative functions, and by other means. On the other hand, Applicants recognize that while certain parts of the transaction may be deemed to entail an end-to-end combination, there are substantial system segments which constitute a horizontal combination. Of most significance to SPI, Applicants operate parallel route systems throughout the Texas/Louisiana petrochemical belt, which is the heartland of plastics resins production, connecting the industry's production facilities with

the major markets of the Northeast, Midwest and Southeast through the Chicago, St. Louis, Memphis and New Orleans gateways.

Applicants recognize that the proposed merger of the UP and SP bears strong anti-competitive implications for the plastics and chemicals industries. Indeed, UP President Richard Davidson freely acknowledged during the UP's 1994 pursuit of the Santa Fe that a merger of the UP and SP "would corner the freight market in Gulf Coast chemicals, raising competition questions that would be challenged at the ICC." Davidson Tr. at 25-27, 74-76 and Exhibit 1. This is reflected throughout the instant application, and substantial segments of the testimony of Applicants' witnesses is dedicated to argument that the merger would not, in fact, reduce competition to Gulf Coast plastics and chemicals producers.

As set forth herein, SPI vigorously disagrees with Applicants as to the likely impact of the proposed merger on Gulf Coast producers, particularly insofar as plastics resins producers are concerned. Whether the Board credits Applicants' testimony or the evidence submitted by SPI and numerous other concerned parties, including vitally interested government agencies, other shippers and shipper representatives, and other rail carriers, will be determinative to the Board's decision on the application.

In evaluating Applicants' testimony, it is important for the Board to consider the character of that testimony and the thoroughness of the analysis of Applicants' witnesses. As is

evident from the face of the application, Applicants' witnesses rely on broad generalizations, anecdotal illustrations, and extrapolation from episodical situations to industry sectors at large. Moreover, Applicants' consultant witnesses, ostensibly engaged to bring independence and objectivity to the Applicants' case, proved themselves to lack knowledge in the subject matter of their testimony, and to have received all of their information from Applicants' employees and counsel. Such lack of rigor, thoroughness and critical analysis thoroughly impeaches their credibility, especially witnesses Spero and Willig.

Specifically, witness Spero conceded that he has no independent knowledge of the subject matter of his testimony; rather, he bases his testimony on what he has been told by UP/SP personnel or otherwise has read in third-party publications. Spero Tr. at 26, 31, 35-36, 39, 44-45, 49-50. While Spero is willing to opine on water competition in the broadest terms (UP/SP-23 at 703, 714-15), on deposition Spero admits he has no such knowledge. Spero Tr. at 95-96. Indeed, UP's marketing representatives with whom he spoke advised him that plastics resins do not move by water, Id. at 105-106; but he conveniently neglected to so qualify his testimony. Similarly, he was willing to extrapolate from two narrow movements cited by Applicants' marketing personnel to conclude that chemical shippers have ample source and carrier alternatives with no further inquiry. Spero Tr. at 114-116. In a third example, Spero opined on plastics resins customers at "Little Rock and other Arkansas locations"

who could post-merger obtain single-line service in lieu of joint line service. UP/SP-23 at 705. On deposition, Spero admitted he had no knowledge of any such customers, nor did he know who controlled the routing, nor could he quantify the alleged benefits of single-line service to plastics resins movements. Spero Tr. at 97-103. As to his testimony regarding source competition, Spero concedes his traffic analysis may be erroneous by virtue of improperly considering reconsignments, proportional rates, etc. as competitive origins. Spero Tr. at 132-135. These illustrations of witness Spero's willingness to assume, generalize and extrapolate to earn his consulting fee are only a few of his many concessions on deposition, and they thoroughly impeach his written testimony.

Professor Willig on deposition was candid as to his methodology and role. He readily admitted he has no knowledge of the plastics industry and made no independent study. His information comes from conversations with UP "business people and also to some extent from Mr. Peterson's testimony." He also received information from SP's counsel, who spoke with, and shielded Willig from, SP marketing personnel, whose identities are unknown to Willig. Willig Tr. at 28-35, 241-244. While he was willing to generalize in his testimony concerning railroad competitive factors, UP/SP-23 at 619, again his sources were UP business personnel and SP counsel; and he neither believes his representation to be universally true nor has knowledge of its relevance to plastics. Willig Tr. at 268-269. Willig's

uncritical acceptance of the representations of Applicants' employees and counsel, and his lack of independent inquiry, is in sharp contrast with the intellectual discipline he followed as a Deputy Assistant Attorney General in the Antitrust Division of the Department of Justice. Willig Tr. at 235-238.

In contrast to the one-sided "inquiry" of Applicants' consultants, SPI's consulting witnesses have conducted a thorough and intellectually disciplined review of the record. Witnesses Ruple, Crowley and Shepherd each engaged in thorough analysis of Applicants' witnesses' contentions, utilizing, as appropriate, Applicants' assumptions (Crowley), independently verifiable data (Ruple), and recognized and mainstream economic analytical tools and theory (Shepherd). The testimony of witnesses Ruple and Shepherd warrant particular attention. Witness Ruple offers his testimony based on his 17 years of experience in the railroad industry, all with the SP or members of its present corporate family. For two years, 1993-1995, he held senior marketing responsibility for plastics. He brings a dimension to this case which is entirely lacking in Applicants' submitted witnesses: a thorough understanding of, and first-hand experience in, the very important Gulf Coast plastics and chemicals market. Professor Shepherd, in addition to his distinguished credentials, testified for the UP in the SF/SP merger proceeding. The thorough analysis, knowledge and credibility of SPI's witnesses are a marked contrast to Applicants' consulting witnesses.

B. Governing Legal Standard.

The Board's single and essential standard for approval is that the merger of two class I railroads be "consistent with the public interest." 49 U.S.C. § 11344(c). Missouri-Kansas-Texas R. Co. v. United States, 632 F.2d 392, 395 (5th Cir. 1980), cert. denied, 451 U.S. 1017 (1981); see also Penn Central Merger Cases, 389 U.S. 486, 498-499 (1968).[6]

In determining what is consistent with the public interest, 49 U.S.C. § 11344(b)(1) requires consideration of at least the following five factors: (1) the effect of the proposed transaction on the adequacy of transportation to the public; (2) the effect on the public interest of including, or failing to include, other rail carriers in the area involved in the proposed transaction; (3) the total fixed charges that result from the proposed transaction; (4) the interest of carrier employees affected by the proposed transaction; and (5) whether the proposed transaction would have an adverse effect on competition among rail carriers in the affected region.[7] Demonstration by Applicants that they have met, at a minimum, all five factors is necessary for the Board to approve the merger; to disapprove a merger application, the Board need only find that one of the

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[6] As set forth at n.1, supra, the statutory standard for this proceeding is that which was in force prior to January 1, 1996.

[7] The fifth factor, Section 11344(b)(1)(E), dealing with competitive effects on other railroads, was added by section 228(a)(2) of the Staggers Rail Act of 1980, Pub. L. No. 96-448 (Staggers Act).

"public interest" factors has not been demonstrated.[8] For example, a proposed merger will not be approved when it negatively effects the adequacy of transportation to the public (1st factor) and competition (5th factor). See Santa Fe Southern Pacific Corp. -- Control -- SPT Co., 2 I.C.C.2d 709, 827 (1986), 3 I.C.C.2d 926, 928 (1987) (SF/SP). The adverse effect or competition warranting imposition of public interest conditions need entail a significant reduction in competition in "an affected market," 2 I.C.C.2d. at 808, not necessarily throughout the entire merger territory.

The Railroad Consolidation Procedures, 49 C.F.R. §§ 1180.0-1180.9, explain that the Board incorporates the numerous elements of the public interest in evaluating specific merger proposals by performing a balancing test weighing "the potential benefits to the Applicants and the public against the potential harm to the public." Id. at § 1180.1(c). Particularly important, however, is the fifth factor, the effect of a merger on competition. As the Commission explained in its general policy statement on mergers, "Our analysis of the competitive impacts of a consolidation is especially critical in light of the Congressionally mandated commitment to give railroads greater

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[8] The burden of proof is on Applicants. 5 U.S.C. § 556(d). Pursuant to 49 U.S.C. § 11344(c), the Board to approve a merger of two Class I railroads must make affirmative findings of consistency with the public interest. This standard contrasts with 49 U.S.C. § 11344(d), applying to mergers of other than at least two Class I railroads, where the Board shall approve a merger application unless it finds a lessening of competition.

freedom to price without regulatory interference." 49 C.F.R. § 1180.01(a).[9]

Consequently, the policies embodied in the antitrust laws also provide guidance on public interest considerations in control proceedings.[10] See 49 C.F.R. § 1180.1(c)(2). As the Supreme Court has observed, the antitrust laws give "understandable content to the broad statutory concept of 'the public interest,'" FMC v. Aktiebolaget Svenska Amerika Linien, 390 U.S. 238, 244 (1968). In McLean Trucking Co. v. United States, 321 U.S. 67, 87-88 (1944), the Supreme Court noted the proper weight to be accorded to antitrust policy in carrier control proceedings:

> In short, the Commission must estimate the scope and appraise the effects of the curtailment of competition which will result from the proposed consolidation and consider them along with the advantages of improved service, safer operations, lower costs, etc., to determine whether the

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[9] The Board also is guided by the rail transportation policy, 49 U.S.C. 10101a, added by the Staggers Act. See Norfolk Southern Corp.--Control--Norfolk & W. Ry Co., 366 I.C.C. 171, 190 (1982) (NS Control). The 15 elements of that policy set forth in section 10101a, taken as a whole, emphasize reliance on competitive forces to modernize railroad actions and to promote efficiency. H.R. Rep. No. 96-1430, 96th Cong., 2d Sess. 88 (1980), reprinted in 1980 U.S.C.C.A.N. 4110, 4119. Element 5 provides that it is the policy of the United States to "foster sound economic conditions in transportation and to ensure effective competition and coordination between rail carriers," and element 13 prohibits "predatory pricing and practices, to avoid undue concentrations of market power." 49 U.S.C. §§ 10101a (5) & (13).

[10] Under 49 U.S.C. 11341(a), transactions approved by the Board are exempt from the antitrust laws, and all other laws, as necessary to effect the transactions. Northern Lines Merger Cases, 396 U.S. 491, 504 (1970).

consolidation will assist in effectuating the overall transportation policy.

Accord Bowman Transportation v. Arkansas-Best Freight, 419 U.S. 281, 298 (1974); Port of Portland v. United States, 408 U.S. 811, 841 (1972); Northern Lines Merger Cases, 396 U.S. 491, 514 (1970); Denver & R. G. W. R. Co. v. United States, 387 U.S. 485 (1967).

Although the Board does not sit as an antitrust court in determining compliance with the Clayton, Sherman, or related antitrust acts,[11] the Board's statutory obligation under the public interest standard requires that any anti-competitive effects of a control transaction be balanced against its anticipated benefits.

Adequacy of Transportation to the Public. The Board first must examine the proposed merger's effect on the adequacy of transportation to the public. This necessarily involves an examination of the public benefits that may result from the merger. Public benefits may be defined as efficiency gains that may or may not be shared with shippers and which include cost reductions and service improvements. However, benefits to the combining carriers that are the result of increased market power, such as the ability to increase rates at the same or reduced service levels, are exclusively private benefits that detract from any public benefits associated with a control transaction.

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[11] Section 7 of the Clayton Act, 15 U.S.C. § 18 (1981) prohibits mergers if their effect "may be to substantially lessen competition, or to tend to create a monopoly."

See CSX Corp. -- Control -- Chessie and Seaboard C.L.I., 363 I.C.C. 518, 551-552 (1980) (CSX Control); Union Pacific -- Control -- Missouri Pacific; Weste[illegible] Pacific, 366 I.C.C. 462, 585-589 (1982) (UP Control); Union Pacific Corp. et al.--Cont.--MO-KS-TX Co. et al., 4 I.C.C.2d 409, 428-429 (1988) (UP/MKT); and Rio Grande Industries, et al.--Control--SPT Co., et al., 4 I.C.C.2d 834, 875 (1988) (DRGW/SP).

Effect on Competition Among Rail Carriers. The effect of a merger on competition among rail carriers commonly is cited as the most critical factor. See SF/SP, 2 I.C.C.2d at 726. The Board may disapprove the merger on this factor alone if the harm to the public from the loss of competition outweighs the expected benefits to the public from the merger. Id.[12] In evaluating "whether the proposed transaction would have an adverse effect on competition among rail carriers in the affected region," 49 U.S.C. 11344(b)(1)(E), the Board does not limit its consideration of competition to rail carriers alone, but examines the total transportation market.[13]

As the first step in that examination, the Board examines the effects of the merger on the existing railroad

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[12] SPI accordingly addresses only the issues of the effect of a UP/SP combination on competition and, relatedly, on the adequacy of transportation to the public. Other parties will address the interests of carrier employees and the effects on other rail carriers, as those factors relate to their specific interests.

[13] See 49 C.F.R. § 1180.1(c)(2). Two results from mergers that would "ill serve the public [are] reduction of competition and harm to essential services."

network, with particular attention to whether the markets served by the merging parties will suffer competitive harm. Competitive harm results from a merger to the extent the applicants gain sufficient market power to raise rates or reduce service (or both), and to do so profitably relative to pre-merger levels. See Burlington Northern Inc. -- Control and Merger -- Santa Fe Pacific Corp. and The Atchison, Topeka and Santa Fe Railway Company, I.C.C. Finance Docket No. 32549, Dec. No. 38, p. 54 (Aug. 23, 1995) (BN/SF). The determination of competitive harm is more evident when the possible routing options on a rail-bound commodity drop from two originating or terminating railroads to one. BN/SF at 55. Similarly, loss of geographic competition is an important consideration where geographic competition has served to constrain rates. BN/SF at 113-114 (McDonald, commenting). In rounding out its analysis of competitive harm, the Board also examines whether the opposing railroads will be financially and competitively able to withstand the projected loss of traffic to the merged system. Id.

As a practical matter, to assess competitive harm, the Board defines the markets the merger will affect. This is done by examining the "area of effective competition." Standard Oil Co. v. U.S., 337 U.S. 293, 299-300 n. 5 (1949). A relevant market has two dimensions, product and geographic. Brown Shoe Co. v. United States, 370 U.S. 294, 324 (1962). Relevant markets must also reflect commercial realities. United States v. Grinnell Corp., 384 U.S. 563, 572 (1966). Although not binding

on the Board, the United States Department of Justice/Federal Trade Commission Horizontal Merger Guidelines, 57 Fed. Reg. 41552 (Sep. 10, 1992) ("Merger Guidelines"), are instructive in tnat they define a market as:

> a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a small but significant and nontransitory increase in price, assuming the terms of sale of all other products are held constant.

Merger Guidelines, § 1.0. In most contexts, the Department of Justice "will use a price increase of five percent (5%) lasting for the foreseeable future." Id. at § 1.11. The "product" in a railroad merger proceeding is the "transportation of freight." See SF/SP, 2 I.C.C.2d at 738.[14/]

In evaluating horizontal mergers such as that before the Board in the instant proceeding, market concentration is a useful indicator of the likely potential competitive effect of a merger. Merger Guidelines, § 1.51. Market concentration is routinely ascertained by the Department of Justice through the

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[14/] Motor and water carrier transportation is not included in the product market in order to determine the competitive effects of the transaction since they are unlikely to be direct substitutes for rail transportation in the markets affected by the proposed transaction. It is not that motor and water carriers do not carry freight in the geographic markets served by the Applicants, but rather that their rates and/or service cannot be found to reliably constrain the behavior of Applicants. See SF/SP, 2 I.C.C.2d at 738; see also UP Control, 366 I.C.C. at 504.

use of the Herfindahl-Hirschman Index (HHI).[15] Any market with an HHI index at or above 1800 is "highly concentrated," and, in such a market, a proposed merger that will cause an HHI increase of at least 100 is presumed anti-competitive under the antitrust laws. See Merger Guidelines, § 1.51.

C. Market Definition.

In evaluating the effect of a proposed merger on competition, the Board "must first define the markets the consolidation will affect by examining the 'area of effective competition.' [cite omitted] A relevant market has two dimensions, product and geographic. [cite omitted] Relevant markets must also reflect commercial realities." SF/SP at 737.

1. Product Market.

a. Commodities Affected. The commodities of relevance to SPI are, as hereinbefore noted, polyethylene (PE) and polypropylene (PP) (collectively, "plastics resins"). Within the chemicals group (STCC 28),

see Exhibit 7 at 000003; the two highest volume commodities the UP handles in the Gulf Coast are polyethylene and polypropylene. Peterson V.S. at 180. Indeed, of the 24 Gulf Coast chemicals analyzed by witness Peterson as

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[15] The HHI is based on the sum of squares of the market share of each participant in a market. A low HHI for a market occurs when a large number of firms have equal market shares; a high HHI occurs when there are only a few firms in a market; and the highest HHI (10000) occurs when there is only a single firm in the market. See Merger Guidelines at § 1.51.

meeting the "50/10 screen," a test of traffic wherein the merger partners' market shares raise substantial issues of competitive impact, PE and PP constituted of the total product tonnage. Peterson V.S. at 233-235.[16/]

Polyethylene and polypropylene, each considered as a whole, is deemed to be a commodity product in and of itself. Thus, polyethylene producers compete with polyethylene producers and polypropylene producers compete with polypropylene producers. While there may be multiple grades and formulations of each product, for the Board's purposes such a distinction is irrelevant in that plastics resins companies individually produce multiple grades and formulations by virtue of batch production runs and through varying the chemical properties. See Lippincott, SPI V.S.-1 at 5-6. Indeed, in end use applications, PE and PP compete with one another. Id. at 5. These facts are not in contention; Applicants concur in the assessment that PE and PP producers compete with each other within the product line, and even between product lines. See Peterson Tr. at 177, 180-181.

Considering the size and nature of the polyethylene and polypropylene plastics industry, and its importance to Applicants due to both the ranking of the materials

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[16/] Witness Barber attempts to analyze the market for "plastic flakes," STCC 28211 63. Barber V.S. at 543. His analysis is misplaced since he obviously does not understand the nature of this commodity description. Barber Tr. at 228-229. As recognized by witness Peterson, "plastic flakes" is not a specific commodity, but rather is a generic reference to plastic resins. Peterson Tr. at 543-544.

within the hierarchy, by tonnage, of Applicants' chemicals traffic and the industry's 6.3% annual growth rate, Lippincott, SPI V.S.-1 at 4, the impact of the proposed merger of the UP and SP on the plastics resins industry warrants specific consideration by the Board.[17]

b. Transportation Services. "The product provided by railroads is the transportation of freight." SF/SP at 738. From the perspective of plastics resins, rail is the predominant mode of movement. This is detailed in the verified statements of witnesses Bowles, SPI V.S.-2 at 3-8, and Ruple, SPI V.S.-3 at 12-15. Witnesses Bowles, Chairman of SPI's Committee on Transportation and Distribution, and Ruple both discuss the industry's reliance on rail due to integration of the rail car as a "rolling silo" to accommodate the batch production runs for the various grades of individual resins. Other factors include the volume of resin production - 36 billion pounds, Lippincott, SPI V.S.-1 at 4, average length of haul at approximately 1,000 miles, Crowley, SPI V.S.-4 at 6, integration of the hopper car with the customer's production feeding lines, and the need to maintain product integrity. Industry members own or lease about 40,000 covered hopper cars to manage their logistics requirements. Bowles, SPI V.S.-2 at 3.

In some instances, the rail market share is absolute, 100%. An SP account profile of

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[17] Applicants' reliance on the support of certain industry members, e.g., Peterson V.S., UP/SP-23 at 316, is unpersuasive, as discussed at n.3, supra.

. See Exhibit 8 at 001103.[18/]

While Applicants' witnesses Spero and Barber attempt, through gross generalizations, to infer that there is modal competition by discussing inter- and intra-modal competition at the two-digit STCC 28 level, the Commission has characterized analysis at the two-digit STCC level as "nothing more than contrived methodology." SP/SF at 750. Notwithstanding his willingness to generalize as to competitive options, Peterson also admitted that he is not knowledgeable with regard to water transportation for outbound products. Peterson Tr. at 187-188. Witness Barber also acknowledged that the barge movement of plastics is trivial. Barber Tr. at 248-249. On deposition, Barber admitted that PE moves by rail in long haul, with truck movements generally confined to distances of up to a couple of hundred miles. Barber Tr. at 233-234. As previously noted, UP marketing personnel advised witness Spero that plastics do not move by water. Supra, at 3. Accord, Bowles, SPI V.S.-2 at 7-8; Ruple, SPI V.S.-3 at 13.

[18/] Transload, which is a technique to obtain competitive rail service where intramodal competition is not present, . See Exhibit 9.

Inevitably, some PE and PP moves by truck, but that is a small factor, in the order of magnitude of 15% for PP and 3% for PE, Crowley, SPI V.S.-4 at 25.[19] In addition to short haul movements, a primary reason for truck movement of plastics resins is due to the failure of the serving rail carrier to effect timely delivery. Bowles, SPI V.S.-2 at 7; Ruple, SPI V.S.-3 at 13-14. The cost advantage of rail versus truck is detailed by Bowles, SPI V.S.-2 at 5-7. According to witness Bowles' calculations, the difference between rail and hopper truck or rail and truck packaged freight amounts to $0.0263/lb. and $0.0170/lb., respectively, for a typical 180,000 pound load, i.e., an increase in cost of $4,734 or $3,060 for hopper or packaged truck delivery of a typical order of plastics resins.

The Commission in the SF/SP case recognized that a rail market share of 73% was sufficiently high to warrant consideration of the merger effects with regard to the described market. SF/SP at 745. Considering the plastics industry's well-recognized dependence upon rail, and the overwhelming market share of rail, plastics resins transportation constitutes an important transportation product line in evaluation of the proposed UP/SP merger.

2. Geographic Market The Texas/Louisiana Gulf Coast region is known generically as the "petrochemical belt." This is due to the large number of petrochemical complexes running from

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[19] SPI witness Bowles references an order of magnitude of 20% for truck movement, but that is qualified as including materials other than PE and PP. Bowles, SPI V.S.-2 at 6.

Baton Rouge/New Orleans to the Galveston area. By virtue that both the UP and SP have extensive operations in this area, the proposed merger is of intense interest to the plastics and chemicals industries.

Polyethylene and polypropylene are particularly impacted by the proposed merger since the Texas/Louisiana Gulf Coast area accounts for approximately 95% of polyethylene and 86% of polypropylene production capacity. See Ruple, SPI V.S.-3 at 6-7.[20/] With a total of more than 92% of the combined PE and PP production capacity located in the Texas/Louisiana Gulf Coast, Id., the market impact on the Gulf Coast as the origin region for PE and PP plastics resins constitutes a relevant and important market for merger analysis purposes. SP/SF at 763.

Additionally, the Houston-Memphis/St. Louis/Chicago and Houston-New Orleans corridors are particularly significant to the plastics industry. As described by witness Lippincott, based upon analysis of plastics processing firms, i.e., those who receive the resins shipments, 39.8% of the market lies in the midwest and northeast--areas served from the Gulf Coast via St. Louis, Memphis and Chicago; and 18.3% is in the southeast, an area served via New Orleans and Memphis. Of the balance, 15.3%

[20/] Lippincott cites slightly, but not materially, different figures than Ruple (SPI V.S.-1 at 4). In that Ruple bases his analysis on 1994 capacity information while Lippincott uses a 1993 source, the Ruple figures are cited above. The differences may reflect plant capacity changes between 1993 and 1994. As stated by witness Lippincott, the plastics industry has grown at an annual rate of 6.3% over the period 1989-1994. Lippincott V.S. at 4.

is in Texas and Louisiana, leaving only 26.6% moving to California and the other western states. Lippincott, SPI V.S.-1 at 6 and Table VII. Mexican border points are of growing importance to the industry, as NAFTA promises increasing trade opportunities with Mexico.

The anticipated benefits of the merger, as described by Applicants, particularly concern improved service to and within the west coast through shorter routes, single-line service, business trades to rationalize the Applicants' and the BNSF's routes, etc. Thus, the overwhelming interest of the plastics industry lies in transportation corridors and service which will escape the major, claimed benefits of the proposed merger.

D. UP and SP Dominate the Plastics Resins Market.

1. UP and SP Are the Primary Carriers of Plastics Resins.

Two sources are available to analyze the transportation market. One entails a market structure analysis. This is performed by analysis of production capacities, plant locations and serving rail carriers. Such an analysis is set forth in the verified statements of witness Ruple, SPI V.S.-3 at 5-8. The alternative method of analysis is to employ traffic data through waybill tape (the ICC's 100% costed waybill sample, 1994) and Applicants' traffic tape analysis. Notwithstanding that the waybill data contains errors, see Crowley, SPI V.S.-4 at 7, n. 3, see also Spero Tr. at 132-135, this analysis also is instructive. Witness Crowley presents this data, SPI V.S.-4 at 6-20.

As indicated above, plastics resins production is concentrated in the Texas/Louisiana Gulf Coast. Considering the three sub-categories of polyethylene and also polypropylene, the concentration of resins production capacity in the Gulf Coast ranges from 86% to 97.4%. Ruple, SPI V.S.-3 at 7. It is noteworthy with respect to high density polyethylene, wherein production in the Gulf Coast represents 97.4% of domestic production overall, the remaining 2.6% is located in Clinton, Iowa, which is locally served by the CNW, now a part of the Union Pacific. Id. Overall, in excess of 92% of all domestic polyethylene and polypropylene production occurs in the Texas Gulf Coast. Id.

The UP and SP have access to nearly 90% of the Gulf Coast plastics resins production capability. Id. at 8. Pre-merger, approximately 64% of the plastics resins market for PE and PP is served exclusively by the UP and/or SP, and no other carrier. Id. at 8. The BNSF serves 3% on an exclusive basis, and has access to only 23% of Gulf Coast production. Id. at Exhibit 4. The 7% not available to UP, SP or BNSF is produced on the east bank of the Mississippi River and served by the IC according to the Union Pacific. Thus, Applicants jointly are well positioned to control plastics resins traffic in the Gulf Coast.

Analysis of traffic data confirms that Applicants in fact dominate the market for plastics resins transportation. This is reflected in the testimony of witness Crowley, who shows

that the UP and SP's combined shares of the Gulf Coast PE and PP markets are 71% and 74%, respectively. SPI V.S.-4 at 16-19. The UP's own data,

. See Exhibit 10 at 100106.[21] The combined UP/SP market share of plastics, , is noteworthy in that it is

[22]

The UP and SP's market share concentration extends, not surprisingly, to the principal transportation corridors for plastics traffic: Houston-Memphis/St. Louis and Houston-New Orleans. According to Applicants' witness Peterson, the UP/SP actual share of traffic in these two corridors in 1994 respectively. Peterson, UP/SP-23 at 160.

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[21]

[22]

Thus, the UP and SP currently dominate plastics resins traffic, the most important of the chemical commodities handled by the Applicant carriers.

2. Applicants Would Continue to Dominate Plastics Resins Transportation Post-Merger.

Applicants argue that post-merger, that they no longer will dominate the market for plastics by virtue of the access in the 2-to-1 markets afforded to the BNSF. As identified by Ruple, post-merger the UP and SP would continue to have access to approximately 90% of the Gulf Coast plastics market. The agreement with the BNSF only gives the BNSF access to specified plants, increasing its market access from 23% to approximately 47% of the Gulf Coast producers; it would not reduce the UP/SP access. Moreover, a combined UP/SP, by virtue of their pre-merger exclusive service arrangements, would control almost 40% of the plastics resins production capacity without facing potential BNSF competition. Such a market share in and of itself is evidence of a dominant firm. See Shepherd, SPI V.S.-7 at 16, n. 19.

Arguing that the merged railroads would not dominate the plastics market, Applicants utilized a theoretical approach, essentially assuming that the BNSF will capture all newly available traffic. Using the Peterson assumptions that the BNSF would capture 90% of traffic destined to BNSF closed destinations and 50% of traffic destined to competitively-served destinations and gateways, Crowley shows that the UP/SP would suffer a reduction in market share of PE from 71% of Gulf Coast

traffic to 63%, and a reduction of PP from 74% to 62%. Looking at the PE and PP industries throughout the United States, post-merger the UP/SP would control 60% of polyethylene and 47% of polypropylene -- based upon the Applicants' own assumptions of BNSF potential traffic capture. See Crowley, SPI V.S.-4 at 11-14.

Demonstrative of the market power of a merged UP/SP is HHI analysis. See supra at 12-13. While the Commission has not relied upon the HHI in prior merger cases, it is instructive with regard to the degree of market power. Crowley calculates the HHI levels for polyethylene and polypropylene pre-merger at 2,440 and 3,275, respectively. Under the Merger Guidelines, these figures evidence highly concentrated markets. Post-merger, the HHI index would increase for polyethylene to 4,075, and for polypropylene to 5,778. Crowley, SPI V.S.-4 at 21-28. The increased HHI market shares of 1,635 and 2,503 clearly sound the alarms whether the HHI is looked upon as a yardstick, or only as a tool for merger analysis.

There is another critical dimension to the post-merger market power analysis. Theoretical access does not denote effective competition. To be a viable competitor, the BNSF must have the physical capacity in that market segment, not face material barriers to competing, and have the corporate commitment to compete.[23/] Capacity and mind-set limitations of the BNSF as

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[23/]

(continued...)

limiting its competitive posture in the plastics market are discussed in Section I.E., infra. Before reaching the capabilities of the BNSF, it is important to recognize the market barriers faced by the BNSF in competing for plastics traffic, and particularly in competing for the traffic newly opened to the BNSF by virtue of the UP/SP settlement agreement.

Tieing arrangements, long-term contracts and renewal options are typical market maintenance/market foreclosure tools employed by dominant firms in the marketplace. The BNSF will face all of these barriers in attempting to compete with a merged UP/SP.

The UP,

See Exhibit 10 at p. 100108.

These are not idle musings. As previously indicated,

See Exhibit 2.

see Exhibit 11; and

see Exhibit 12.

[23/] (...continued)

see Exhibit 13.

See Exhibit 4 at 000003. The industry norm for contract term is three to five years. Ruple, SPI V.S.-3 at 26-27. Moreover,

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See Exhibit 4 at 000006. Since the vast majority of traffic moves under contract, and that volume is growing, Peterson Tr. at 421-423, possibly amounting to 80-90% of plastics traffic, Willig Tr. at 249, the reality is that the BNSF will find the cupboard bare if the merger is approved and the BNSF seeks to explore its newfound traffic "opportunities."

Furthermore, there is the element of tieing arrangements, also described as carrier leverage. Applicants' witness Peterson asserts that producers have leverage on railroads due to their ability to offer multi-plant or multi-commodity traffic. See e.g. Peterson, UP/SP-23 at 234-235, 316-319. For Applicants to argue shipper leverage is ironic; the leverage, in fact, runs in the other direction.

See Exhibit 14 at 000906.

[24]

Applicants well understand the varying uses of the leveraging power.

See Exhibit 15.

SPI's Witness Ruple provides particular comment on the ability to leverage a closed facility to obtain traffic from a competitively-served point.[25] In his verified statement, based upon 17 years of experience within the railroad industry, Ruple states that the power to package exclusively-served and competitively-served points in a customer contract "is very

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[24] The leveraging power is illustrated at SPI V.S.-3 at Exhibit 1, which reflects that the "leveraged" producers each have other plants exclusively served by the SP.

[25]

effective in carrier negotiations with its shipper customers." SPI V.S.-3 at 9.

On deposition, Applicants' witnesses Spero and Willig both conceded that railroads can exercise leverage over shippers by virtue of their control of exclusively-served production facilities. See Spero Tr. at 125-131 and 136-139; Willig Tr. at 252-253.[26/] Under cross-examination, witness Spero reviewed data from his underlying workpapers which demonstrated the ability of a carrier to lock up competitively-served traffic through its control of an exclusively-served point. Spero Tr. at 120.

Since the UP/SP would serve numerous resins plants exclusively, compared to the one facility served exclusively by the BNSF, see Ruple, SPI V.S.-3 at Exhibit 1, and since many of the producers which have competitively-served facilities also have exclusively-served facilities, e.g., Amoco, Fina, Montell, Chevron and DuPont, a combined UP/SP would enjoy enhanced power over and above that reflected by its share of captive traffic by virtue that the combined market shares and the leveraging opportunities effectively would serve to foreclose BNSF from competitive opportunities to serve plants nominally open to the BNSF by the trackage rights agreement. This market barrier, combined with

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[26/] Professor Willig coyly attempted to play down the leverage issue, by asserting that he could not understand why a railroad would wish to act in such a fashion. Willig Tr. at 253-256.

assure domination of the plastics resins market if UP and SP are allowed to merge. Indeed, it is not UP/SP which would be subject to competitive pressures; rather, Applicants expect to achieve diversion of traffic from the BNSF's already nominal share. See Peterson, UP/SP-23 at 283-84.

E. BNSF Does Not Offer an Effective Competitive Alternative.

Recognizing that a merger of the UP and SP would substantially reduce competition in numerous markets and corridors, Applicants entered into an agreement with the BNSF in an effort to assure that any "2-to-1" points retain second carrier service. While in prior mergers trackage rights providing for a second carrier to operate at such 2-to-1 points have been utilized to ameliorate the effects of loss of competition at those points or in those particular corridors, there is a material difference between prior mergers and the instant proceeding.

As a threshold matter, in prior proceedings, e.g., BN/SF, third-party carriers concerned about the effects of the merger and *interested* in serving certain points or corridors intervened to seek remedial provisions where they could and would provide competitive service. In this fashion, trackage rights were sought and secured by those carriers in the best position to exercise them. By contrast, in this merger it was not BNSF that sought the opportunity to provide competitive service over particular corridors or at specific points that fit in with its operations and its strategic plan. Rather, the Chairman of the

UP called the Chairman of the BN in order to initiate discussions. Ice Tr. at 59-60; 127; 357. At the time of this UP initiative, the BN had not formulated its position or strategy with regard to the merger. Id. at 62. In a transaction of unprecedented scope, the trackage rights exceed 3800 route miles. As indicated by BNSF's Vice President-Transportation, the UP/SP trackage rights offer consisted of a "package deal." Bredenberg Tr. at 68; see also Id. at 54-56, 70.[27]

Applicants have described the BN as being the only carrier in a position to provide operations to ameliorate loss of competition throughout the entire UP/SP operating area. Undoubtedly, if UP/SP were insistent on a single carrier to provide all 2-to-1 replacement service throughout the UP/SP operating area, BNSF is the only carrier with the operational reach to satisfy that criteria. Nonetheless, there is an inherent incredulity to the UP claim that they selected "the biggest, meanest, toughest competitor we've got in the west and that they were going to put in a level of service that was going to give us a run for our money." Rebensdorf Tr. at 150.[28] It

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[27] Administrative Law Judge Nelson permitted only very limited discovery into the substance of the UP/SP-BNSF trackage rights negotiations, notwithstanding that the agreement and the role of BNSF as a substitute competitor are essential elements of the UP/SP merger application.

[28] While choosing "the biggest, meanest, toughest competitor...to give us a run for our money," the UP did not want that competitor to be too efficient and too competitive. On the Houston-Brownsville route, Applicants refused BNSF's request to have the option to use a contractor to provide service. BNSF's negotiator testified that UP's view was that such an option would put the UP/SP at a competitive disadvantage. Ice Tr. at 582-84.

is entirely inconsistent with rational market behavior for a firm to enhance its largest competitor's market position. It is further inconsistent with

See Exhibit 7 at 000004.

UP/SP's choice of the BNSF as the single replacement competitor is, however, understandable on the recognition that, in point of fact, carriers have particular strengths in individual sub-markets, both geographically and from a product standpoint. Shepherd, SPI V.S.-7 at 10-12. This is evident from the

See Exhibit 7 at 000008. As previously noted,

Moreover, the agreement between the UP/SP and BNSF covers more than simply amelioration of loss of competition resulting from the merger; additionally, the comprehensive agreement with the BNSF gave the UP/SP the opportunity to effect certain business trades, e.g., the I-5 corridor BNSF line purchase in California and the UP/SP trackage rights over BNSF in California and Oregon, intended to improve operational efficiency.

As a package arrangement, there is no assurance that the mere opportunity for the BNSF to serve certain points and routes will, in fact, be implemented to the level of establishing

true and viable competition to replace the competition which would disappear upon merger of the SP into the UP. Indeed, there is evidence that the BNSF had little interest in serving the traffic involved from the Houston hub, e.g., the Houston-Brownsville corridor discussed above, see n. 28, supra, for reasons which will be discussed below.[29] As part and parcel of the overall arrangement, and with the BNSF having no investment in the trackage rights[30] and no cost except upon use,[31] the UP/SP-BNSF agreement provides the BNSF with a blank page to use when, if, and to the extent desired. See Shepherd, SPI V.S.-7 at 39-40 ("In the context of trackage rights, BNSF will be a potential entrant into trackage rights markets, an outsider which may (or may not) seek to enter many or all of the Texas-coast-related markets..."). The agreement provides the perfect foil for the UP and SP by virtue of bringing in the other dominant western carrier to provide the proverbial "fig leaf" to cover the glaring competitive harm consequential to the proposed merger.

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[29] See Bredenberg Tr. at Exhibit 1.

[30] Under the New York Dock doctrine, if the BNSF were required to hire crews to serve the trackage rights points, that becomes a fixed cost to the railroad.

[31] The agreement calls for the BNSF to purchase a certain stretch of track between Houston and New Orleans, but the purchase also entails three yards. These yards give the BNSF a presence in New Orleans for west coast through traffic connecting with the NS or CSX.

1. The BNSF Is a Weak Competitor in the Gulf Coast Plastics Market.

Contrary to Applicants' expressed opinion of the BNSF as a competitor, Gerald Grinstein, the recent Chairman of the BN and BNSF, has conceded that the BN had "severe service disability in the Houston market." Grinstein Tr. at 161. His candid assessment is fully consistent with the market niche appraisal discussed above. Thus, in serving the Gulf Coast plastics industry, the BNSF begins in the hole. This is reflected in the BNSF's market share of plastics resins traffic, as set forth by Ruple, SPI V.S.-3 at 1-5. Compounding the BNSF's prospect as an effective competitor are the market foreclosure barriers discussed above. The question thus is posed whether the trackage rights agreement, notwithstanding these limitations, can transform BNSF into an effective competitor to a merged UP/SP?

2. The BNSF Lacks Commitment to Implement Trackage Rights Agreement.

The BNSF, in its Comments filed with the Commission on December 29, 1995, purported to describe its operations under the trackage rights agreement. To do so, it submitted the testimony of Neal Owen, a consultant to the BNSF who has no capability to commit the BNSF to any level of operation. Ice Tr. at 271-72. Notably, the BNSF utilized a consultant to prepare its operating plan, notwithstanding that it had employees capable of doing so. Ice Tr. at 336. The reason was not explained. Id. at 336-37. Of course, company employees could have been viewed as speaking for the company, rather than

simply opining as to feasibility from an abstract standpoint; and company employees would be subject to cross-examination on their specific knowledge and could not hide behind the lack of direct responsibility as a means of impeding the development of the record based upon the actual facts as they exist.

The actions of the BNSF to pursue implementation of the trackage rights agreement should be viewed as a threshold measure of the BNSF's commitment to render vigorous and effective competition. This is especially important given the schedule for Board action on the merger application, and the prospect that if the application were to be approved, the merger could be consummated and the trackage rights could become effective within one year of the date of the agreement. And what has the BNSF done to develop plans to serve the important plastics market and assure customers and the Board that they will, indeed, maintain effective competition in the Gulf Coast plastics and petrochemicals market? The answer is simple: virtually nothing.

From execution of the agreement on September 25, 1995 to March 4, 1996 (the date of the close of deposition testimony of BNSF's Vice President Carl Ice), a period of almost 5 1/2 months, the BNSF has "not identified specific plastics producers or plants that will gain access under the BNSF Agreement." See Exhibit 16, BNSF Response to SPI Interrogatory No. 8. Nor has the BNSF identified the facilities and operations necessary to serve plastics producers. Id. at No. 9. Rather, BNSF has tendered to the Board and the shipping public Neal

Owen's statement, which is most general in substance and nature, and is sadly lacking both in necessary details and in comparison with the proposed UP/SP operating plan. Nine elements essential to implementation of service under the trackage rights simply have not been addressed in meaningful detail. See Crowley, SPI V.S.-4 at 45-51.

When asked to admit that it does not have any studies, analyses, reports or plans regarding the construction or acquisition of additional storage capacity for plastics resins shipments, i.e., plans regarding facilities essential to serve plastics producers (see Section E.3, infra), or any operating plans to serve plastics resins production points open to BNSF service by the UP/SP-BNSF agreement, the BNSF responded that other than the Neal Owen statement, it has no specific plans "but that it is currently in the process of developing such plans." See Exhibit 17, BNSF Responses and Objections to SPI's First Request for Admissions, Nos. 1-3. When pressed on deposition two weeks later with regard to its undertaking to develop such plans, BNSF's sole company witness, Carl Ice, Vice President-Mechanical, who served as BNSF's negotiator with the UP, stated that while he is "the mentor" of the implementing team, he knew of no such work in progress. Ice Tr. at 346-349. Nor is Neal Owen involved in, or aware of, any follow-up planning; and he has received no questions from BNSF personnel with regard "to further the plan" he developed. Owen Tr. at 209-210. BNSF's complete lack of any plans or programs to implement the trackage rights agreement with

the UP and SP in the plastics market, and its attempted obfuscation of its lack of action, can only be interpreted as a lack of interest

With regard to Mr. Owen's operational plan, he admitted that his described operating plan would need to be phased in over time, but he had no estimate of the time frame for full implementation. Owen Tr. at 52-53. Of course, he could not make any such judgments by virtue that he had no knowledge of what traffic may be available to the BNSF, nor had he made an assessment of how much traffic moves under UP or SP contract, nor of how much traffic is actually open to BNSF competition. Owen Tr. at 15-16. Mr. Ice confirmed that BNSF has undertaken no studies to determine whether the BNSF would have the critical mass of traffic necessary to provide efficient service under the agreement with the UP/SP, Ice Tr. at 276, nor did he analyze Neal Owen's proposed operating plan for feasibility and acceptability, Ice Tr. at 18-19. Not surprisingly, BNSF undertook no analysis of potential build-in opportunities, Ice Tr. at 76-77, which would be important if BNSF were interested in learning whether it may be foreclosed from traffic opportunities by virtue that it is limited under the September 25, 1995 agreement to operate overhead service except for such local service as is specifically identified in the agreement. See Agreement, UP/SP-22 at 318, ¶¶ 4(b), 5(b), 6(c).

At this juncture, operation by the BNSF under the trackage rights agreement is a mere possibility; BNSF is not

obligated to institute the services described by Owen, Owen Tr. at 29-31; and implementation by BNSF is contingent upon the level of business achieved. Ice Tr. at 17; 335-336. Rail carriers select customers and traffic to fit their capacities and operations, see Ruple, SPI V.S.-3 at 21-22; and BNSF offers absolutely no promise to any plastics producer that it will offer vigorous and effective competition to a merged UP/SP for plastics resins traffic. To the contrary, as readily admitted by Rollin Bredenberg, BNSF Vice President-Transportation, the time of BNSF's top management and the railroad's resources are fully occupied in implementing the merger of the Burlington Northern and Santa Fe. Bredenberg Tr. at 11-12.

3. BNSF Lacks Adequate Infrastructure to Provide Fully Competitive Service to the Plastics Industry.

There is no debate among the parties to this proceeding about the fact that hopper car storage capacity is a critical element in service to the plastics industry. This not only is described in the affidavits of A. O. Bowles, SPI V.S.-2 at 3-4, and Ruple, SPI V.S.-3 at 15-17, but also it is conceded by Applicants and by the BNSF. Professor Willig, for example, describes storage for plastics as a "major dimension of non-price competition between railroads," see Willig, UP/SP-23 at 619; Spero describes storage in transit as a "key element in serving plastics shippers," Spero Tr. at 70-71; 117.[32/] Peterson

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[32/] Spero concedes that the cycle time improvement benefits touted by Applicants for private car owners and leasors do not (continued...)

confirms that a substantial volume of plastics, estimated to be one-third, and for some shippers much more than one-third, move to storage-in-transit after production while awaiting ultimate delivery instructions. Peterson Tr. at 166. See also Peterson, UP/SP-23 at 65. BNSF's consultant Owen recited his understanding that a majority of PE and PP go into storage, Owen Tr. at 193, and that customers may be gained or lost due to storage availability. Id. at 201-202. Moreover, storage needs apply not only to loaded cars; but necessarily, empty returns also must be stored and held pending re-delivery to the plant to receive a new product load. Owen Tr. at 100.

According to the SP,

a prediction which has been

32/ (...continued)
materially benefit plastics traffic by virtue of the storage requirement. Spero Tr. at 54-57.

realized as reflected in the industry's 6.3% annual growth rate, see Lippincott, SPI V.S.-1 at 4.

obviously would adversely impact a carrier's competitiveness.

entails a different set of considerations for a carrier which currently has a strong customer base, described by the SP as a market share. Id. at 000891. But for a carrier which does not have a strong market share, and is facing a possibly significant capital investment in order even to compete for market opportunity, the option to refrain from marketing is very viable.[33/]

The BNSF's competitive posture with regard to storage capability is detailed by witness Ruple in SPI V.S.-3 at 17-19 and Exhibits 7-9. As described both by Ruple and in the , see Exhibit 14, dedicated storage track is the only efficient, competitive method of providing storage for plastics cars. This is so from both a cost standpoint and from an efficiency of service perspective. See Ruple, SPI V.S.-3 at 15-16.

[33/] Ruple discusses the process of carrier selection of traffic which fits its operations and capacity. SPI V.S.-3 at 21-22.

In terms of Gulf Coast capacity, the UP and SP currently enjoy 84% of the plastics hopper car storage capacity in the Gulf Coast. See Ruple, SPI V.S.-3 at Exhibits 7-8. To meet customer needs, SP committed to a new 3,000 car storage yard at Dayton, Texas, strategically located in close proximity to plastics resins production facilities. See Ruple, SPI V.S.-3 at 15 and at Ex. 8; see also Exhibits 14 and 18. Owen understands that the BNSF would like more storage capacity than currently available to it, Owen Tr. at 190-191; and he seeks to intimate that it will be able to access the SP's Dayton yard, Owen V.S. at 17, BN/SF-1. In fact, there is no provision under the UP/SP-BNSF agreement for the BNSF to access either Dayton, Texas, or any other storage yard currently operated by the UP or SP. Ice Tr. at 382-385; Rebensdorf Tr. at 159-161.[34/] Thus, to serve the plastics industry under the trackage rights agreement, the BNSF must commit to increasing its storage yard capacity; and

, that entails a substantial capital authorization, which customarily would require justification and approval. Ice Tr. at 350-351.[35/]

[34/] To the extent that there is room for new storage construction at Dayton, Texas, and by virtue that the BNSF would have access to Dayton through its rights along the Baytown branch line, BNSF could contract for construction of storage at Dayton, as well as elsewhere.

[35/]

See Exhibit 1 at 200697.

See Exhibit 2.

In addition to storage capacity, witness Ruple analyzes the BNSF's current operational capacity in the Gulf Coast. See Ruple, SPI V.S.-3 at 19-20. According to his knowledge, based upon long service in the railroad industry, Ruple identifies the BNSF's share of yard operational capacity for blocking, switching, etc., as constituting only 13%, in relation to the aggregate total of the UP and SP of 87%. Ruple explains the dichotomy of such minimal operational yard capacity with the BNSF presence in the Gulf Coast as resulting from the BNSF being primarily a destination carrier of coal, farm products and fertilizer. Id. at 19. Substantially most of said traffic is served in trainload and unit train movements, and therefore does not require the yard operations that plastics, chemicals and other manifest traffic command. Id.

Comparing the BNSF's market share of plastics traffic with its current storage and operational yard capacities, compare Crowley, SPI V.S.-4 at 18, with Ruple, SPI V.S.-3 at 20, it is evident that the BNSF is ill-equipped to step into the shoes of the SP as a competitive force in the Gulf Coast region for new plastics traffic emanating from points opened to BNSF access under the trackage rights agreement. See Shepherd, SPI V.S.-7 at 39-49.

4. The Trackage Rights Agreement Handicaps BNSF as an Effective Competitor.

In addition to lacking the spirit and the infrastructure to effectively compete for plastics traffic, the BNSF further suffers serious handicaps by virtue of the trackage

rights agreement itself and the UP/SP's operational plans. These deficiencies fall into three areas: (i) the traffic base *practically* available to the BNSF under the agreement with the UP and SP is inadequate to enable the BNSF to achieve a critical mass for efficient operations; (ii) the BNSF is handicapped on the all-important Houston-Memphis/St. Louis corridor by virtue of the UP's intentions with respect to directional flow in the corridor, and (iii) the trackage rights fee places BNSF at a cost disadvantage as compared to a UP/SP operation. A fourth and critical element is that to the extent BNSF elects to utilize the UP/SP for switching or haulage under the agreement, it will have relegated itself to second class status from a competitive standpoint by yielding both operational and economic control over its customer service.

The Verified Statement of Thomas E. Crowley, President of L. E. Peabody & Associates, analyzes the traffic available to the BNSF under the trackage rights agreement. Crowley utilizes the "50/90" assumption employed by Applicants, namely that from competitively-served points opened to the BNSF under the trackage rights agreement, the BNSF will capture 90% of traffic to BNSF sole-served destination and 50% to gateways and commonly-served destinations. Under these assumptions, witness Crowley calculates that the traffic available to BNSF will be less than 15% of the amount predicted by BNSF witness Lawrence, SPI V.S.-4 at 37, and consequently that BNSF operations in the Houston-Memphis (and St. Louis) corridor will support less than

0.6 trains per day, a level of operation that will leave BNSF non-competitive with a merged UP/SP from an operational and a cost of service standpoint. Id. at 52-57. This analysis does not take into account traffic which is unavailable to the BNSF due to contractual commitments to the UP/SP, or leveraging of competitively-served points by the UP/SP.

Considering that the train operations predicted by witness Crowley represent maximum rather than start-up levels, it is abundantly clear that the BNSF will face substantial economic barriers before it can offer fully-competitive service on an economically-justified basis. Whether the BNSF will be willing to heavily invest in and undoubtedly subsidize, operations to make its presence known, particularly when it has capital investment requirements and service opportunities arising out of its own recent merger, requires a substantial leap of faith. Indeed, the Applicants identify diversion from the BN/SF as a result of the service improvements by the UP/SP on the Houston-St. Louis-Chicago corridor, Peterson V.S. at 283-284, evidencing that the opening of service points to the BNSF will not result in a flood of traffic away from the UP/SP to the newly-empowered BNSF.

Secondly, Crowley identifies the operational problems to be incurred by the BNSF in exercising its trackage rights. In particular, with the UP/SP instituting directional flow between Houston and Memphis on their operational lines (the UP/SP operating northbound on the UP's lines and southbound on

the SP's lines), the BNSF would be running plastics and chemicals traffic from Houston to Memphis/St. Louis against the predominant southbound flow of traffic. SPI V.S.-4 at 58-59. The line on which the BNSF would operate is known as the "Rabbit," due to its undulating terrain features; additionally, it lacks centralized traffic control, or even block signals on portions of the line, and is characterized, by Applicants, as having long intervals between sidings. The Applicants themselves assert that the line is severely limited in capacity in its bi-directional operation. See UP/SP-24 at 44. It is significant that the BNSF had no knowledge of the UP/SP operating plan to subject its Houston-Memphis trackage rights to the heavy southbound directional flow until the merger application was filed, two months after entering into the trackage rights agreement, and they read the UP/SP plans for themselves. Ice Tr. at 16. This is extremely critical by virtue that the corridor from Houston to the St. Louis gateway is the major corridor for plastics traffic, Peterson Tr. at 162;[36] and Memphis and Chicago --which also would use the Houston-Memphis corridor--are deemed to be in third place, along with the southern corridor to California, behind New Orleans.[37] These barriers to BNSF operations to the eastern gateways will be

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[36] See also Lippincott, SPI V.S.-1 at 7 and Table VII.

[37] See also Exhibit 8 at 001101,

extremely prejudicial to its ability to compete for plastics traffic.

Further, Crowley details the cost penalty faced by BNSF in competition with the UP/SP on the important Houston-St. Louis (via Memphis) route -- 30%! SPI V.S.-4 at 68-69. As identified by witness Shepherd, this either will have the effect of impeding competition from BNSF or, alternatively, raising the price floor to the plastics producers. SPI V.S.-7 at 46-47, 52-54.

Finally, BNSF has options to implement its arrangement with the UP/SP through providing its own switching, through UP/SP switching service, or by use of third-party switching. Also, in certain corridors, it may operate under haulage rather than trackage rights. As discussed by witness Ruple, SPI V.S.-3 at 27-28, considering the emphasis Applicants have placed upon single-line service, it is evident that any operation by BNSF utilizing UP/SP or a third party for movement will be grossly inferior from an operational and competitive standpoint to the service available from the UP/SP. This, too, constitutes a further handicap to the BNSF.[38] On the other hand, as the BNSF seeks to develop the newly-available customers and volumes, and considering the requirements to implement their own merger, the notion that the BNSF would initiate operations

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[38] Query, accordingly, the basis for the UP's opposition to the BNSF using a contractor for the Houston-Brownsville corridor, supra at n. 28? Could it have been that the UP simply was setting the entry barrier as high as possible?

itself is difficult to contemplate. Once an election is made, the BNSF cannot change that election for a five-year period.

As BNSF's former Chairman so succinctly summarized, "trackage rights do not necessarily insure unfettered competition. 'It's service with some disability.'" Grinstein Tr. at 63 and Exhibit 1. In this instance, the "some disability" is a substantial disability, precluding BNSF from rendering effective, competitive transportation service to Gulf Coast plastics producers.

F. Merger of the UP and SP Would Inflict Substantial Injury on the Plastics Industry.

1. The Merger Would Substantially Reduce, If Not Eliminate, Both Direct and Source Competition.

In Section C above, SPI established that the market for the transportation of plastics resins from Gulf Coast origins is an important transportation product which must be examined and protected from injury in a merger of competing Gulf Coast Rail carriers. SPI also has established that the UP and SP currently dominate the market for plastics resins transportation, and that a merged UP/SP would continue that domination. Indeed, as demonstrated by Crowley, even with BNSF access the market share of the merged carrier would be greater than the pre-merger market share of the larger of the UP or SP. SPI V.S.-4 at 19. A combination of the UP and SP would eliminate the principal competitive environment which currently exists in the Texas/Louisiana Gulf Coast area for plastics traffic; and it is well documented in Section E that the BNSF will not be an

effective competitor at currently competitively-served (2-to-1) points.

Maintenance of effective competition is too essential a public interest consideration to leave to the notion of "Trust me." Creation of a "field of dreams" is a wonderful flight of fancy for the movies; it does not offer a basis for approval of a merger that would pose risk to one of the vital and growing sectors of the U.S. economy. Since replacement competition of 2-to-1 points is a condition to approval of this merger, and since that replacement is not offered in the proposed transaction, the Board cannot approve the merger unless an effective substitute is prescribed.

In addition to the loss of direct competition at currently served 2-to-1 points, the merger would destroy competition in two other areas, as well. First, a merger of the UP and SP would destroy competition posed by build-in/build-out opportunities. As previously discussed, the UP/SP-BNSF trackage rights agreement allows overhead service, except that BNSF may provide local service at identified points. Thus, any existing build-in opportunities which have not been recognized by Applicants (i.e., other than Mont Belvieu and Eldon, Texas) would be lost were the merger to be approved as proposed.

Applicants have assiduously resisted discovery of their analyses and investigations of build-in opportunities.[39/]

[39/] Exhibit 19 is a copy of Applicants' Responses to Interrogatories, evidencing that they were willing to produce (continued...)

Were those opportunities to be identified on the record and the Board condition any merger approval upon preserving those opportunities, any awakening of interest at the BNSF in serving the plastics and chemicals industries in Louisiana could lead to exercise of any rights granted by the Commission and the challenge to Applicants' currently captive traffic. Notwithstanding Applicants' resistance, the record well demonstrates that such opportunities indeed do exist, subject to an appropriate level of traffic to warrant the investment.[40]

In discovery,

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[39] (...continued)
only those build-in opportunities which they interpreted to constitute "projects of any substance ..." Of course, whether the projects are "of substance" or have feasibility or potential feasibility is a determination properly for the Board, not for Applicants as a means of evading legitimate discovery.

[40] See also separate Comments, e.g., of Quantum Chemical Corporation and Union Carbide Corporation.

[41] Relevant portions are included in Exhibit 20.

Gehring Tr. at 104-106.

Gehring Tr. at 161.

Query: What other opportunities may exist that have not come to light on this record due to Applicants' efforts to bury such projects and analyses far away from the eyes of the public and of the Board?

In addition to the loss of direct competition, considering the degree to which the UP and SP exclusively serve plastics production points, and further considering the dominance both of the UP and SP access to the industry and of the Gulf Coast production of PE and PP, a merger of the UP and SP would result in loss of geographic or source competition. This is inherent in the plastics industry by virtue of the concentration of production in the Gulf Coast and the control of the market by the UP and SP. Imports, alluded to by Applicants as offsetting loss of source competition in the Gulf Coast, are not significant for plastics resins. Imports amounted to less than 10% of

domestic demand for PE, and only 3% of PP. See Lippincott, SPI V.S.-1 at 7. These levels do not significantly influence the U.S. markets. Id. Considering that resins production is tied to feedstock availability, which is a function of the natural resource location in the Gulf Coast region, see Bowles, SPI V.S.-2 at 2-3, imports simply cannot influence the U.S. markets, and especially so for transportation service.[42/]

Applicants have conceded that source competition occurs with respect to shippers on the SP and UP and that it affects "many commodities and most major transportation corridors." See Exhibit 21. Applicants' witness Barber concedes that source competition exists, Barber Tr. at 252-253, and that the BNSF settlement does not ameliorate loss of source competition, Id. at 254; and he readily acknowledges that a merger of two railroads, each serving different customers, may be of concern from the standpoint of the loss of source competition. Barber V.S., UP/SP-23 at 481. Witness Peterson similarly acknowledges the horizontal nature of the merger, Peterson Tr. at 65, that there is intense competition among producers, Id. at 110-111, and the dependence upon source competition, Id. at 1041-1042.

Source competition further plays a role with regard to plant expansion and new plant construction

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[42/] The loss of geographic competition also is present in the chemicals industry, as evidenced by the separate comments of Quantum Chemical Corporation regarding its chemicals production at two plants, each exclusively served by one of the Applicants in this proceeding. See QCC-2.

opportunities. See Exhibit 22 at 502100:

see also Exhibit 22,

As Commissioner McDonald noted in her Comments accompanying the BN/SF decision, "a significant reduction in geographic competition could be a major concern ... a proposed merger which eliminates geographic competition over a broad area may be objectionable for that reason alone, even if little or no reduction in point-to-point rail competition occurs." BN/SF at 113-114. Commissioner McDonald went on to note that the "BN is combining with a relatively minor originator of western coal," and thus that the issue of loss of source competition did not rise to decisional significance in the BN/SF proceeding. "I do believe, nonetheless, that WCTL has identified an issue that may be important or decisive in future large rail consolidations, and an issue that may extend beyond coal to other markets as well." Id. at 114. Unlike the BN/SF merger proceeding, the UP and SP both are major originators of plastics, and currently dominate that market; and the loss of source competition therefore is of decisional significant in this proceeding.

2. The Merger Would Lead To Increased Prices for Plastics Resins Transportation.

As evidenced by the testimony of Professor Shepherd, reduction of competition and dominance of one supplier in the marketplace lead to increased prices, and possibly reduced service. SPI V.S.-7 at 21-22, 52-54. This cannot be disguised by the testimony of Applicants' witnesses Barber and Willig who rely on only the most general market analysis, and an uncritical acceptance of the representations of Applicants' marketing personnel, with no independent verification to conclude that increased market power would not result. Even so, they concede that an increase in concentration will serve to increase the pricing power which currently exists within the marketplace.

As demonstrated by SPI with regard to plastics, a combination of the UP and SP would materially increase concentration in the Gulf Coast plastics market due to their current pre-eminent positions, substantial reduction of geographic competition, loss of build-in opportunities, lack of a strong, viable competitor for Gulf Coast plastics originations, and, for those facilities accessible to the BNSF pursuant to the trackage rights agreement which is central to the Applicants' posture that the merger can be structured to avoid adverse competitive impacts, the insufficiency of BNSF as a carrier which reasonably can be expected to replace current competition. Deficiencies of BNSF as a competitive replacement include: (i) lack of replacement of loss of source competition in the plastics industry since the BNSF does not in fact serve a meaningful

segment of the industry; (ii) infrastructure problems, including an inadequate quantity of necessary facilities for the storage of plastics hopper cars; (iii) lack of a sufficient traffic base to make the BNSF a viable competitor per se and due to market foreclosure, and (iv) operational and economic barriers to efficient and competitive BNSF service imposed by the terms of the trackage rights agreement and the contemplated plan of operation of the UP/SP. Without question, trackage rights disabilities affect shippers as well as carriers, see Grinstein Tr. at 148-151.

The inevitable increase in rates resulting from the market power of a merged UP and SP is conclusively demonstrated on the record in this proceeding. Most directly, on September 25, 1995, soon after announcement of the merger and on the day of the trackage rights agreement between the UP and SP with the BNSF, Richard Davidson, President of UP, addressed the Chemical Manufacturers Association at a dinner meeting. He announced to the attendees that one of the first steps the UP would take following consummation of the proposed merger would be termination of the SP's "cash flow pricing." See Johnson, SPI V.S.-5. See also Davidson Tr. at 85-87. Mr. Davidson readily admitted during his deposition that he viewed cash flow pricing as a technique to attract business at an unacceptable rate level, Id. at 81, and that he has an obligation to price traffic to obtain the highest revenues possible without possible loss of business to a competitor. Id. at 78-79. The implications are

obvious: customers formerly served by the SP, and those served by the UP whose rates were market driven by SP competition, will see unchecked rate increases if the merger is allowed to occur.

For evidence that the UP indeed functions in this fashion, it is necessary to look no further than

See Exhibit 24.[43/]

Professor Shepherd testifies that a "maverick" in the marketplace has the effect of constraining prices of the dominant service provider(s). SPI V.S.-7 at 49-50. The BNSF will not fulfill this role. It is a fully mature competitor, not a maverick; it has its own merger to implement, with capital burdens -- and competition for capital -- attendant to that merger; and it contemplates a relatively insignificant capital investment in its agreement with the UP/SP, and thus little incentive to aggressively price to increase market share -- a

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tactic that could invoke retaliation by the UP/SP in BNSF's market strongholds. See Shepherd, SPI V.S.-7 at 24-26, 30-31, 38-39. Moreover, the evidence already is in that the BNSF is not and will not be an effective competitor to replace the SP. In comments dated March 12, Phillips Petroleum Company advises the Board: "Recently concluded contract negotiations with the BN yielded rates from Houston to New Orleans, contingent upon the SP/UP deal being approved, that have given us cause for concern. These rates proved to be considerably higher than other available rail options. If this is a preview of post-acquisition pricing, then the shipping public is in trouble!"[44/] The rate differential alluded to in the Phillips letter was more than % greater than the higher of the bids received from the UP and the SP.[45/] Is there any wonder why the UP was so eager to bring in the BNSF as the benefactor of the trackage rights and the savior of this transaction? See also Shepherd, SPI V.S.-7 at 21, 46-47, 52-54.[46/]

[44/] The Phillips Comments are associated with SPI V.S.-6.

[45/] See Watson, SPI V.S.-6. By way of comparison, Crowley calculates the BNSF's variable costs on the Houston-St. Louis corridor at 30% greater than the UP's. SPI V.S.-4 at 68-69.

[46/] It is noteworthy indeed, as reflected in the application and the comments of other parties to this proceeding (e.g., Quantum Chemical Corporation and Union Carbide Corporation) that build-ins to plastics and/or chemical plants were considered or planned by both the UP and the SP, to plants served by the other. While both BN and SF had some physical presence in Texas prior to their merger, both had been markedly unaggressive in competing for new plastics business through build-in to UP or SP sole-served production facilities.

whereas competition drives rates to cost (including a return on investment), the essence of monopoly power is the ability to increase rates above cost levels. The UP has shown its ability in the past, and its intent should this merger be approved, to increase rates in the absence of effective competition.

The target of increased prices will be the plastics and chemicals industry, as candidly acknowledged at the CMA dinner by UP's President. Plastics rates, i.e., commodities moving long distances and which are not susceptible to water movement, are highly rated (most profitable) to begin with, Peterson Tr. at 1041-1042; and this merger if approved by the Board will only increase the burden on these industries. The most immediate burden of rate increases consequential to the merger will be those plastics shippers on the SP's lines. Additionally, producers served jointly by the UP and SP who have chosen UP service necessarily also will face rate increases with the elimination of the SP as a constraining force on rates, as will those who elected to continue UP service in lieu of an SP build-in.[47/] Ultimately, with the demise of the admitted widespread geographic competition, even currently captive plastics producers will be subject to an upward squeeze on rates.[48/] This

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47/ See, separate Comments of Union Carbide Corporation.

48/ Overall to the plastics industry, there may be some phasing due to the effect of staggered contract expiration dates, whether due to pre-existing agreements or

constitutes the "small but significant and nontransitory" increase in price above prevailing or likely future levels discussed in the Merger Guidelines and cited approvingly by the Commission in SF/SP, at 737-738, as entailing an adverse effect on competition.

G. Request for Relief.

SPI respectfully submits that the evidence in this case demonstrates that the proposed merger of the Union Pacific and Southern Pacific Railroads would have a substantial and material adverse effect upon the plastics industry located along the Texas/Louisiana Gulf Coast due to the largely horizontal nature of the merger in the Gulf Coast region.[49] The record is compelling, just as in the SF/SP merger proceeding, that the proposed merger of the UP and the SP would not be in the public interest in that the public benefits will not outweigh the potential harm to the public and therefore that merger authority should be denied.[50]

Faced with the conclusion that the merger would not be in the public interest, the Board is faced with two alternatives: deny the application or impose conditions to ameliorate the

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[49] SPI is aware that other parties are addressing the impact of the merger in the Central Corridor. To Central Corridor shippers, that obviously is of great significance. In terms of the overall impact on railroad operations and the economy in general, the Gulf Coast is the area of predominant adverse economic impact which would result from a merger of the UP and SP.

[50] Former BNSF Chairman Grinstein stated that, in his view, a UP/SP merger would be an "overlapping merger" and should not be approved. Grinstein Tr. at 81-82.

competitive loss. If the former, the record is clear that the SP can succeed and continue to be a competitive force in the marketplace. As recently as March, 1994, Applicants' witness Peterson, then testifying for UP in the UP/CNW merger proceeding, asserted that the "SP is not the small, weak, beleaguered competitor that it paints itself to be." Peterson Tr. at 409. As the Board is aware, the SP has seen continued improvement in its financial performance in recent years. Compare Railroad Revenue Adequacy: 1991 Determination, 8 I.C.C.2d 666 (1992)--SP ROI-negative; 1992 Determination, 9 I.C.C.2d 851 (1993)--SP ROI of 3.5%; 1993 Determination, 10 I.C.C.2d 189 (1994)--SP ROI of 0.7%; 1994 Determination, 60 Fed. Reg. 43475 (August 21, 1995)--SP ROI of 7.2%. Moreover, witness after witness testified that if the merger does not go through, the SP would continue to be a vigorous competitor. See Ice Tr. at 231; Grinstein Tr. at 44, 81-82; Davidson Tr. at 81. Only as justification for this application have Applicants described the SP as a troubled--but *not* failing--entity.

With specific reference to the Gulf Coast petrochemical industries, a merger of the UP and SP would not be adverse to the public interest *on condition* that the UP were required to divest one of the two sets of parallel networks, including associated yards and facilities, serving Texas and Louisiana industries. These are depicted at SPI Exhibit 25. In essence, these consist of the rail networks running from the Eagle Pass/Laredo/Brownsville border points, through Houston and Ft.

Worth to New Orleans, Memphis, St. Louis and Chicago. All extant trackage rights should be preserved and either honored or transferred. Since the competitive harm lies in consolidating control over both sets of parallel systems in the Texas/Louisiana Gulf Coast region in one carrier, an appropriate remedy would be to require divestiture of one of the two parallel systems, with the election of which network to divest being that of the Applicants.

Divestiture is fully consistent with both the public interest and Commission policy and precedent. First, from a public interest standpoint, the preponderance of benefits identified by Applicants result from route efficiencies outside of the Gulf Coast, predominantly with regard to the west coast markets, and also by consolidation of certain duplicative functions. Thus, the merger benefits could be realized to a substantial degree, and the adverse effects of the merger on Gulf Coast industries could be avoided, by a divestiture.

Three railroads publicly have expressed an interest in securing the route structure and associated infrastructure related to one of the sets of duplicative Gulf Coast operations. Those parties are Conrail (CR-6), the Illinois Central (IC-1) and the Kansas City Southern (KCS-18). Applicants themselves have recognized that Board imposition of a competitive solution to the Gulf Coast chemicals market problem they face in this application is a distinct likelihood in their settlement agreement with the Illinois Central (UP/SP-74). The nexus cannot be ignored between

IC's notice of intent to file a responsive application, in which IC identified its interest in acquiring the Texas/Louisiana Gulf Coast chemical routes of the SP, including the plastics storage yards operated by the SP, and paragraph 14(b) of the UP/SP-IC settlement agreement.[51]

From the standpoint of Gulf Coast producers, divestiture would maintain the status quo ante. The Commission was adamant in the BN/SF decision that it would not impose conditions to ameliorate competitive problems that would have the effect of improving the position of adversely impacted parties. Under a divestiture remedy, those facilities with competitive service presently existing between the UP and SP would retain that competitive option. Those producers who are sole-served at points along the divested track would continue to be sole-served. Geographic competition as it exists today would be preserved. The divestiture would be a logical solution to the problems posed

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[51] Indeed, SPI does not even foreclose consideration of BNSF as a potential successor in interest to the divested lines. Divestiture would entail the storage tracks and other infrastructure necessary for operation of that segment. Other identified deficiencies of a BNSF operation under the trackage rights likely would disappear were BNSF an owner, rather than a tenant; and with an equity stake in the divested lines, the BNSF would certainly have more than abundant incentive to aggressively operate those lines to compete fully for all competitive plastics business. On the other hand, the prospect of the BNSF as the successor could raise competitive impact problems of its own, as evidenced by the Commission's SF/SP decision.

by this merger to the Gulf Coast industry which is fully consistent with Commission precedent and merger principles.[52/]

The Board has full authority to require divestiture as recommended herein as a condition for approval of the UP/SP merger. 49 U.S.C. § 11344(c) provides, in pertinent part, that "the Commission may impose conditions governing the transaction." In its general policy statement on mergers, the Commission notes that it has "broad authority" to impose conditions on consolidations. The Commission has interpreted this authority to include, in addition to the granting of trackage rights, the authority to impose the sale of railroad lines to competing carriers as a condition to a railroad merger. See Seaboard Air Line Railroad Company - Merger - Atlantic Coast Line Railroad Company, 320 I.C.C. 122, 184 (1963). The Commission found that

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52/ Strengthening of the BNSF under the trackage rights agreement with the UP/SP could serve to ameliorate certain of the weaknesses identified in the contemplated BNSF operation. Such conditions could include increased service opportunities through opening presently closed points to BN service, in order to provide BNSF greater traffic aggregation opportunities, which in turn may encourage investment and enable BNSF to provide the contemplated level of operation. SPI certainly supports open access within the railroad industry. However, to conclude that enhanced BNSF access will cure loss of competition posed by the proposed merger, the Board must find evidence not presently in the record that BNSF will, in fact, undertake the necessary capital investments and commit to full and vigorous competition. Additionally, any contractually based market foreclosure tactics employed by Applican s, as described above, must be rendered voidable, at the shipper's option, in order to achieve the objective of preserving effective competition. Whether such a remedy would be consistent with past Commission principles, or whether the circumstances of this merger warrant departure from those principles, are policy considerations for the Board. The remedy recommended by SPI above would not require examination of these issues.

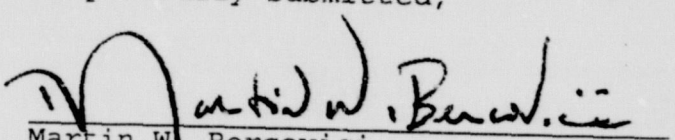
requiring one of the applicants to a proposed merger to sell some of its lines to a competing carrier that might otherwise be adversely affected to be justified to the extent it balanced competition and thus benefitted the public generally. Id.

The scope of the Commission's authority in this regard was recently reaffirmed with the passage of the ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803. While, as hereinbefore noted, prior law governs, SPI respectfully submits that the Termination Act is relevant to the effect that the legislative history makes it clear that the new Act merely codifies pre-existing law concerning the Board's merger powers. Thus, Section 11324(c) of the ICC Termination Act, codified as 49 U.S.C. § 11124(c), now makes explicit the types of conditions the Commission always implicitly had the power to impose under the general language of former section 11344(c). That is, the Board enjoys the power to impose the granting of trackage rights and/or divestiture of parallel tracks as conditions for the approval of a transaction. Indeed, the House Conference Report accompanying the ICC Termination Act, House Report No. 104-422, notes that the new law "elaborates on the existing power to impose conditions on the approval of a merger or regulated transaction . . . [by] explicitly authoriz[ing] imposition of conditions requiring divestiture of parallel tacks (sic) or requiring the granting of trackage rights." Id. at 119. It is uncontroverted that the Commission has had the power to condition merger approval upon the granting of trackage rights, as demonstrated in the BN/SF

proceeding. While divestiture previously has not been a widely used remedy of the Commission, Congress undoubtedly viewed divestiture as a contemporaneously held power of the Commission, as evidenced by the legislative history language quoted above, which makes no distinction between divestiture and trackage rights as being codified by the revised statutory language.

WHEREFORE, THE PREMISES CONSIDERED, The Society of the Plastics Industry, Inc., respectfully urges the Surface Transportation Board to find that a merger of the Union Pacific Corporation, et al. and the Southern Pacific Rail Corporation, et al. would substantially and adversely impact upon the polyethylene and polypropylene resins industries in the Texas/Louisiana region, that said industries are significant and that the transportation of said commodities constitutes an important market for the UP and SP railroads, and therefore that merger of the UP and SP as proposed would not be in the public interest. SPI accordingly requests the Surface Transportation Board to grant relief as requested herein.

Respectfully submitted,



Martin W. Bercovici
Douglas J. Behr
Arthur S. Garrett, III
Leslie E. Silverman
KELLER AND HECKMAN
1001 G Street, NW
Suite 500 West
Washington, DC 20001
Tel: (202) 434-4100
Fax: (202) 434-4646

Attorneys for The Society of the Plastics Industry, Inc.

March 29, 1996

II. VERIFIED STATEMENTS

Verified Statement of C. A. Lippincott

My name is C. A. "Buzz" Lippincott, I am Director of Statistics at the Society of the Plastics Industry, Inc. (SPI). My personal background includes an A.B. degree in Chemistry from the University of Colorado at Boulder, and a M.B.A. in Marketing from the Wharton Graduate Division of the University of Pennsylvania. My commercial experience includes three years as a Marketing Planning Analyst with Pennsalt Chemicals Corp. (now part of Elf Atochem) and 23 years in Marketing with ARCO Chemical Co. and its related companies.

For nine years with the SPI, I have been Staff Director for the Committee on Resin Statistics (CRS), an SPI service committee composed of representatives from more than 100 resin producing companies, trade publications, consultants and government. The CRS monitors and reviews the Society's resin statistics to assure accurate and timely information on market size, changes in market share, industry trends, raw material needs, capital utilization and possible impact of legislation and regulatory decisions.

The CRS meets twice a year as a group to discuss improvements in existing programs and to recommend new means of measuring the plastics industry. Company specific data is collected through a fiduciary firm from participating resin producers in the U.S. and Canada. The aggregate data is published monthly and is considered the

most reliable data in the industry.

The Plastics Industry

To better understand the present day plastics industry, it is best to begin by looking at that part of the petrochemical industry from which the majority of resins are derived. Fractions of crude oil (especially naphtha) or natural gas, through various cracking processes, are a source of chemical monomers (especially ethylene, propylene, butadiene, etc.) used to make synthetic resins (SIC 2821). (See Figure I).

Since crude oil refining and natural gas deposits are mainly located in the U.S. Gulf Coast area (especially Texas and Louisiana), it is not surprising to see monomers and synthetic resins also being made in that geographic area of the U.S. Economics of scale dictates that resins be produced in large plants close to monomer supplies. With resin available in solid form, shipments can be made easily throughout the Continental U.S. SIC 308, Miscellaneous Plastics Products, is comprised of establishments (plastic processors or fabricators) primarily engaged in manufacturing plastic products in the form used in the major markets as shown in Figure I.

A consultant study was recently sponsored by the SPI, entitled "Contributions of Plastics to the U.S. Economy", by Probe Economics, Inc. This study provides measures of the size of the plastics industry, its makeup and how it interacts with the rest of the U.S. economy.

The Probe study initially presents most of the industry measures that are available in U.S. government statistics, especially U.S. Census of Manufactures data. The study suggests that a gap in government statistics arises from three sources: 1) auxiliary facilities such as laboratories which are not counted; 2) plastics industry activities carried out in establishments not categorized as "plastics" by the government, especially "captive" activity; and 3) activities of non-plastics firms that supply the plastics industry. The major conclusions of the Probe study include:

- Based on government data sources, the U.S. plastics industry accounts for 872,700 jobs and $176.7 billion in shipments in 1994.
- Captive plastic product operations, such as milk processors who blowmold their own milk jugs, bring the totals up to 1,227,600 jobs and $225.2 billion in shipments for 1994.
- Estimates of upstream industry suppliers brings the total to 2,124,000 jobs and $318.9 billion in shipments in 1994.
- For Texas, the plastics resins industry accounts for 13,600 jobs and $11.8 billion in shipments in 1994; for the plastics industry generally (exclusive of captive operations), the industry accounts for 56,300 jobs and $20.8 billion in shipments in 1994. The resins industry alone accounted for more than $1 billion in new capital expenditures in Texas in 1994.
- For Louisiana, the second largest state for resin production, the plastics resins industry accounts for 3,500 jobs and $3.3 billion in shipments in

1994; for the plastics industry generally, the industry accounts for 7,700 jobs and $4.0 billion in shipments in 1994.

Without question the plastics industry is one of America's foremost sources of jobs and economic contribution, and the industry is a key component of the economies of the states of Texas and Louisiana.

Thermoplastic Resins

Thermoplastic resins are plastics capable of being repeatedly softened by heat and hardened by cooling to form pellets either for shipping or processed into their final form as finished products. In 1994 total U.S. sales and captive use including exports for thermoplastic resins amounted to 63.3 billion pounds as reported by the CRS, for an average annual growth of 6.3 percent over the past five years. Polyethylene and polypropylene (polyolefins) with a total of 36.1 billion pounds accounted for 57.0 percent of these thermoplastic resins[1].

Plant Locations and Capacity

There are three major types of polyethylene in common use today: Low Density Polyethylene (LDPE), Linear Low Density Polyethylene (LLDPE), and High Density Polyethylene (HDPE). Polyethylene production capacities by location are listed in Tables I, II and III. Polypropylene capacities by location are listed in Table IV. Table

[1]Thermoset resins are also included in SIC 2821 and are usually sold in liquid form. Thermoset sales and captive use amounted to 7.5 billion lbs. in 1994, which when added to the 63.3 billion lbs. of thermoplastics, totals 70.8 billion lbs. reported by the CRS.

V summarizes the degree of capacity concentration (88.8 percent) for these high volume polyolefin resins in the Texas and Louisiana area of the U.S. The 1993 issue of the Stanford Research Institute (SRI) Directory of Chemical Producers was used as the source of company capacity data. Subsequent issues from SRI do not contain comparable updated company specific data.

Capacities as stated for LLDPE and HDPE in Tables II and III reflect SRI estimates for capacity dedicated to HDPE and LLDPE for individual plants with "swing" capacity. Some of the newer plants, depending on operating conditions, can produce polyethylene within a broad density range. Changes in plant swings between the two polyethylene products are not usually made over a short production schedule period.

However, this ability to shift from one product to another does enhance the competitive flexibility for those producers who operate these plants.

Polyolefin End-Use Markets

Major polyolefin end-use markets are outlined in Table VI. There are certain competitive observations that become apparent from these data. Applications for film account for a majority of volumes for low and linear low density polyethylene. There are also significant match-ups in end-uses for HDPE and PP where economics can often be to the advantage of one material over the other.

Most generally though, the competition exists among the resin suppliers of similar grades or specification products. While there does exist some niche specification product, most polyolefins are considered commodities, meaning equivalent in use. This does not necessarily suggest that all equivalent specification commodity plastic resins are fungible among all manufacturers. Competing manufacturers do have unique tradename nomenclature for each product grade; however, equivalent grades from different suppliers can be made to process satisfactorily by blending product from several sources. Therefore, competition for a given piece of end-use business is among equivalent resin suppliers.

An example is the case of HDPE blowmolded milk bottles (jugs). This represents a significant end-use market for high density resin, and the various suppliers are in competition with each other to achieve a given share of the business.

Geographic Distribution of the Plastics Industry

The plastics processing industry is spread all across the U.S. The CRS does not collect data for resin volume shipment by state. For this we can refer again to the earlier mentioned "Contribution of Plastics to the U.S. Economy", by Probe Economics, Inc. That study states that total manufacturing shipments for the 48 contiguous states amounted to $140.95 billion in 1994. This total excludes wholesale trade sales, captive product shipments, and estimates for upstream industry suppliers.

The data contained in Table VII has been assembled to reflect common rail operating districts in the Continental U.S. Almost 40 percent of dollar shipments of plastic materials is attributed to the midwest/northeast region of the country. This would suggest that the processing phase of the plastics industry is located in line with U.S. population, economic output and states with extensive manufacturing activity.

Plastics Resin Trade (See Table VIII)

Imports of polyolefin resins are not considered a significant influence on the domestic U.S. market. Imports of polypropylene were only 3 percent of production volume, with polyethylene imports at less than 10 percent of production in 1994.

U.S. resin producers tend to think of exports on an opportunistic basis. When product is available, consideration is given to export at something above incremental costs. In 1994 polypropylene exports amounted to 9.4 percent of production with polyethylene exports standing at 13.1 percent.

Economic Considerations

Resin producers keep a watchful eye on cost of production and marketing in a highly competitive business environment. Capital investment required for hydrocarbon exploration and feedstock procurement is high. Research and development is an ongoing activity in order for the resin producers to remain competitive in the several resin grades and specifications needed to match a variety of end-uses in the

marketplace. New catalysts continue to be developed, in some instances creating new resin types with a need for product development and technical service support by resin producers.

Transportation and inventory costs are also monitored closely by the resin producers. Some of the CRS resin subcommittees collect quarterly data on inventory status. The channels through which these hydrocarbon materials pass from well head to final consumer create physical and economic complexities. Any change in the equilibrium that exists among these various equations is felt all along the way to the final consumer.

Conclusion

The plastics industry, as we know it today, has evolved into one of the country's major industries. With the introduction of LDPE in 1942, followed in 1957 by HDPE and PP and finally LLDPE in 1978, the industry has benefited from feedstocks, especially natural gas concentrated in the U.S. Gulf Coast. It is therefore not surprising to see the Gulf Coast emerge as the center of U.S. resin production. Technologies to produce these resins have been essentially made available to all through cross licensing etc., which has lead to intense competition among producers.

Processors and fabricators located across the U.S. have been able to prosper with the technical service help provided by the several competitors vying for their business.

This has resulted in multiple sources of resin supply. Since processors have the ability to blend products from various suppliers to achieve desired resin processibility, resin producers must be attentive to economic fluctuations at ali times in order to maintain a competitive position in the marketplace.

I, C. A. "Buzz" Lippincott, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement, executed on this 20th day of March, 1996.

C. A. Lippincott

C. A. "Buzz" Lippincott

Table I
U.S. Low Density Polyethylene Producers[1]
Capacity in Millions of Pounds[2]

Company	Location	1993 Capacity
Chevron Chemical Co.	Cedar Bayou, TX	620
	Orange, TX	300
Dow Chemical Co.	Freeport, TX	610
	Plaquemine, LA	415
DuPont	Orange, TX	520
	Victoria, TX	240
Eastman Chemical Co.	Longview, TX	650
Exxon Chemical Co.	Baton Rouge, LA	710
Lyondell Petrochemical Co.	Bayport, TX	150
Mobil Chemical Co.	Beaumont, TX	500
Quantum Chemical Co.	Clinton, IA	430
	Deer Park, TX	460
	Morris, IL	540
	Port Arthur	190
	Tuscola, IL	15
Rexene Corp.	Odessa, TX	405
Union Carbide Corp.	Seadrift, TX	500
Westlake Polymer Corp.	Lake Charles, LA	750
TOTAL		**8,005**

[1] Participants in the SPI Monthly Statistical Report in 1994.
[2] Source: SRI International as of January 1, 1993.

Note: SPI reported total capacity at 8,090 million pounds in 1994.

Table II
U.S. Linear Low Density Polyethylene Producers[1]
Capacity in Millions of Pounds[2]

Company	Location	1993 Capacity
Chevron Chemical Co.	Cedar Bayou, TX	220
Dow Chemical Co.	Freeport, TX	465
	Plaquemine, LA	960
Exxon Chemical Co.	Mont Belview, TX	900
Mobil	Beaumont, TX	735
Phillips	Pasadena, TX	300
Quantum	Deer Park, TX	85
	Morris, IL	550
	Port Arthur, TX	300
Solvay Polymers	Deer Park, TX	120
Union Carbide Corp.	Seadrift, TX	595
	Taft, LA	660
Total		**5,890**

[1] Participants in the SPI Monthly Statistical Report in 1994.
[2] Source: SRI International as of January 1, 1993.

Note: SPI reported total capacity at 6,061 million pounds in 1994.

Table III
U.S. High Density Polyethylene Producers[1]
Capacity in Millions of Pounds[2]

Company	Location	1993 Capacity
Chevron	Cedar Bayou, TX	260
	Orange, TX	870
Dow Chemical Co.	Freeport, TX	190
	Plaguemine, LA	340
Exxon	Mont Belvieu, TX	330
Fina	Bayport, TX	360
Mobil	Beaumont, TX	500
Oxychem	Bay City, TX	1,050
	Victoria, TX	450
Paxon Polymer Co.	Baton Rouge, LA	1,300
Phillips	Pasadena, TX	1,500
Quantum	Alvin, TX	400
	Clinton, IA	450
	Deer Park, TX	565
	Port Arthur, TX	240
Solvay Polymers	Deer Park, TX	1,370
Union Carbide Corp.	Seadrift, TX	515
	Taft, LA	450
Total		**11,140**

[1] Participants in the SPI Monthly Statistical Report in 1994.
[2] Source: SRI International as of January 1, 1993.

Note: SPI reported total capacity at 12,202 million pounds in 1994.

Table IV
U.S. Polypropylene Producers[1]
Capacity in Millions of Pounds[2]

Company	Location	Capacity
Amoco Chemical Co.	Alvin, TX	1,168
	Cedar Bayou, TX	550
Aristech Chemical Corp.	Kenova, WV	330
	LaPorte, TX	390
Eastman[3]	Longview, TX	540
Epsilon Products Co.	Marcus Hook, PA	520
Exxon	Baytown, TX	1,070
Fina	LaPorte, TX	1,000
Genesis[3]	Maryville, MI	300
Himont[4]	Bayport, TX	1,050
	Lake Charles, LA	852
Huntsman Polypropylene	Woodbury, NJ	360
Lyondell	Bayport, TX	300
Phillips	Pasadena, TX	480
Quantum	Morris, IL	500
Rexene	Odessa, TX	180
Shell	Norco, LA	340
	Seadrift, TX	200[(1)]
Solvay Polymers, Inc.	Deer Park, TX	450
Union Carbide	Seadrift, TX	--[(1)]
Total		**10,580**

[1]Participants in the SPI Monthly Statistical Report in 1994.
[2]Source: SRI International as of January 1, 1993.
[3]Now Huntsman
[4]Now Montell
(1) Plant jointly owned by Shell and Union Carbide in 1994.
Note: SPI reported total capacity at 12,202 million pounds in 1994.

Table V
Polyolefin Capacity in Texas/Louisiana
Millions of Pounds

Resin	Texas/ Louisiana	Other	Total	TX/LA Percent (%)
LDPE	7,020	985	8,005	87.7
LLDPE	5,340	550	5,890	90.7
HDPE	10,690	450	11,140	96.0
PP	8,570	2,010	10,580	81.0
Total	**31,620**	**3,995**	**35,615**	**88.8**

Source: SPI International (1993).

Table VI
Polyolefin End Use Markets
Millions of Pounds

Market	LDPE	LLDPE	HDPE	PP
Film	3,607	3,601	1,560	927
Packaging	2,603	1,935	--	--
Non-Packaging	1,004	1,866	--	--
Sheet	108	51	650	159
Injection Molding	366	606	2,004	3,304
Consumer Prods.	--	--	158	1,318
Packaging	--	--	508	860
Other	--	--	--	1,126
Fiber & Filament	--	--	--	2,811
Wire & Cable	253	--	128	--
Extrusion Coating	868	--	--	--
Blow Molding	79	21	3,647	165
Liquid Food Bottles	--	--	1,191	--
Household Bottles	--	--	955	--
Other	--	--	1,501	--
Pipe & Conduit	--	--	743	--
Other Extruded	138	300	119	147
All Other Uses	1,117	1,039	1,657	1,778
Exports*	1,368	517	1,401	655
TOTAL	**7,904**	**6,335**	**11,909**	**9,946**

*Exports shown here represent CRS participants only and are not equal necessarily to Census data per Table VII.

Source: SPI Committee on Resin Statistics

Table VII
Continental U.S. Plastics Manufacturing Shipments
1994

Geographic Location	$ Billions	Percent (%)
Midwest/Northeast	56.07	39.8
Southeast	25.87	18.3
West	37.49	26.6
Texas/Louisiana	21.52	15.3
TOTAL	**140.95**	**100.0**

Midwest/Northeast - 15 states east of Chicago, St. Louis and north of Virginia/Kentucky.

Southeast - 9 states east of the Mississippi River.

West - 22 states west of Chicago, St. Louis, Memphis and the Mississippi River excluding Louisiana/Texas.

Source: "Contributions of Plastics to the U.S. Economy," by Probe Economics, Inc.

Table VIII
Polyolefins Resins
U.S. Production and Trade
Millions of Pounds
1994

Resin	Production	Imports	Exports	Apparent Consumption[1)]
LDPE	7,578	203	1,226	6,555
LLDPE	5,026	1,196	488	5,730
HDPE	11,117	946	1,386	10,677
PP	9,539	282	900	8,921

[1)] Apparent Consumption equals Production, plus Imports, minus Exports.

Note: Total import/export data as reported by U.S. Bureau of Census does not necessarily equal that reported by CRS participants as shown in Table VI.

Sources: Production - SPI Committee on Resin Statistics Monthly Report
Imports - U.S. Bureau of Census IM 145
Exports - U.S. Bureau of Census EM 545

VERIFIED STATEMENT OF A. O. BOWLES, JR.

Background:

My name is A. O. Bowles, Jr. I hold a Bachelor of Science Degree in Chemical Engineering from the University of Kentucky and a Masters Degree in Business Administration from West Virginia University. I have been employed by Union Carbide Corp. for 32 years. During that time, I have worked in the following areas:

- Ten years in production engineering running various plant processes. I had almost every type of chemical processing experience that is used by Union Carbide.
- One year in engineering design department.
- Twenty-one years in positions related to transportation, distribution and product logistics for Union Carbide.

My current position is Elastomers Logistics Manager - Worldwide. In this position, my primary responsibilities include all aspects of product movement from production of our elastomer products to customer delivery. This includes package design, packaging, product deployment, freight and warehousing or storage.

I have worked with The Society of the Plastics Industry, Inc. (SPI) Committee on Transportation and Distribution (COT&D) since 1983. During that time, I have served in various positions on the executive board for eight years. Currently, I am Chairman of the Committee and have held this position since August 1994.

Purpose:

This statement is made in my capacity as Chairman of the COT&D to supply background information on the dependence of the plastics industry on rail transportation to the manufacture and distribution of plastics resins. Transportation is second only to raw materials among the cost elements attributable to plastics resins, amounting to approximately 20% of the delivered cost. Rail transportation is very critical to the plastics industry and must receive careful consideration in the UP/SP merger proceeding.

Statement:

Plastics resins are produced by polymerizing various hydrocarbons. These hydrocarbons are the products of cracking processes. These processes take natural gas, crude oil and other natural substances and crack them using heat and catalysts to produce unsaturated hydrocarbons. These hydrocarbons are then polymerized to make plastic resin. Almost 60% of the domestic U.S. production of thermoplastic resins is concentrated in the product categories of polyethylene and polypropylene. These resins require ethylene and propylene as feedstocks which are the two major products of the cracking processes.

Because of the difficulties of transporting material such as ethylene and propylene, resins producing facilities are located either near the cracking process or on a pipeline used to carry the feedstocks to the polymerization process. The reserves of

natural feedstocks for the hydrocarbon cracking processes are located in the Gulf Coast area primarily between Corpus Christi, Texas and New Orleans, Louisiana.

The plastics resins producing process is a continuous process. Different grades of resin are produced by changing polymerization conditions or changing the additives added down stream of the reaction process. The many different grades of resin are supported by running the continuous process in block or campaign type operations. Within these large product grade "production runs," the product is further segregated into batches or blends. These blends are characterized by laboratory analyses. In many cases, these analyses are provided to customers so that their process conditions can be set to properly produce a finished product made from the particular production run. A resin producer might support anywhere from 10 to 300 grades of plastic resin, depending upon the breadth of market the resin producer wishes to cover.

Construction of fixed silos to support such a large product line would be very capital intensive and presents a problem from a product quality standpoint. The means which have evolved over the years in the plastics industry to economically support a large number of products is the covered hopper car. Currently, the resin producers either own or lease about 40,000 covered hopper cars. These hopper cars represent an opportunity to store and ship product to customers in an efficient manner while

maintaining product quality in increments of 175,000 to 210,000 pounds of product.

In this industry, covered hopper cars are treated as a "package." They are filled directly from the production lines and analyzed for quality requirements. The cars are then stored on either leased or privately owned rail track until customers order the material. The material is then shipped to the customers by rail, where some customers use the hopper cars as storage vessels to feed plastic resins to their production processes. The industry average of hopper cars trips per year is between four and five. Despite the relatively low number of "turns" compared to other rail fleets, this is still the most economical way to support the storage, quality and service requirements for the products produced by the plastics industry.

Product quality is very critical in the plastics resins industry. Many resins end up as a material of construction for medical supplies and end uses related to food and materials for human consumption. There are two major ways the industry protects product quality:

- Handling the resins as few times as possible between the production and the consumption of the resin in an end use. For this the hopper car is ideal. Resins can be manufactured and loaded directly into hopper cars with little if any intermediate storage or complex handling systems.

- Covered hopper cars in this industry are typically lined with epoxy resins which produce a hard, smooth surface which allows the cars to be water washed between loadings to insure minimal cross contamination of the resin with other grades of resin or from metal or metal oxides from which the hopper car is constructed.

Since the pelleted plastic resins must be reduced to a molten state in order to form them into end use products, the end use production application "sees" every pellet and every piece of foreign matter contained within the resin. Because of this fact and the critical nature of some end use applications, the maintenance of product quality is paramount. The hopper car, because of its size and lining, allows the industry to maintain a high level of product quality.

At customer locations, maintenance of quality is also important. The hopper car represents a convenient vehicle for receiving plastics resins. The hopper car contains enough volume to support most medium to high output extrusion or molding lines for about 24 hours of operation. This minimizes customer handling of the resin and provides a surge vessel from which production lines can be fed. This also allows tracking of product quality through the plastic resin to the end use product. This is very valuable for insuring the maintenance of product integrity from "cradle to end user."

Economics:

Because of feedstocks availability on the Gulf Coast, about 85-90% of polyethylene and polypropylene production in the U.S. is located in this area. Most of the users of plastics resins are located near major population centers. This would include the Midwest, Northeast, Southeast and Western U.S. The average distance from producing plants to customers is approximately

1,000 miles. At this distance, rail is certainly the most viable option for shipment of product.

The table below shows the relative comparison of various modes for the movement of plastics resins:

MODAL ECONOMICS FOR MOVEMENT OF PLASTIC RESINS
Costs are expressed as Cents per Pound

Cost Element	Hopper Car	Package Truck	Bulk Truck
Loading/Packaging	0.50	1.00	0.50
Container Cost	0.37	1.07	0.00
Freight	2.00	2.50	5.00
Total	2.87	4.57	5.50

Assumptions:

Hopper Car
1. Trip length is 1,000 miles from plant to customer.
2. Hopper car investment is $65,000.
3. Depreciation is based on 40 year straight line method.
4. Maintenance cost is $1,200 per year (non AAR billable).

Package Truck
1. Bags are estimated at $0.35 each with 50 bags per pallet.
2. Pallet cost is $9 per pallet.
3. Miscellaneous costs for packaging are $3 per pallet load.
4. A pallet load is 2,750 pounds (50 bags at 55 lbs. per bag).
5. Freight is based on $1.15 per mile.
6. Truck load capability is 44,000 pounds of product.
7. Trip length is 1,000 miles from plant to customer.

Hopper Truck
1. Trip length is 1,000 miles from plant to customer.
2. Freight is counted on a round trip due to cleaning and backhauls.

Applying industry average figures, which include resins other than polyethylene and polypropylene, approximately 73% of the domestic volume of plastics resins production moves from the producing location in hopper cars, and 9% of export volume moves by rail to export points, the economic penalty for use of package

trucks for polyethylene and polypropylene production alone would be in the order of $264.45 million. In addition, it would take 4+ trucks to equal one hopper car. Thus, paperwork for orders bills of lading, certificates of analysis, Material Safety Data Sheets, invoices and other paperwork which accompany a shipment of resin would more than quadruple. At a documentation cost of roughly $25 per shipment, this would add costs of about $8.83 million. A rough estimate of the most competitive alternative mode would be an added cost of $273.28 million annually for the two major resins, and this well may be conservative to the extent that a higher proportion of these resins in fact moves by rail.

As indicated above, not all resins are shipped from the production points in the rail cars. Rather, an estimated 20% (again, of all resins) are shipped by truck, in both package and hopper trucks. The prime reasons for hopper truck shipments are to supply a customer due to a service failure by the railroad in timely delivering a rail car, or possibly due to rejection of a car by the customer, to serve customers within reasonable truck distance from the production plant (approximately 200-300 miles), or small lot shipments to a compounder or to a packager for export. Even in latter situations, many producers move the product initially by rail in that the plants are designed for rail rather than motor carrier loading.

Waterborne movement of plastic resins for distribution within the U.S. has never been a major factor for several reasons. These are:

1. For movement from the Gulf Coast to the East would require a vessel which is certified as a Jones Act vessel. There are very few such vessels, and thus the capacity to support the industry is not available at this time. Secondly, because of product quality reasons, material would have to move by container which would require inland movement from the producing location to the pier and the pier to the customer. Again, the customer base is not generally located at or even near piers.

2. For movement along inland waterways to the Midwest from the Gulf Coast, a container system would be necessary. The investment to put such a system in place would be very high, and once again inland movements would be required on both ends of the water move.

3. Transit times and sailing schedules for waterborne movements increase inventory significantly in order to provide the same level of customer service. The net effect would be to double the amount of inventory which would be required. This would more than offset any economies which waterborne movement might provide.

It is for these reasons that water movement of plastic resins has not been a major factor since the inception of the industry in the 1940s.

Conclusion:

The plastics industry has developed since the end of World War II utilizing the covered hopper car as its primary "package" for receipt of production, storage and delivery to the ultimate customer. The industry today counts a fleet of approximately 40,000 cars, which reflect, at a current cost of $65,000 per covered hopper car, an investment (measured by replacement cost) of some $2.6 billion. Plant systems and customer systems are designed for rail delivery. The plastics industry truly is

dependent upon rail transportation for the movement of product from production to customer destinations.

I, A. O. Bowles, Jr., declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement, executed on this 7th day of March, 1996.

A. O. Bowles, Jr.

A. O. Bowles, Jr.

Verified Statement
Of
Larry D. Ruple

My name is Larry D. Ruple, and I have been requested, as an independent consultant, to review and analyze the competitive impacts the proposed merger between the Union Pacific and Southern Pacific Railroads would have on the plastics industry within the Gulf Coast region.

1. Introduction

My experience includes 17 years within the railroad industry. Following graduation from Weber State with a bachelor's degree in Business Administration, (Major, Accounting), I was employed by the Denver & Rio Grande Western Railroad. During my employment at D&RGW I was provided a variety of promotions and opportunities to work within the various departments of the railroad such as clerical, operations, sales and marketing. As a result of the Rio Grande Industries purchase of the Southern Pacific Lines and subsequent combination of the two railroads, in mid-1989, I was promoted within the Southern Pacific's marketing department, holding the titles of Director - Construction Materials & Aggregates, Managing Director - Inorganic Chemicals and from August 1993 to May of 1995, Managing Director - Plastics, Inorganic Chemicals & Environmental Waste. Since leaving Southern Pacific mid-1995, I spent a short period of time within the industry sector as Corporate Traffic Manager before venturing out in the pursuit of a consulting practice.

As Managing Director - Plastics, Inorganic Chemicals & Environmental Waste

of the SP, I was held directly accountable for the development, production and implementation of market based strategic initiatives and overall market plan to enhance Southern Pacific's position and market share of transportation and logistic needs relative to the aforementioned commodity areas. I was responsible to develop and implement pricing strategy and tactics to achieve optimum revenue along with logistic and cost planning, structuring movement, service and equipment parameters to insure performance to plan. When I refer to plastics or plastics resins in this statement, I am referring to plastics raw materials such as polyethylene, polypropylene, polyvinyl chloride, etc., classified within STCC 28211.

Based upon my past experiences and responsibilities, I am familiar with the requirements of the plastics resins industry for transportation services, the transportation of plastics resins, and the competitive environment for plastics transportation. Based upon that experience, I believe it is important to understand and analyze the following areas in determining the effects the proposed merger between Union Pacific and Southern Pacific would have on the Gulf Coast plastics resins market along with the impact the UP/SP - BNSF Agreement would have in mitigating those concerns. I will discuss (a) an overview of the plastics market; (b) concentration and geographical location of value added suppliers and receivers; (c) review of modal competition; (d) current plastics storage capacity in the Gulf Coast; (e) current operational capacity in the Gulf Coast; (f) potential effects of the UP/SP merger on the competitive environment; (g) the impact of the Agreement with BNSF; (h) followed by a conclusion which, as demonstrated in the following pages, identifies significant areas of concerns as to the competitive environment flowing from merger

of the UP and SP.

2. Overall Review of the Plastics Market

A. Commodity Overview and Description: In developing the effect that a Union Pacific / Southern Pacific merger would have on the plastics market, I believe it is important to identify the primary products, a brief description of the products and an overview of the use(s) of these products. Throughout our discussion we will be focusing on three (3) major product lines which, in combination, provide by far the largest percentage of production volume as compared with the total of all plastics, other than liquid. These commodities are commonly known as High Density Polyethylene (HDPE), Low Density Polyethylene (LDPE) and Polypropylene. By confining our discussion to these product lines we will remain consistent with the products identified in the various support statements filed by Applicants. To facilitate comparison with Applicants' testimony, in this and the following sections I utilize the data from the Chemical Properties Synopsis employed by Applicants, as found in their work papers at N04-110046-51. This data is consistent with my knowledge and experience.

High Density Polyethylene is a highly crystalline, lightweight thermoplastic resin. Outstanding characteristics are chemical resistance, toughness (even at low temperatures), dielectric properties, water vapor impermeability and relatively high softening temperature. HDPE can be processed by all melt forming methods, including extrusion, injection molding, rotational molding, blow molding and powder coating. The dominant fabrication process is blow molding, and is typified by the

ubiquitous semi-opaque milk bottle. Growing end uses are found where HDPE has begun to replace paper in many packaging applications, most prominent being merchandise and grocery bags. HDPE is the largest volume produced U.S. resin.

HDPE End Use Pattern - 1994 Data Estimates

Derivative	Percentage	Derivative	Percentage
Blow Molded Bottle	26	Extruded Pipe	8
Ind. Containers/Tanks	24	Consumer Containers	4
Packaging (Film & Bags)	20	Wire & Cable	2
Misc. Film & Sheet	6	Miscellaneous	10

Low Density or high pressure conventional polyethylene (LDPE) is generally the softest and least crystalline of the polyethylenes. It is customarily sold in pellet form. LDPE is widely used in applications requiring clarity, inertness, processing ease, sealability, moisture barrier and good electrical properties. It can be fabricated by all thermoplastic processes. LLDPE or Linear Low Density Polyethylene is acquiring market share from LDPE due to it being less expensive to produce while maintaining many of the same qualities as LDPE. For this review we are combining LDPE and LLDPE as one. End uses are many; however, blown and cast film are by far the largest. Wire and cable coating was the original application.

LDPE End Use Pattern - 1994 Data Estimates

Derivative	Percentage	Derivative	Percentage
Blown & Cast Film	68	Wire & Cable	4
Injection Molding	8	Rotational Molding	4
Extrusion Coating	8	Miscellaneous	8

Polypropylene (PP) is a thermoplastic polymer of propylene with a low specific gravity. A unique molecular structure gives PP high stiffness, good tensile strength and resistance to acids, alkalis, and solvents. Principal advantages of PP are toughness, light weight, chemical resistance, good heat resistance and an almost unlimited modification potential through additives, fillers, and reinforcements. PP is

*While Mt. Belvieu is a closed Southern Pacific point, the Union Pacific has secured build-in authority from the ICC. Although the Union Pacific line to Mt. Belvieu has not been constructed, Applicants have treated Mt. Belvieu as jointly served in the Agreement with the BNSF.
***LLDPE/HDPE Swing capacity dedicated to HDPE - various locations (1900).

LD/LLD Polyethylene

Producer	Location	Millions of Lbs 1995 Capacity LDPE	LLDPE	Carrier
Chevron	Cedar Bayou, TX	630	440	SP Closed**
Chevron	Orange, TX	290		UP/SP Joint
Dow	Freeport, TX	625	550	UP Closed
Dow	Plaquemine, LA	425	960	UP Closed
Dupont	Orange, TX	545		UP/SP Joint
Dupont	Bloomington, TX	265		UP Closed
Eastman	Longview, TX	625	250	BN/UP Joint
Exxon	Baton Rouge, LA	650		IC*
Exxon	Mt. Belvieu		1300	SP Closed**
Formosa Plastics	Point Comfort, TX		440	UP Closed
Lyondell Polymers	Bayport, TX	125		SP Closed
Mobil	Beaumont, TX	500	1200	UP/SP Joint
Quantum	Clinton, Iowa	430		CNW
Quantum	La Porte, TX	395	85	SP Closed
Quantum	Morris, IL	540	300	CSXT
Quantum	Port Arthur, TX	190	250	SP Closed
Rexene Polymers	Odessa, TX	410		UP Closed
Union Carbide	Seadrift, TX	500	1500	UP Closed
Union Carbide	Taft, LA		1120	UP Closed
Westlake Polymers	Lake Charles, LA		850	SP/KCS Joint
	Totals	7995	6495	

*Exxon at Baton Rouge is shown as being served by IC; however, KCS has secured authority from the ICC for build-in. **Chevron at Cedar Bayou and Exxon at Mt. Belvieu are shown as SP Closed; Union Pacific has secured authority from the ICC for build in. Although this line has not been constructed, Applicants have treated both Cedar Bayou and Mt. Belvieu as jointly served in their Agreement with the BNSF.

***LLDPE/HDPE Swing capacity dedicated to HDPE - Various locations (1900)

Polypropylene (PP) - Millions of Lbs

Producer	Location	1995 Capacity	Carrier
Amoco	Cedar Bayou, TX	620	SP Closed**
Amoco	Chocolate Bayou, TX	1000	UP Closed
Aristech	La Porte, TX; Neal, WV	640	PTRA Open
Eastman (Huntsman)	Longview, TX	500	BN/UP Joint
Epsilon Products	Marcus Hook, PA	360	Conrail
Exxon	Baytown, TX	1020	UP/SP

Fina	La Porte, TX	1000	PTRA Open
Formosa Plastics	Point Comfort, TX	490	UP Closed
Himont (Montell)	Bayport, TX	1040	SP Closed
Himont (Montell)	Lake Charles, LA	1160	SP/KCS Joint
Huntsman	Woodbury, NJ	400	Conrail
Lyondell Petrochemicals	Bayport, TX	300	SP Closed
Novacor (Huntsman)	Marysville, MI	120	CSXT
Phillips / Simika	Pasadena, TX	500	PTRA Open
Quantum	Morris, IL	300	CSXT
Rexene	Odessa, TX	180	UP Closed
Shell	Norco, LA	300	UP Closed
Shell / Carbide	Seadrift, LA	200	UP Closed
Solvay Polymers	Deer Park, TX	440	UP Closed
	Total	10,570	

Based on the foregoing, it is evident that (a), approximately 97.4% of the production of HDPE within the United States is confined to Texas and Louisiana. The remaining 2.6% being produced in Clinton, Iowa is served locally by the CNW, a member of the Union Pacific Rail family; (b), approximately 88% of LDPE production is confined with the states of Texas and Louisiana, while over 95% of the LLDPE production is within these two states. We must also remember that Clinton, Iowa which represents a significant portion of the remaining capacity is served by CNW; and (c), approximately 86% of the production capacity of Polypropylene is confined to the states of Texas and Louisiana. Thus, using the data presented above we can quickly calculate the geographical concentration of plastics resins within the states of Texas and Louisiana to be in excess of 92%. Therefore, any potential harm to a competitive rail transportation environment in Texas and Louisiana, greatly affects the plastics producers, downstream industries and the consuming public.

C. Review of Carriers Serving the Market and Breakdown of Account Access: To help us understand the extent the Union Pacific / Southern Pacific merger would have on the competitive rail transportation environment, I have assembled the

following data on both the U.S. Domestic market as well as the Gulf Coast Plastics Producers. Exhibits 1 through 5 provide a look at the U. S. Domestic market while the remainder of the Exhibits focus on the Gulf Coast plastics market. Each chart provides a listing by production facility and location, by the current railroad providing service and whether that facility is either open or closed to competitive service, production capacity and an estimation of the annual rail volume shipped. We will refer to these same general categories and exhibits throughout our review, especially Exhibits depicting a combined UP/SP rail system, noting that it would have access to nearly 90% of the plastics resins produced in the Gulf Coast through either exclusive service (captive to UP/SP) or open to competitive access.

If we break UP/SP's market access down one step further we will find that approximately 64% of the plastic resin market for polyethylene and polypropylene is served exclusively by UP/SP and no other rail carrier prior to any conditions granted. The conditions provided for by Applicants to BNSF will include service to resins producers on the SP Baytown branch, Exxon at Mt. Belvieu, Chevron and Amoco at Cedar Bayou, along with Mobil at Amelia (Beaumont) and Chevron and Dupont in Orange, TX. On the surface, the BNSF's access will reduce UP/SP's exclusive service to nearly 40% of the plastics resins production capacity. However, we follow this discussion by looking at the potential leverage UP/SP have in their negotiations with the resins producers.

In reviewing the Applicants' verified statements, (example Mr. Peterson page 239, 245; Mr. Barber page 501, etc.), it is suggested that industry, in its efforts to obtain the best possible transportation rates and services, will leverage multiple plants

or commodities in "package deals" at the same or different geographical locations to the rail carrier(s) when possible. Applicants feel that this practice possesses considerable effective bargaining power that represents an additional constraint on rail rate increases at sole served locations. We examine the flip side of this theory by pointing out that a rail carrier, in its efforts to maximize volumes and revenues from individual customers, has the power to leverage its sole served locations as an effective tool in securing transportation volumes and revenues from multiple plants or multiple commodities in "package deals" at the same or different geographical locations when possible. This power is very effective in carrier negotiations with its shipper customers.

In assessing BNSF as a potential replacement for the competitor lost if the UP/SP merger is approved, it is necessary to develop an understanding of the strengths and weaknesses of the respective parties along with the issues that they must secure in the final outcome, just as each party, producer and rail carrier, do before entering into negotiations. As a condition of the UP/SP merger, BNSF would be given access to Exxon, Mt. Belvieu and E. Baytown, Chevron at Eldon and Orange, Dupont at Orange, Amoco at Cedar Bayou (Eldon) and Mobil. Using the rail strategy as outlined above in leveraging a single served facility in gaining multiple plant or multiple commodity "package deals", we find that while BNSF will gain competitive access to both of Exxon's facilities, UP and Exxon have long been rumored to have agreed to a multiple year contract covering the majority of production of both facilities as a condition of the UP Mt. Belvieu build-in. While BNSF will gain access to both Dupont at Orange and Amoco at Cedar Bayou, both of these producers have

additional resin production facilities "captive" to the UP/SP at Bloomington and Chocolate Bayou, respectively, leaving only Chevron and Mobil remaining without reliance on UP/SP in the resins area. Exhibit 6 is provided to allow us to get a better picture of carrier leverage the Gulf Coast resins market. This Exhibit shows that for three of the five producers, the exclusively served facility or facilities have equivalent or greater volumes than the competitively served plants, thus allowing the carrier's leverage to be effectively employed.

3. Concentration and Geographical Location of Value Added Suppliers and Receivers

The concept of single line service is not new to either the railroads or those who use rail. Single line service has been one of the contentions used throughout recent history for rail consolidations. Both end users and those providing value added services such as grinders, packagers, colorization, etc. have employed the knowledge of these benefits in choosing a site or location to establish their downstream business. This is evidenced by Mr. Gray's statement where shippers place a premium on single-line service, to maximize speed and reliability and focus performance responsibility on a single carrier along with the elimination of time consuming interchange, possible movement errors and waybill exchange, switching charges, etc. (Mr. Gray pages 201,202, Mr. La Londe page 382, Mr. Peterson pages 42,43, 71,111).

Referring back to the earlier exhibits, UP/SP have long held a dominant position in servicing the plastics resins producers. With this knowledge in hand, those doing business with or receiving product from the various producers often have located on the Union Pacific and Southern Pacific. Again, the intent is to take

advantage of possibly lower rates by avoiding multiple rail rate factors, reciprocal switching charges, etc., and to obtain better service by avoiding multiple rail interchanges, blocking and switching. The value added services provided by the grinders, packagers, colorizers, etc., play a vital role in the resins market and to each individual producer in their domestic and export sales efforts. And of course, providing the end users such as extruders, molders, etc. with a quality product, competitive price and timely service is equally important. While UP/SP have attempted to address the competitive access to the so-called "2 to 1" shippers though a proposed agreement with BNSF, the BNSF face an embedded constraint by the virtue that the BNSF will not have access to the end users and value added suppliers which are located on the UP or SP's lines. According to a map published by Census, (a New York firm that tracks plastics usage and consumption), the largest concentration of plastic end users are located in the Northeast, followed closely by California and Texas, the latter being geographical strongholds for the combined UP/SP system.

The question we must ask is, will competitive access at origin alone be enough to offset the historical settlement of both value added suppliers and end users on the UP/SP system, allowing BNSF or any other carrier to become an effective competitor? Applicants themselves assume that BNSF would capture no more than 10% of traffic to UP/SP served destinations, and possibly 50% to eastern gateways from competitively served UP/SP and BNSF origins. The latter assumes producers will split their traffic even where other traffic may predominantly flow to UP/SP destinations, a conclusion which is not demonstrated or supported by experience.

4. Review of Modal Competition

Throughout Applicants' filing, alternative sources of competition play a vital role in seeking to assure industry that a combined UP/SP will be held in check. These alternative sources of competition come in the form of ocean, barge and truck transportation. While each may be used by the chemical industry generally, I believe it is important to focus our attention on the plastics industry specifically and further not only on the historical use of these alternative means but also the physical layout of plants and their capability of loading resins via these alternative modes. To do so we must first look at the physical layout of plastics resins plants and their almost complete reliance on rail and rail equipment, and also in how resins are produced and stored.

Industry averages provide us with the knowledge that the average plastics shipment weighs approximately 179,000 lbs. via rail, moving an average of 1000 miles from origin. Assuring product integrity and minimizing handling to insure purity and product performance are of utmost important. Customers require specific product compositions to meet production standards along with timely delivery to maintain operations. To meet the demand for customer product specifications, resins producers may in any given period of time have to produce multiple grades of each resin. A producer's customer base usually consist of large amount of customers usually requiring a relatively small volume of product per year. Therefore, to avoid continual production changeover as to product makeup and the high costs associated with plant idling, producers forecast the demand/sales or amount of each specific

product anticipated during a specific period of time, usually 90 to 120 days, and produce in what is referred to as product runs. These product runs are usually at a minimum of 6 to 10 cars and can go much higher in volume. To produce such a variety of products, with varying characteristics, to eliminate or reduce the large cost of plant shutdown or change over from one product to another, an attempt to find an economical way to store each product individually became very apparent. It was obvious that construction of multiple storage silos that could meet and maintain the high product integrity standards was economically not feasible, not to mention the requirement to shuttle product from production to each silo and then establish a network allowing access to load from these silos.

To accomplish these tasks, to insure product integrity, minimize the need for multiple storage silos or facilities, along with provide the producers with a vehicle to effectively transport their product to the end users, the rail car was adopted as the primary means of not only transportation but storage . Producers are almost totally reliant on the rail car for loading production, storage track for both loaded and empty cars, and movement to final destination and return of empty cars.

While ocean and barge carriers may play a vital role in the movement of chemicals in general, for commodity products which are used as basic raw materials and move to water-based production facilities, these circumstances do not apply to polyethylene and polypropylene. Also, while there is a relatively small share of product moving via truck, most likely it first began its journey via rail and subsequently is transferred from a rail car in order to service a non-rail customer, to meet an emergency shipment need (often due to the failure to achieve timely delivery

BEFORE THE
SURFACE TRANSPORTATION BOARD

Finance Docket No. 32760

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD COMPANY
AND MISSOURI PACIFIC RAILROAD COMPANY

--CONTROL AND MERGER--

SOUTHERN PACIFIC RAIL CORPORATION
SOUTHERN PACIFIC TRANSPORTATION COMPANY, ST. LOUIS
SOUTHWESTERN RAILWAY COMPANY, SPCSL CORP. AND THE
DENVER AND RIO GRANDE WESTERN RAILROAD COMPANY

Verified Statement
of
Thomas D. Crowley
President
L. E. Peabody & Associates, Inc.

On Behalf of
The Society Of The Plastics Industry, Inc.

Due Date: March 29, 1996

TABLE OF CONTENTS

LIST OF EXHIBITS

I. INTRODUCTION

My name is Thomas D. Crowley. I am an economist and President of the economic consulting firm of L. E. Peabody & Associates, Inc. The firm's offices are located at 1321 Cameron Street, Alexandria, Virginia 22314. My qualifications and experience are attached as Appendix A to this verified statement.

I have been requested by The Society of the Plastics Industry, Inc. ("SPI") to review the Railroad Control and Merger Application filed by the Union Pacific Railroad Company ("UP") and the Southern Pacific Transportation Company ("SP") before the Surface Transportation Board ("STB") in Finance Docket No. 32760 and evaluate its impact on the existing competitive transportation flows of polyethylene (STCC 2821142) and polypropylene (STCC 2821139) from Texas and Louisiana origins

My analysis is based on my review of the UP/SP's merger application and supporting workpapers, the 1994 Costed Waybill Tape provided to me by the ICC, the workpaper's supporting the BNSF's December 29, 1995 submission in this proceeding, UP/SP responses to interrogatories, BNSF responses to interrogatories, and the settlement agreements between UP/SP and several western railroads (including BNSF). Certain of the analysis presented in this statement are identical to those I have undertaken on behalf of the National Industrial Transportation League and the Chemical Manufacturers Association. Others were undertaken for SPI alone.

The remainder of this Verified Statement summarizes the results of my research and is organized under the following headings:

II. Summary and Findings

III. Geographic Competition for Polyethylene and Polypropylene

IV. Calculation of HHI Values

V. BNSF Is Not An Effective Replacement For Merging Railroads

II. SUMMARY AND FINDINGS

Based on my review of the UP/SP merger application as well as the workpapers and data submitted by UP/SP and BNSF, my findings and conclusions are as follows:

1. The merger of the UP and SP will cause major competitive harm to western shippers, even if the provisions of the UP/SP-BNSF settlement agreement are made a condition of the merger.

2. After the UP/SP merger, UP/SP will control a 60% of the U.S. production of polyethylene and 47% of the U.S. production of polypropylene.

3. After the UP/SP merger, UP/SP will control 63% of the Texas/Louisiana rail originations for polyethylene and 62% of the Texas/Louisiana originations for polypropylene.

4. The post merger BNSF access to UP/SP jointly served origins would equal 7% for polyethylene and 9% for polypropylene.

5. Based on UP/SP data and data provided by SPI members, the market concentration as determined by the Herfindahl-Hirschman Index ("HHI") is well above the threshold for "highly concentrated" as shown in the following tabulation.

Item (1)	HHI Polyethylene (2)	HHI Polypropylene (3)
1. Before Merger	2,440	3,275
2. After Merger	4,075	5,778
3. Change	1,635	2,503

Source: Exhibit_(TDC-2)

6. BNSF's witness Lawrence estimates that the UP/SP-BNSF settlement agreement will provide BNSF access to $1,812 million per year. When properly restated, BNSF's market access will equal $258 million per year. BNSF's revenue per mile from the market access is substantially less than BNSF's system average revenue per mile and cost mile as shown below:

Item (1)	Amount Per Mile (2)
1. Market Access Revenue	$67,990
2. BNSF System Average	
a. Revenue	$246,369
b. Costs	210,316

Source: Exhibit_(TDC-3)

7. The BNSF will not have sufficient traffic available to operate trains efficiently over the Houston-Memphis corridor. Traffic available to BNSF, including the rerouting of traffic from BNSF's own lines, will equal 1.2 million tons per year or an equivalent of 0.6 loaded trains per day. In order for BNSF to operate this line segment, BNSF will require aggregate investment for infrastructure of $97.5 million ($19.0 million per year).

8. The BNSF's costs of moving plastics between Houston and St. Louis, utilizing the Houston-Memphis Corridor, exceed the variable costs incurred by UP or the variable costs of BNSF when routed over its own tracks. The BNSF's variable costs equal $9.85 per ton over the Houston-Memphis Corridor and $8.86 per ton over its own tracks. The UP's variable costs between Houston and St. Louis equal $7.56 per ton. Thus, the floor for competitive prices after the merger will be raised.

9. BNSF's compensation to UP/SP for trackage rights exceeds the UP/SP's variable costs and provides a profit for the landlord (UP/SP). In addition, the adjustment mechanism for the trackage rights compensation based on 70% of the change in the Rail Cost Adjustment Factor, excluding productivity ("RCAFU") exceeds the UP's and SP's actual change in costs, thus providing a further windfall to UP/SP. The adjustment mechanism which most closely tracks actual cost changes is the Rail Cost Adjustment Factor, including productivity ("RCAFA").

III. GEOGRAPHIC COMPETITION FOR POLYETHYLENE AND POLYPROPYLENE

The movement of plastics (STCC 28211) is characterized by long distances and comparatively heavy loads. Because of these characteristics, the plastics industry is dependent upon rail transportation for the vast majority of volumes moved throughout the country. In fact, the very commerce of the industry would come to a halt without efficient and reasonably priced rail transportation.

Exemplary of this dependence are the 295,788 carloads or 26,002,952 tons of plastics moved by United States railroads in 1994. The average load per car weighed 87.9 tons and was transported 974 miles. The Louisiana Texas Gulf Coast region produced 207,580 carloads involving 18,476,236 tons. Average Gulf Coast lading was 89.0 tons per car and the average length of haul was 1,029 miles.

This section of my verified statement addresses the impact of the UP/SP Merger on the chemical industry in the Gulf Coast area (i.e., Texas and Louisiana). In particular, this statement focuses on Polyethylene (STCC 2821142) ("PE") and Polypropylene (STCC 2821139) ("PP".)[1/] Of the 24 STCC 28 chemical commodities studied by UP witness Peterson, Polyethylene and polypropylene comprise 48 percent of the UP/SP originated STCC tonnage in 1994,[2/] a substantial portion of the total U.S. and Gulf Coast plastics traffic summarized above.

1/ Two (2) STCC groupings (STCC 2821144, Plastics, resins or gums, NEC, other than liquid, and STCC 2821163, Plastic flakes, granules, lumps, pellets, powder or solid mass, other than expanded) reflect generic classifications for plastics and are generally assigned to the PE and PP STCC codes. I have therefore assigned tonnages from these two groupings to PE and PP based on a distribution of tonnages for all plastics.

2/ Witness Peterson's originated tonnage shown in Table 24 of his statement (page 235) equals 23.1 million tons of which polyethylene and polypropylene comprise 11.2 million tons.

of a rail car), or packaged and loaded into containers needing to be shuttled to the port.

Little has changed throughout the years from the original concept of almost complete reliance upon the rail system for the resins producers. More chemically specific grades are demanded by customers, increased demand on just in time deliveries, along with constant pressure on cost of goods provided. Resins producers perhaps are more dependent on rail now than their earlier predecessors due to an increased variety of products demanded by their customers. No other form or combination of transportation alternatives can provide the services currently offered by rail. Rail is the most economical and efficient means of providing product storage, minimization of product degradation and contamination, and effective long haul transportation. To meet their needs, the producers maintain their own rail fleets, which they own and/or lease.

Since we have discussed the producers' reliance upon rail, we should also include those of the end users. As mentioned earlier, product requirements for each end user or application usually vary in composition and volume. A typical receiver purchases a limited supply of product, with the volume ranging from as little as 3 or 4 carloads per year to as much as several hundred. Each product purchased must have exacting requirements in order to meet final product performance expectations. End users, once again, are usually characterized by requiring each product be produced with a specific chemical composition designed to meet specific performance needs; have limited on-site storage capability; require just in time inventory supply, are located on rail in order to receive the advantages of rail transportation; universally

accept a rail car load as the industry standard order quantity, and utilize the rail car as their "rolling silo/warehouse".

From both the producer/shipper and the end user/receiver standpoint, rail continues as the dominant means of resin storage and transportation. No other means can be substituted or supply the multitude of logistics characteristics that rail represents.

5. Current Plastic Storage Capacity in the Gulf Coast

As described above, plastics resins frequently move from production directly into storage until assigned or sold to a customer. Therefore, storage capacity is critical to serving the plastics industry. We start our discussion concerning plastics storage by identifying the 3 basic types of storage made available to the producers by the railroads, predominantly UP and SP. These three basic types are random, strategic and Gulf Coast preferred site. A brief explanation of each is in order.

Random storage is by its very nature cars placed wherever track space is available without plan or design. Strategic storage can be defined as initially moving the loaded car to a forward point or trackage available near a gateway interchange point or a geographical location nearer the intended eventual customer. Gulf Coast preferred site is a large facility either specifically designed or operationally adequate to handle the storage of plastic resin cars in close proximity to the producers. A well know example of the Gulf Coast preferred storage is the Dayton, Texas yard placed into service by SP in 1994. The advantage and disadvantages of each are presented in the below table.

Random		Strategic		Gulf Coast Preferred Site	
Advantages	Disadvantages	Advantages	Disadvantages	Advantages	Disadvantages
No Initial Capital Investment	Remote Storage - Unreliable Switching	Closer to Market	Limited Return to Plant	Maximum Inventory Control	Capital Investment
	High Cost - Out of Route Miles	Reduced Cycle Time	Limited Sampling Ability	Reduction in Car Handling	
	No Inventory Control	Reduced Congestion in Gulf Coast	Limited Product Access / Transloading	Security	
	Derailments, Product Liability	Some Capital Investment	Out of Route Miles	Network Designed for Large Block Shipments	
	Potentially Large Service Delays		Extra / Multiple Handling	Third Party Switching "Cost Reduction"	
	No EDI Capability		Locations Not Integrated with Existing Network	Close Proximity to Plant	
	Multiple Handling		Derailments, Product Liability	Sampling, Product Return Economies of Scale	
	No Service Design		Unreliable Transit / Switching	Reduced Derailments, Product Liability	
	Lost Cars		Limited Inventory Control	Reduced Lost Car Occurrences	
	No Sampling Ability		Limited Operational Efficiencies	Simplified Billing Process	
	Limited Return to Plant		Requires Shipper to Forecast Lost Cars	Reduced Switching Cost	
				Improved Locomotive / Crew Utilization	
				Operational Flexibility	

The ability to provide storage for plastics rail cars is vital to the operations and success of both the resin producer and the rail carrier. Applicants are well aware of this nearly total reliance on rail carrier storage facilities as evidenced in the remarks of Mr. Gray, (pages 200, 204, 227), Mr. La Londe, (pages 372, 377), Mr. Peterson, (page 65) and Mr. Willig, (pages 585, 619 and 625). Having a clear

understanding of the role that plastic storage plays in the production, sales, and transportation delivery of resins is critical to an analysis of a carrier's ability to compete in the Gulf Coast plastics market.

While the percentage of resins utilizing storage varies, in general between 30 and 50% require storage. Putting this into perspective, production capacity figures for polyethylene and polypropylene are approximately 36.6 billion lbs. annually, or in excess of 203,000 rail cars. Using 40% as our average of resins utilizing storage, we find that nearly 81,200 carloads utilize some form of rail storage, provided by industry, by railroads, by third parties operators, or by the end users. Taking this into consideration, to be an effective competitor, a rail transportation service provider must have the ability to store loaded plastic cars commensurate with its customers' volume requirements. While this discussion focuses on loaded cars, similar operational capacity and storage ability needs to be present for empty rail cars as well.

The next logical step is to identify and analyze the ability of each carrier to provide such storage. In Exhibits 7 through 9, each carrier's plastic storage capacity is presented. A stand alone Union Pacific represents or provides approximately 30% of total dedicated plastic storage capacity within the Gulf Coast; Southern Pacific represents or provides approximately 54% of the total dedicated plastic storage, while BNSF represents approximately 16%. (See Notes to Exhibit 9.) Knowing the resins producers' reliance upon available storage, it is necessary to consider, if the proposed combination of UP/SP is approved, is there indeed a competitive alternative to UP/SP for plastics resins producers realizing the combined UP/SP system accounts for

approximately 84% of the available Gulf Coast plastic storage?

To keep this important aspect of assessing the BNSF's ability to compete within the Gulf Coast resins market, it is necessary to review the various statements filed by the Applicants. Mr. Gray (page 204) states that due to reduced inventories, stricter production discipline, product customization and just in time controls, customers demand high service levels. Plastics producers use rail cars for storage for their increasingly customized products, requiring carriers to provide space to hold and manage the inventory of such cars until an order is placed. Mr. La Londe (page 377) states an emerging factor in transportation being "one stop shopping", as related to the plastics industry, storage for loads and empties, sampling, transloading, warehousing, packaging, operational support and inventory management are essential ingredients of rail service. Mr. Peterson (page 65) states shippers of bulk commodities, such as plastics, often need storage on railroad yard tracks. Storage allows plants to run at capacity and product to be readily available for prompt movement to various markets as market price and demand change. Mr. Willig (pages 619 and 624) follows by saying while price is a key component of competition, storage for plastics represents another major dimension of non price competition between railroads... non price competition tends to be dynamic.

Since a combined UP/SP represents 84% of the available storage for plastics resins in the Gulf Coast and considering that BNSF already serves a small portion of the plastics industry, commensurate with its storage capacity, the trackage rights alone do not make BNSF competitive for the plastics traffic opened to them by the UP/SP - BNSF Agreement. What can best be described using the "chicken and egg" analogy,

BNSF would most likely require customer volume commitments in advance of investing in plastics storage facilities. The customer on the other hand would most likely require BNSF to have adequate storage facilities in place in order to commit the volumes. Since construction time tables would vary upon the location, permitting, construction and size or capacity of facility designed, it is safe to say any decision made would require a substantial amount of time and must coincide with BNSF's ability to attract the customer's business along with the customer's ability to use BNSF due to prior transportation commitments.

6. Current Operational Capacity in the Gulf Coast

Coupled with plastics storage, I believe it is also relevant to examine the operational support and capacity that each carrier holds within the Gulf Coast. Not only will an effective competitor have the ability to provide adequate storage capacity, that same carrier must be able to provide the operational support and capacity to effectively and efficiently handle the large volumes of traffic available. Based upon my operational familiarity related to my marketing responsibilities, I prepared Exhibits 10 through 12 to help understand the operational capacity of both BNSF and UP/SP. A combined UP/SP will possess 87% of operational capacity as measured in carloads while BNSF provides roughly 13%. Perhaps one reason for this disparity is that while the BNSF has a presence in the Gulf, much of the traffic is terminating grain, fertilizer, and coal traffic, moving in trainload or unit trains; and those services do not require substantial operational support.

Taking into account the combination of factors discussed earlier, we find that a

combined UP/SP rail system would have access to over 90% of resins production, through providing either exclusive rail service or at competitive points, UP/SP would provide and control over 84% of plastic storage, and UP/SP would provide and control over 87% of the operational capacity and support within the Gulf Coast Chemicals market. In direct comparison, BNSF currently has access to 23% of the resins production, mostly via service at competitive points via the PTRA, provides approximately 16% of the plastic storage and only 13% of operational capacity and support. As a condition of the proposed merger, BNSF would be granted competitive access to a larger total of production capacity, however; its plastic storage capacity and operational ability would not increase accordingly. In order for a rail carrier to truly represent a competitive alternative, the ability to provide a competitive price must be coupled with the ability to provide adequate storage capacity and the ability to effectively and efficiently handle the traffic once tendered to it. This "ability" takes on a combination of many forms, locomotive power, crew, mechanical support and maintenance, territorial knowledge as well as the more obvious items of storage and yard support I have just discussed.

7. Potential Effects of the UP/SP Merger on the Competitive Environment

From my experience both within and as a customer of rail service providers, rail transportation pricing is much like that of any other product. A product is marketed and sold based on the value that it provides to the consumer. It is often categorized by the statement, price is determined by "what the market will bear".

To determine market price, both carriers and customers must first develop

their goals or objectives to achieve. This can be done corporately, via a geographical market, a commodity line, by individual customer, or by a combination of all the above. Seldom is a pricing policy "set in stone"; rather, general goals are determined allowing flexibility in implementation of a plan. The key to a successful pricing effort is in the preparation of strategy. It is in this area that competition plays a vital role in determining market price.

When dealing within the plastics resins market, the primary pricing instrument is contracts. These contracts may cover not only the price for the services being provided but also a detailed outline of the services to be provided, along with time stipulations for these services. In exchange, the carrier, at an agreed to price, is usually awarded a volume percentage of business, providing the carrier a stable revenue stream along with a predictable volume base to operate within. Before entering these contract negotiations, carriers, as well as their customers, develop individual review processes to determine their position. This is usually recognized as a strength/weakness relationship. For example a rail carrier preparing to enter into negotiations for available transportation of loaded plastics cars would most likely research the following areas. Perhaps the first step would be a determination of how the available traffic would fit into the current directional flow of operations. For example, if the majority of the traffic originating in the Gulf Coast moves via the New Orleans gateway for interchange with a southeastern carrier and the current line is underutilized, this additional volume may be warranted to increase operational efficiencies. This traffic, Gulf Coast to New Orleans, then fits the carriers needs. The next steps can be summed up under the area of operational capability. Are there

existing resources available to handle this potential volume, such as plastics storage capability, operational yard support, locomotive power, etc.; if so, the process continues. Once the customer's traffic has been determined to be a "good fit" for the rail carrier, the next step leads toward developing the competitive market environment. By listing customer expectations, requirements and/or carrier responsibilities that must be provided, an in depth competitive review takes place.

Since the resins producers are almost exclusively reliant upon the usage of rail cars for loading, storage, shipping, etc., there is a severe handicap on other forms of transportation. Although transportation of resins may touch a variety of forms in the final delivery, it almost always revolves around a railroad for the origin movement. Although reviewed and analyzed as to the costs associated with providing alternative service (especially if a production facility is serviced exclusively by a single rail carrier) via motor carrier, transloads, or water, these modes seldom compete effectively with rail, especially at the typical lengths of haul. The attention is then shifted toward rail alternatives. Each carrier is analyzed as to their ability to provide the services required. This could include ability to provide local plant switching at time specified, storage for both empties and loads, operational support to handle the volume efficiently, effectiveness of the route taken to reach either gateway interchanges or customer base, percentages or volume of destination of on-line served customers and "in-transit" value added suppliers, geographical reach and service into the areas of heavy concentration of end users, along with a past experience or market knowledge of each carrier's pricing habits; and last but not least, any potential leverage each carrier may possess.

The consolidation of UP/SP adds up to considerable strength when you bring into the mix their ability to access both competitive and single source positions, operational capacity, storage capacity and geographical coverage of end users. A carrier's ability to differentiate its services from the others within the market creates additional value. It is also important to remember that pricing strategies can themselves be differentiated under the concept "what the market will bear" and further refined into several other key areas, such as; a) exclusively served production facilities where effective rail competition is not readily available, the competition may then take on the form of another competing facility on another rail carrier; b) production facilities that are competitively served by more than one railroad in direct competition for the shipping volumes, is an area where value added services can distinguish rail carriers; c) overhead business where a carrier is utilized to transport or bridge traffic between a carrier originating and the terminating carrier and is usually incremental in nature; d) interline received traffic, i.e., traffic that originates on a carrier other than the destination serving carrier, terminating on its points, where caution can be placed to avoid a reduction in revenue or position on the account that may be served from a production facility on the destination carrier's line. Each instance may have its own unique set of circumstances to develop the carriers' competitive pricing position.

Staying within the principle that price is determined by what the market will bear for the services provided, Applicants provide a few common examples they have experienced on the Southern Pacific (Mr. Gray pages 218, 219), and they are well aware of the limits the market sets on pricing or compensation under these limitations

mentioned due to poor cycle times, irregular service and/or service failures, and where the customer is faced with paying a premium for transportation services needed. However we also must keep in mind the limitations that can be placed upon a shipper or industry when, for example, an industry such as the plastics resins industry is reliant upon rail service, often finds itself with one or more of its production facilities locally served by a single carrier, is reliant upon that carrier for rail car storage and of course transportation to the end user. Pricing leverage can shift quickly in the favor of the rail carrier when competitive alternatives are not present.

We must therefore determine a carrier's ability to compete; and in the specific case of the Gulf Coast plastics resins markets (polyethylene and polypropylene), the competitive environment is created by a combination of logistical factors. While much focus is placed on the ability to set a price, perhaps more emphasis should be placed on its ability to perform the value added services needed by the plastics industry. The examples provided by the Applicants refer to Southern Pacific setting their price by their inability to provide efficient services to meet customer demands. If this same logic is then continued within the market place, it stands to reason that pricing strategies will increase in direct correlation to a carrier's ability to provide enhanced services. Carrier costs are not the primarily consideration in either example since the carrier will price to what the market will bear. If a carrier's costs rise and competitive market factors will not allow that carrier's price to rise and still participate within the market, most likely the carrier will absorb the rising cost. If a carrier's cost decreases due to productivity gains, and the market price remains stable,

the carrier will most likely enjoy the increased return. While cost is a key factor in pricing activity, the market price for services rendered plays an equally if not more important role. Just because a carrier's cost either rises or falls does not provide an indication as to how that change will affect the consumer. As noted, taking into consideration the reduced price Southern Pacific offered, since it could not provide the necessary services required by customers, the customer was forced to find an alternative means, and in this case, at a much higher cost of services. The reduced pricing by SP was brought about by a lack of adequate services. If UP/SP can improve those services to an adequate level, and do so at a reduced cost due to their combined efficiencies, with the knowledge that the market will pay a premium for those services, it can either reduce transportation rates or instead increase them based on what the market will bear.

8. Impact of the Agreement with BNSF

Understanding the potential competitive ramifications that the proposed merger between Union Pacific and Southern Pacific would create, the Applicants negotiated with several potential alternative service providers, settling upon the BNSF as the primary candidate. In terms of geographical size, gateways they serve and having some presence in the Gulf Coast, BNSF was selected by UP/SP as the replacement competitor in comparison to the size and scope a combined UP/SP system would create.

To be able to agree that in fact BNSF provides an effective alternative to UP/SP, it is necessary to understand and analyze BNSF's ability to compete.

Looking specifically at the Texas/Louisiana Gulf Coast region, the UP/SP - BNSF Agreement consists of a combination of trackage rights and line segment purchases. These trackage rights are overhead bridge rights, subject to customer access which is limited in scope to new or existing industries that would lend themselves available as to both UP and SP service. They limit BNSF's ability to build or extend trackage from these rights to new or existing industries that may be local on UP or SP. BNSF has been provided the option of either providing switching services direct to the customer, or providing service through reciprocal switching provided by UP/SP or via the use of an approved third party.

BNSF will acquire gateway access to New Orleans and a much shorter route to Memphis. (BNSF must operate bi-directionally on the UP/SP Southbound line.) BNSF will be granted access to the Tex-Mex and thus the Laredo gateway along with other trackage and facility use to improve its position to the fast growing Mexico - United States market. The Agreement provides that each party will treat, without discrimination, the other's traffic and handle it in a like fashion as they would had it been their own.

Earlier, we examined both the operating support and capacity that BNSF currently has within the Gulf Coast along with dedicated plastics storage. Neither element allows the BNSF to effectively compete with a combined UP/SP. While land can be acquired and permitted, and eventually these types of facilities can be constructed, the cost for doing so and time for completion can be tremendous. The industry or customer's current needs, in many cases, will not allow large amounts of lead time. For those competitively served, transportation contracts are often for

varying lengths in term with three to five years as the industry norm, but with some much longer. Of course, while that traffic moving under existing UP or SP contracts is already precluded from BNSF participation until the expiration date, BNSF may be precluded from being a serious bidder on those contracts expiring within the near term due to the lack of ability to efficiently handle and store product. In normal business practice, the high cost of capital investment is usually supported by an adequate revenue stream in return. If this continues to be the case, a plastics resins producer must commit to using BNSF for a set period of time, at agreed upon rates and services, before BNSF would commit the necessary funding for facility construction. The customer in turn cannot jeopardize its current position knowing it has very limited alternatives to the existing facilities now being used, and therefore will be reluctant to commit to a BNSF alternative.

While the details of the Agreement have not been fully concluded, the parties have established a date of June 1, 1996 to do so and/or enter arbitration on the remaining issues, which will result in another 60 days before the final outcome is reached. This leaves many questions unanswered, but perhaps the following concerns in the existing data should be reviewed. BNSF, having a choice to either provide direct service, render service via reciprocal switching or, with UP/SP approval, use a third party contractor. BNSF has stated they are initially looking at contracting with UP/SP for a majority of switching services (Mr. Owen page 6). While they have the right to change the services provided with a set time period, they are limited to doing so only once in every 5 years and must pay any costs associated in doing so to the host carrier UP/SP. Throughout both Applicants and BNSF statements, single line

service has been demonstrated as the preferred means due to a variety of service and cost efficiencies. If BNSF relies upon UP/SP to perform these initial services, many of these same advantages may be lost to BNSF. Not only will they be dependent upon the services provided by UP/SP, but their control over the costs associated with these services will be severely limited. The UP/SP - BNSF Agreement provides for UP/SP to be fully reimbursed for its costs to provide switching services plus a reasonable rate of return. Since no figure has been provided, it is difficult to determine the extent of competitive impact this will have on BNSF. If BNSF chooses to perform the operational services required by their newly accessed shippers, it must heavily invested in an improved infrastructure to support the additional demand and traffic volumes. All of this takes both time and money. BNSF will most likely need the assurances of added volume/revenue to invest; however, shippers will most likely need the assurances of an operational plant and support services such as storage to be able to consider making a routing change. This circular chain on which commitment comes first could delay BNSF's ability to compete effectively within the Gulf Coast.

9. Conclusion

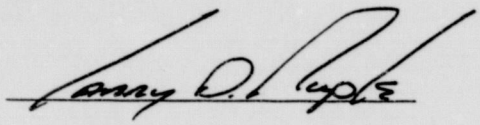
We have examined the overall plastics resins market of polyethylene and polypropylene and found that it is highly concentrated within the Gulf Coast. Therefore, any impact to a competitive rail environment would have significant impact on not only the plastics industry but also the consuming public. We have also reviewed production capacity of plastics resins and the location of that capacity by serving carrier(s) to identify a growing market and consumer demand to reinforce the

need for competitive rail balance. We looked at single line service. While not a new concept, this has played a key role in the settlement of downstream users for many years. Since UP and SP have been the dominant rail transportation suppliers to the plastics resins industry, resins consumers, in order to take advantage of single line service and the benefits it has to offer, often have located on the UP and/or SP. While BNSF may be granted access to new production, it is confined by virtue of its geographical coverage of the end users and/or value added suppliers. We looked at alternative mode competition and found almost a complete reliance on rail, rail car loading, storage of loaded and empty rail cars and, of course, transportation of product to final destination. No other form or combination of transportation alternatives can provide the services current offered by rail. When looking at plastics storage, a critical aspect and need of plastics resins producers, UP/SP possess a dominant position. Although additional plastic storage can be constructed or secured by BNSF, it comes on the back of volume commitments by plastics resins producers in what was phased as a "chicken and egg" analogy. The operational capacity as measured in car spots once again signals a substantial market position by a combined UP/SP having almost 7 times the capacity of BNSF in the Gulf Coast area. In examining the competitive effects the UP/SP will have on the plastics resins market we examined the strengths and weakness of each competitor, UP/SP and BNSF, in terms of pricing and value added service leverage, and found UP/SP to have considerable strength over any competitor or mode when bringing into the mix their ability to access both competitive and single source plant locations, operational capacity, storage capacity and geographical coverage of end users. And when we

assess the impact the UP/SP - BNSF Agreement would have on the competitive rail environment of the plastics resins market, although the two may compare in size and scope overall, under the current conditions in the Gulf Coast the BNSF will not render effective competition to the UP/SP, in substitution for the current environment.

Verification:

I, Larry D. Ruple, declare that the foregoing is true and correct as to the best of my knowledge. Further, I certify that I am qualified and authorized to file this verified statement, executed on this 20th day of March, 1996.



Larry D. Ruple

Total Plastics Resins Production

Exhibit 1

Domestic United States - PP/HDPE/LD/LLDPE

Company	Rail Service	Production Capacity MM's	Rail Volume at 180,000 lbs	Commodity
Amoco Cedar Bayou, TX	UP/SP - BNSF	620	3440	PP
Amoco Chocolate Bayou, TX	UP Closed	1000	5500	PP
Aristech LaPorte, TX	PTRA Open	410	2275	PP
Eastman Longview, TX	UP/BN Joint	500	2780	PP
Epsilon Products Marcus Hook, PA	Conrail	360	2000	PP
Exxon Baytown, TX	UP/SP - BNSF	1020	5670	PP
Fina La Porte, TX	SP/PTRA Open	1000	5550	PP
Formosa Point Comfort, TX	UP Closed	490	2720	PP
Huntsman Woodbury, NJ	Conrail	400	2220	PP
Lyondell Petrochemicals Bayport, TX	SP Closed	300	1670	PP
Montell Bayport, TX	SP Closed	1050	5830	PP
Montell Lake Charles, LA	SP/KCS Joint	1150	6390	PP
Novacor (Huntsman) Marysville, MI	CSXT	120	670	PP
Phillips (Sumika) Pasadena, TX	PTRA Open	500	2780	PP
Quantum Morris, IL	CSXT	300	1670	PP
Rexene Odessa, TX	UP Closed	180	1000	PP
Shell Norco, LA	IC	300	1670	PP
Shell Carbide Seadrift, TX	UP Closed	200	1110	PP
Solvay Polymers Deer Park, TX	PTRA Open	440	2445	PP
Chevron Orange, TX	UP/SP - BNSF	1000	5555	HDPE
Dow Chemical Freeport, TX	UP Closed	220	1220	HDPE
Dow Chemical Plaquemine, LA	UP Closed	280	1560	HDPE
Exxon Mont Belvieu, TX	UP/SP - BNSF	350	1945	HDPE
Fina Bayport, TX	SP Closed	350	1945	HDPE
OxyChem Bay City, TX	BNSF Closed	1050	5830	HDPE
OxyChem Victoria, TX	UP Closed	450	2500	HDPE
Paxon Baton Rouge, LA	IC	1300	7200	HDPE
Phillips Pasadena, TX	PTRA Open	1800	10000	HDPE
Quantum La Porte, TX	SP Closed	600	3335	HDPE
Quantum Chocolate Bayou, TX	UP Closed	400	2225	HDPE
Quantum Clinton, IA	UP Closed	300	1670	HDPE
Quantum Port Arthur, TX	SP Closed	240	1330	HDPE
Solvay Polymers Deer Park, TX	PTRA Open	1300	7225	HDPE
Chevron Cedar Bayou, TX	UP/SP - BNSF	1070	5945	LDA/LDPE
Chevron Orange, TX	UP/SP - BNSF	290	1610	LDA/LDPE
Dow Freeport, TX	UP Closed	1175	7230	LDA/LDPE
Dow Plaquemine, LA	UP Closed	1385	7695	LDA/LDPE
Dupont Orange, TX	UP/SP - BNSF	545	8030	LDA/LDPE
Dupont, Bloomington, TX	UP Closed	265	1470	LDA/LDPE
Eastman Longview, TX	UP/BN Joint	875	4860	LDA/LDPE
Exxon Baton Rouge, LA	IC	750	3810	LDA/LDPE
Exxon Mont Belvieu, TX	UP/SP - BNSF	1300	7220	LDA/LDPE
Formosa Point Comfort, TX	UP Closed	440	2445	LDA/LDPE
Lyondell Polymers Bayport, TX	SP Closed	125	695	LDA/LDPE
Mobil Beaumont, TX	UP/SP - BNSF	1700	9445	LDA/LDPE
Quantum Clinton, IA	UP Closed	430	2390	LDA/LDPE
Quantum La Porte, TX	SP Closed	480	2670	LDA/LDPE
Quantum Morris, IL	CSXT	840	4670	LDA/LDPE
Quantum Port Arthur, TX	SP Closed	440	2445	LDA/LDPE
Rexene Polymers Odessa, TX	UP Closed	410	2280	LDA/LDPE
Union Carbide Seadrift, TX	UP Closed	2000	11110	LDA/LDPE
Union Carbide Taft, LA	UP Closed	1120	6220	LDA/LDPE
Westlake Polymers Lake Charles, LA	SP/KCS Joint	850	4725	LDA/LDPE
	Totals	36660	203870	PP/HDPE/LDA/LDPE

Approximately 92.5% of the U. S. Production Capacity is within the Gulf Coast

Total Plastics Resins Production

Exhibit 3

Domestic United States - PP/HDPE/LD/LLDPE

UP/SP Exclusively Served Points (Post Merger)

Company	Rail Service	Production Capacity Mil/#	Rail Volume at 180,000 lbs	Commodity
Amoco Chocolate Bayou, TX	UP Closed	1000	5500	PP
Formosa Point Comfort, TX	UP Closed	490	2720	PP
Lyondell Petrochemicals Bayport, TX	SP Closed	300	1670	PP
Montell Bayport, TX	SP Closed	1050	5830	PP
Rexene Odessa, TX	UP Closed	180	1000	PP
Shell Carbide Seadrift, TX	UP Closed	200	1110	PP
Dow Chemical Freeport, TX	UP Closed	220	1220	HDPE
Dow Chemical Plaquemine, LA	UP Closed	280	1560	HDPE
Fina Bayport, TX	SP Closed	350	1945	HDPE
OxyChem Victoria, TX	UP Closed	450	2500	HDPE
Quantum La Porte, TX	SP Closed	600	3335	HDPE
Quantum Chocolate Bayou, TX	UP Closed	400	2225	HDPE
Quantum Port Arthur, TX	SP Closed	240	1330	HDPE
Dow Freeport, TX	UP Closed	1175	7230	LD/LLDPE
Dow Plaquemine, LA	UP Closed	1385	7695	LD/LLDPE
Dupont, Bloomington, TX	UP Closed	265	1470	LD/LLDPE
Formosa Point Comfort, TX	UP Closed	440	2445	LD/LLDPE
Lyondell Polymers Bayport, TX	SP Closed	125	695	LD/LLDPE
Quantum La Porte, TX	SP Closed	480	2670	LD/LLDPE
Quantum Port Arthur, TX	SP Closed	440	2445	LD/LLDPE
Rexene Polymers Odessa, TX	UP Closed	410	2280	LD/LLDPE
Union Carbide Seadrift, TX	UP Closed	2000	11110	LD/LLDPE
Union Carbide Taft, LA	UP Closed	1120	6220	LD/LLDPE
	Totals	13600	76205	PP/HDPE/LD/LLDPE

UP/SP will Serve Exclusively almost 40% of Gulf Coast Production Capacity

Total Plastics Resins Production

Exhibit 4

Gulf Coast - PP/HDPE/LD/LLDPE

BNSF (Pre - Merger)

Company	Rail Service	Production Capacity Mil/#	Rail Volume at 180,000 lbs	Commodity
Aristech LaPorte, TX	PTRA Open	410	2275	PP
Eastman Longview, TX	UP/BN Joint	500	2780	PP
Fina La Porte, TX	SP/PTRA Open	1000	5560	PP
Phillips (Sumika), Pasadena, TX	PTRA Open	500	2780	PP
Solvay Polymers Deer Park, TX	PTRA Open	440	2445	PP
OxyChem Bay City, TX	BNSF Closed	1050	5830	HDPE
Phillips Pasadena, TX	PTRA Open	1800	10000	HDPE
Solvay Polymers Deer Park, TX	PTRA Open	1300	7225	HDPE
Eastman Longview, TX	UP/BN Joint	875	4860	LD/LLDPE
	Totals	7875	43750	PP/HDPE/LD/LLDPE

BNSF has access to 23% of Gulf Coast production

BNSF serves exclusively 3% of production

Total Plastics Resins Production

Exhibit 5

Domestic United States - PP/HDPE/LD/LLDPE
BNSF Access (Post Merger)

Company	Rail Service	Production Capacity Mil/#	Rail Volume at 180,000 lbs	Commodity
Amoco Cedar Bayou, TX	UP/SP - BNSF	620	3440	PP
Aristech LaPorte, TX	PTRA Open	410	2275	PP
Eastman Longview, TX	UP/BN Joint	500	2780	PP
Exxon Baytown, TX	UP/SP - BNSF	1020	5670	PP
Fina La Porte, TX	SP/PTRA Open	1000	5560	PP
Phillips (Sumika) Pasadena, TX	PTRA Open	500	2780	PP
Solvay Polymers Deer Park, TX	PTRA Open	440	2445	PP
Chevron Orange, TX	UP/SP - BNSF	1000	5555	HDPE
Exxon Mont Belvieu, TX	UP/SP - BNSF	350	1945	HDPE
OxyChem Bay City, TX	BNSF Closed	1050	5830	HDPE
Phillips Pasadena, TX	PTRA Open	1800	10000	HDPE
Solvay Polymers Deer Park, TX	PTRA Open	1300	7225	HDPE
Chevron Cedar Bayou, TX	UP/SP - BNSF	1070	5945	LD/LLDPE
Chevron Orange, TX	UP/SP - BNSF	290	1610	LD/LLDPE
Dupont Orange, TX	UP/SP - BNSF	545	3030	LD/LLDPE
Eastman Longview, TX	UP/BN Joint	875	4860	LD/LLDPE
Exxon Mont Belvieu, TX	UP/SP - BNSF	1300	7220	LD/LLDPE
Mobil Beaumont, TX	UP/SP - BNSF	1700	9445	LD/LLDPE
	Totals	15770	87615	PP/HDPE/LD/LLDPE

Post Merger BNSF will have Access to Approx. 47% of Gulf Coast Production

Post Merger BNSF will serve Exclusively Approx. 3% of Gulf Coast Production

Total Plastics Resins Production

Exhibit 6

Domestic United States - PP/HDPE/LD/LLDPE

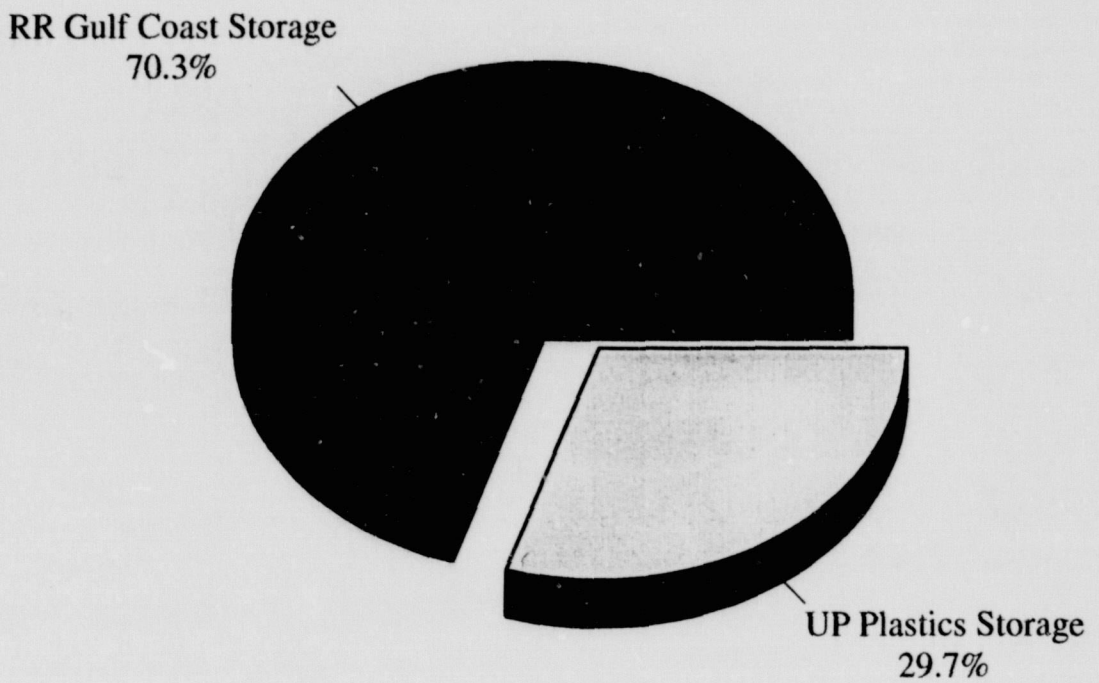
Examples of Potential Carrier Leverage

Company	Rail Service - Post UP/SP Merger	Production Capacity	Product	Rail Carrier Potential Leverage	Rail Service - Post UP/SP Merger	Production Capacity	Product
Amoco Cedar Bayou, TX	UP/SP - BNSF	620	PP	Amoco Chocolate Bayou, TX	UP/SP Closed	1000	PP
Fina LaPorte, TX	UP/SP - PTRA	1000	PP	Fina Bayport, TX	UP/SP Closed	350	HDPE
Montell Lake Charles, LA	UP/SP - KCS	1150	PP	Montell Bayport, TX	UP/SP Closed	1050	PP
Quantum La Porte, TX	UP/SP Open	1080	HDPE/LD/LLDPE	Quantum Chocolate Bayou, TX	UP/SP Closed	400	HDPE
(Chemicals Plant; Plastics facility is SP Closed)				Quantum Clinton, IA	UP/SP Closed	730	HDPE/LD/LLDPE
				Quantum Port Arthur, TX	UP/SP Closed	680	HDPE/LD/LLDPE
Dupont Orange, TX	UP/SP - BNSF	545	LD/LLDPE	Dupont Bloomington, TX	UP/SP Closed	265	LD/LLDPE

Snapshot of Union Pacific Plastics Storage Gulf Coast

Exhibit 7

UP Dedicated Plastics Storage
Spring, TX 1520 Carspots
Addis, TX 550 Carspots
Mc Gehee, AR 380 Carspots (Outside of Gulf Coast)
Avondale, LA 350 Carspots
Dupo, IL 350 Carspots (Outside of Gulf Coast)
Various Strategic Storage 1650 Carspots (Outside of Gulf Coast)

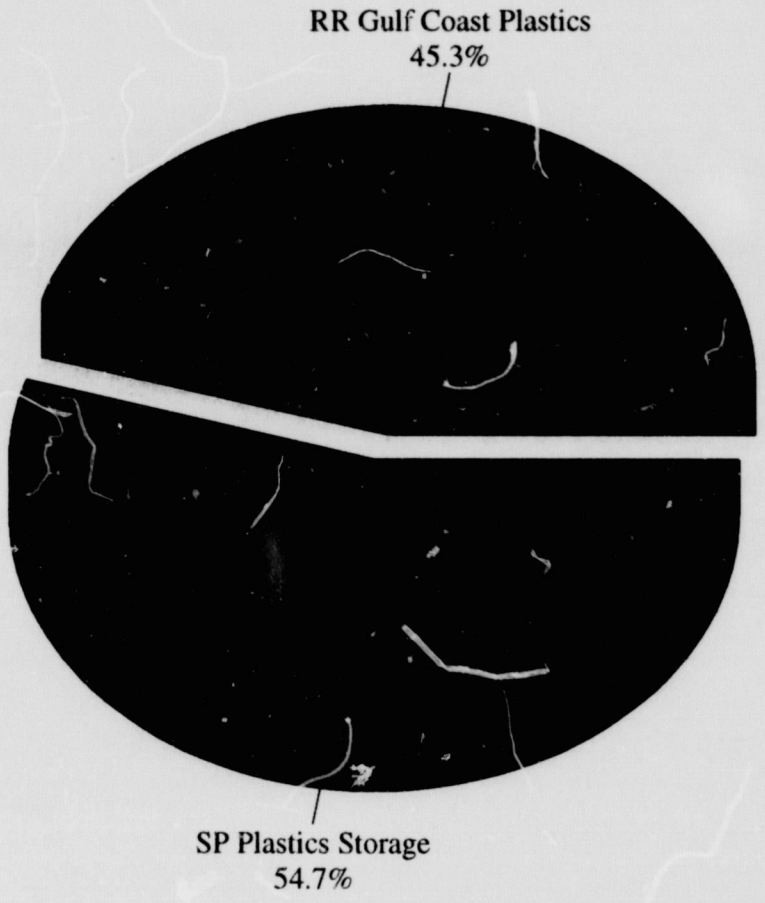


UPRR Dedicated Plastics Storage Pre-Merger

Snapshot of Southern Pacific Plastics Storage
Gulf Coast

Exhibit 8

SP Dedicated Plastics Storage
Dayton, TX 3000 Carspots
E Baytown, TX 1200 Carspots
Beaumont, TX 250 Carspots
Pine Bluff, AR 250 Carspots (Outside of Gulf Coast)
E St Louis, IL 100 Carspots (Outside of Gulf Coast)



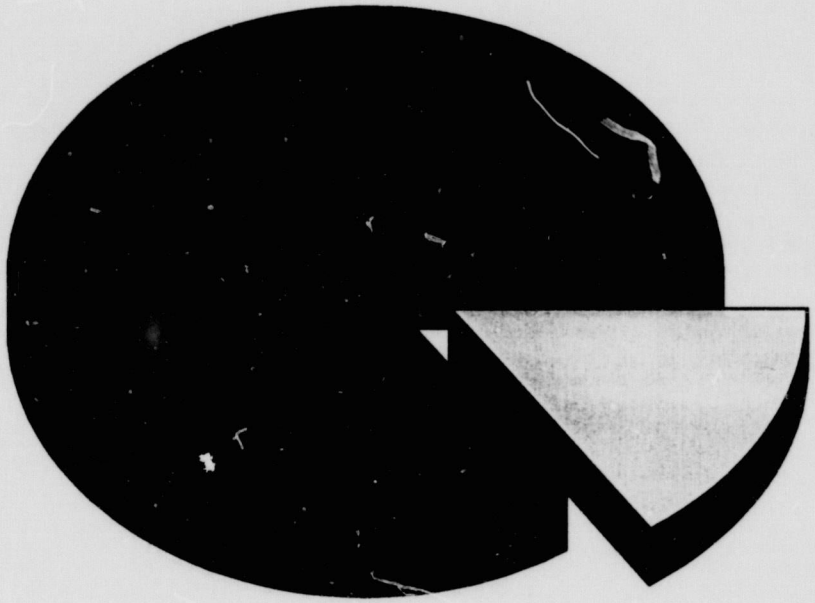
Southern Pacific Dedicated Plastics Storage Pre-Merger

Snapshot of BNSF Plastics Storage
Gulf Coast

Exhibit 9

BNSF Dedicated Plastics Storage
Casey, TX 720 Car Spots
Teague, TX 550 Car Spots
Total Carload Spots 1270

UP/SP Dedicated Plastics Storage
84.4%



BNSF Dedicated Plastics Storage
15.6%

BNSF Dedicated Plastics Storage as Compared to a Combined UP/SP

Notes to Exhibit No. 9

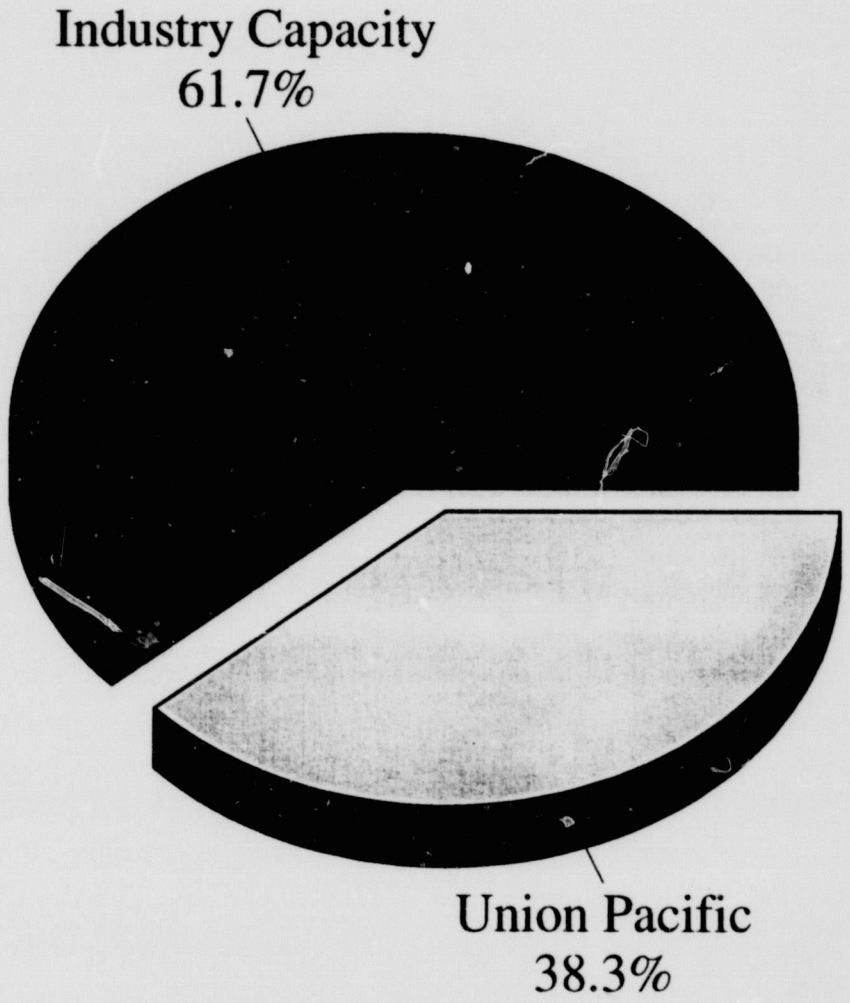
I am aware that my analysis of BNSF's storage capability for plastics cars differs from that of the BNSF, as reflected in their response to an SPI interrogatory. To my knowledge, BNSF provided information on rail yards which are "capable" of being utilized for the storage of cars transporting plastics resins. In fact, any yard in sound operating condition, not otherwise occupied, can be utilized for storage. Following the merger of the BN and SF, it is likely that some rail yards formerly used for operational purposes by either of the carriers may, in fact, be converted to storage use. The real issue is whether the storage capacity is efficient in serving the plastics industry.

Therefore, within reason, I am confident that my evaluation of efficient BNSF storage capacity is accurate. Any adjustments to my figures would be minor in nature, and would not change my conclusions.

Exhibit 10

Union Pacific Operational Capacity & Support
Gulf Coast

UP Operational Switching Yards	Operating Capacity / Carloads
Avondale, LA	1075
Livonia, LA	2500
Addis, LA	100
Amelia, TX	450
Orange, TX	75
Lake Charles, LA	320
Settegast, (Houston) TX	2840
Lloyd, (Spring) TX	1840
Bloomington, TX	350
UP Total Switching Yards	9550



Union Pacific Operational Capacity & Support Pre-Merger

Witness Peterson, apparently recognizing the volume impact and the obvious concentration of market power exercised over the PE and PP by UP and SP, has elected to emphasize these commodities in his discussion relating to Gulf Coast Chemicals (See Peterson, Pages 311-319). Witness Peterson's analysis of the impact on the market concentration for these commodities concludes "that UP and SP do not now and will not after the merger have market power over any of these products." (Peterson, page 234) Witness Peterson's conclusion regarding lack of market concentration is remarkable in light of his own showing of the substantial market control of UP/SP. Witness Peterson in fact acknowledges that 1994 UP/SP transportation "accounted for 71% of Gulf Coast polyethylene production and 67% of capacity." (Peterson, page 312)

UP/SP's large market concentration and the numerous problems associated with BNSF's ability to provide effective competition indicate that the merger would endow UP/SP with substantial power to control transportation rates for Texas/Louisiana producers of polyethylene and polypropylene. In the remainder of this section, I review and restate witness Peterson's market analysis and in addition, identify other concerns regarding UP/SP's potential post merger ability to further manipulate the rate structure for the transportation of polyethylene and polypropylene.[3/]

[3/] It should be noted here that some variance exists between SPI Witness Larry D. Ruple's market share statistics and my own. The differences occur for two reasons. First, Mr. Ruples statistics are drawn from industry production capacity data, my statistics were developed using ICC Waybill Sample Data and specific data provided by UP and SP. Second, some of the railroad data was obviously inaccurate. For instance, some of the railroad provided origination points do not have any production facilities for the commodities represented. The differences between my statistics and Witness Ruples are de minimus and do not affect the validity of our respective testimonies.

The potential impact of the UP/SP merger on the geographic competition for polyethylene and polypropylene is discussed below under the following headings:

A. UP/SP Market Share For U.S. Originations

B. UP/SP Market Share of Texas/Louisiana Originations

C. UP/SP Market Leverage Between Plants

D. Loss of Leverage for Multiple Plants

A. UP/SP MARKET SHARE FOR U.S. ORIGINATIONS

Although my analysis centers on Gulf Coast plastics production, the UP/SP market share for PE and PP transportation throughout the United States is integral to the determination of the level of market power currently wielded by UP and SP and, most importantly, the determination that UP/SP market power would be significantly consolidated and enhanced under the terms of the merger. That UP and SP are dominant in the transportation of PE and PP is irrefutable. As I discuss elsewhere, and is evidenced in this section of my statement, BNSF access under the terms of the Application and the related settlement Agreement would not serve in any significant degree to alleviate the concentration of UP/SP market power which is built into the merger.

In order to exemplify this market power on a national basis I have determined the distribution of PP and PE rail origins for the entire United States. The distribution of PP and PE traffic originations are analyzed on both a pre-merger and post-merger basis. The distribution of traffic prior to the merger (1994) is represented by five (5) groupings: UP originations, SP originations, BNSF originations, KCS originations and the originations of all

other railroads. This distribution was developed through use of the ICC's 1994 Costed Waybill Sample.

I additionally determined the distributions of traffic originations which would occur after the UP/SP merger. These distributions include traffic percentages for UP/SP combined, UP/SP traffic available to BNSF as a result of the comprehensive agreement between UP/SP and BNSF, traffic percentages for BNSF, traffic percentages for KCS, and traffic originated by railroads other than UP/SP, BNSF, or KCS. The distribution of traffic represented by UP/SP, BNSF, KCS, and other railroads was developed through use of the ICC's 1994 Costed Waybill Sample traffic data. The distribution of traffic represented by UP/SP traffic available to BNSF was calculated using the UP/SP's 100 percent sample data. To develop the portion of UP/SP traffic available to BNSF, I identified traffic from plastics producing plants served only by UP and SP. Such locations, as discussed throughout my testimony, are referred to as 2-to-1 locations. The traffic for the 2-to-1 locations was separated into three (3) groupings: traffic controlled at termination by UP/SP; traffic controlled at termination by BNSF; and, traffic by carriers other than UP/SP and BNSF at termination. My analysis employs UP/SP Witness Peterson's assumption that BNSF would capture to 90 percent of the 2-to-1 originated traffic terminated by BNSF and 50 percent of the 2-to-1 originated traffic terminated by any carrier other than UP/SP or BNSF.

As discussed elsewhere in this statement the 90/50 assumption is flawed and grossly overstates the volume of traffic which BNSF could gain from UP/SP. However, I use it here in order to show that even under the Applicant's own terms, BNSF would not capture substantial volumes of UP/SP traffic. The resulting quantity of the 2-to-1 traffic available to BNSF was

subtracted from the UP/SP's total traffic for polyethylene and polypropylene to derive at the amount of traffic available to BNSF. The results of my analysis are graphically illustrated in Figure No. 1 and Figure No. 2 on the next two pages.

DISTRIBUTION BY ORIGIN RAILROAD -- UNITED STATES
POLYETHYLENE

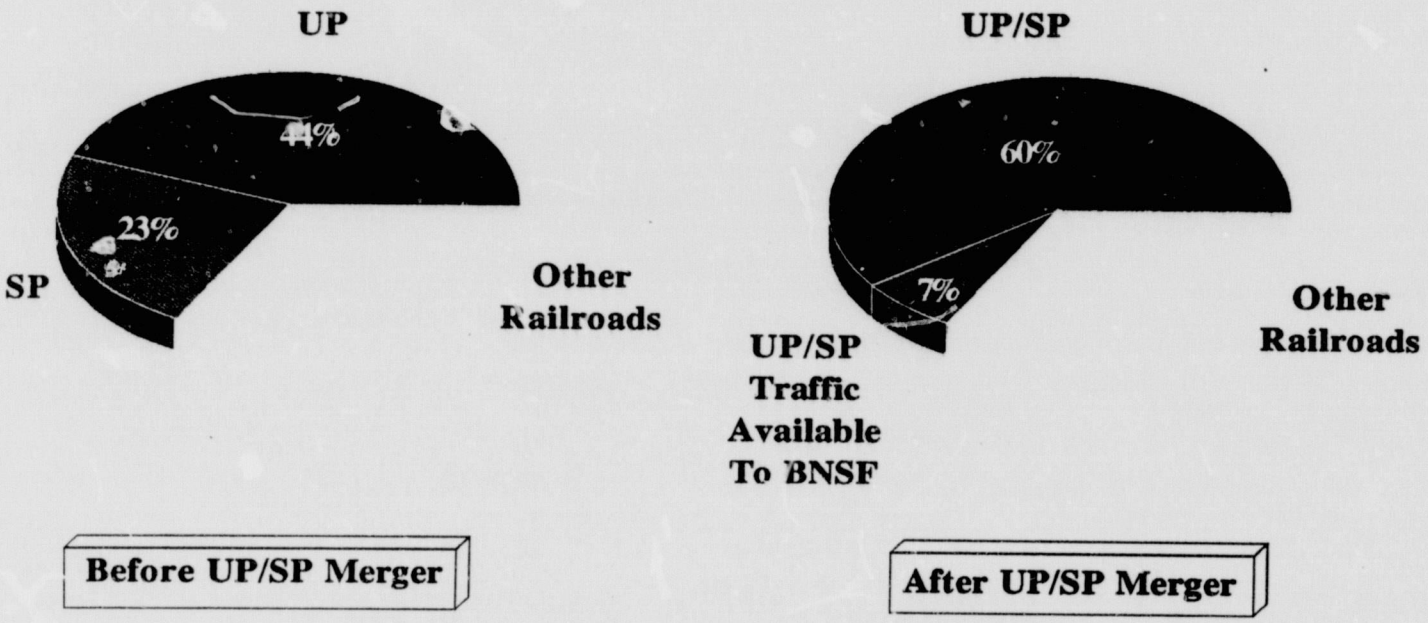


Figure No. 1

SOURCE: ICC's 1994 Costed Waybill File and UP/SP Traffic Tapes
Traffic Available to BNSF reflects application of witness Peterson's 50%/90% theory.

DISTRIBUTION BY ORIGIN RAILROAD -- UNITED STATES
POLYPROPYLENE

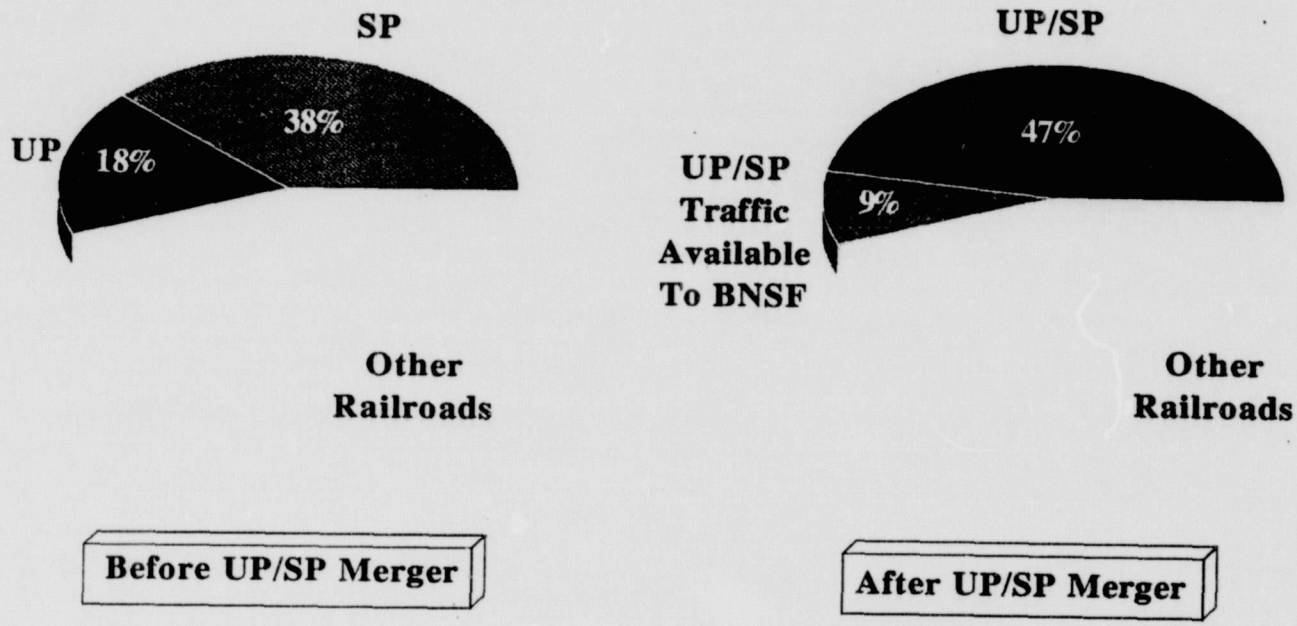


Figure No. 2

SOURCE: ICC's 1994 Costed Waybill File and UP/SP Traffic Tapes
Traffic available to BNSF reflects application of witness Peterson's 50%/90% theory.

The following table summarizes the carrier distributions shown in the preceding figures.

Table 1
Distribution Of Polyethylene and Polypropylene
Originating Tonnages by Railroad -- All U.S. Railroads

Originating Railroad (1)	Originated Rail Distribution of Tons	
	Polyethylene (2)	Polypropylene (3)
Before UP/SP Merger		
1. UP	44.0%	18.0%
2. SP	23.0%	38.0%
3. BNSF		
4. KCS		
5. Other Railroads		
After UP/SP Merger		
6. UP/SP	60.0%	47.0%
7. UP/SP Traffic Available To BNSF	7.0%	9.0%
8. BNSF		
9. KCS		
10. Other Railroads		

Source: ICC's 1994 Costed Waybill Sample

As can be observed from the figures and the Table above, UP controls 44 percent of the polyethylene originations and 18 percent of the polypropylene originations while SP controls 23 percent and 38 percent of polyethylene and polypropylene originations, respectively. All other

railroads control 33 percent of the polyethylene orignations and 44 percent of the polyethylene originations.

Under the terms of the Application and the settlement Agreement, the merger, if approved, would result in UP/SP control of 60 percent of PE originations and 47 percent of PP originations. Only 7 and 9 percent of PE and PP traffic, respectively, would be captured by BNSF. One-third (33 percent) of PE and 44 percent of PP would remain available to other carriers.

The data yielded in this analysis, developed through the use of inputs provided exclusively by the Applicants and the ICC, proves conclusively that, with regard to PE and PP, the post merger consolidated market power which the Applicants would gain through merger exceeds significantly the pre-merger market power which either of the independent carriers could bring to bear. The limited amount of traffic which would be available (but not necessarily captured) by BNSF, would obviously not have a significant effect upon UP/SP dominance.

B. UP/SP MARKET SHARE FOR TEXAS LOUISIANA ORIGINATIONS

I have also analyzed the origin distribution of traffic by carriers for the Louisiana and Texas Gulf Coast region. I have employed the same analytical methodology in this determination as was employed for the U.S. origin distribution. The Gulf Coast area represents the top PE and PP production location in the United States. It also represents the focus of UP/SP market power over the transportation of PE and PP. As I discuss subsequently, the combined UP/SP

infrastructure in the Gulf Coast (particularly, crucial storage-in-transit facilities) would provide a substantial advantage to UP/SP in any "competition" with BNSF for PE and PP traffic.

As would be expected, if the merger is approved, UP/SP market power in the Gulf Coast is even more drastically concentrated than any other region in the United States.

Figures 3 and 4 below illustrate UP/SP market power in the region as well as the extremely limited affect which BNSF access would bring to the market.

DISTRIBUTION BY ORIGIN RAILROAD -- LOUISIANA AND TEXAS
POLYETHYLENE

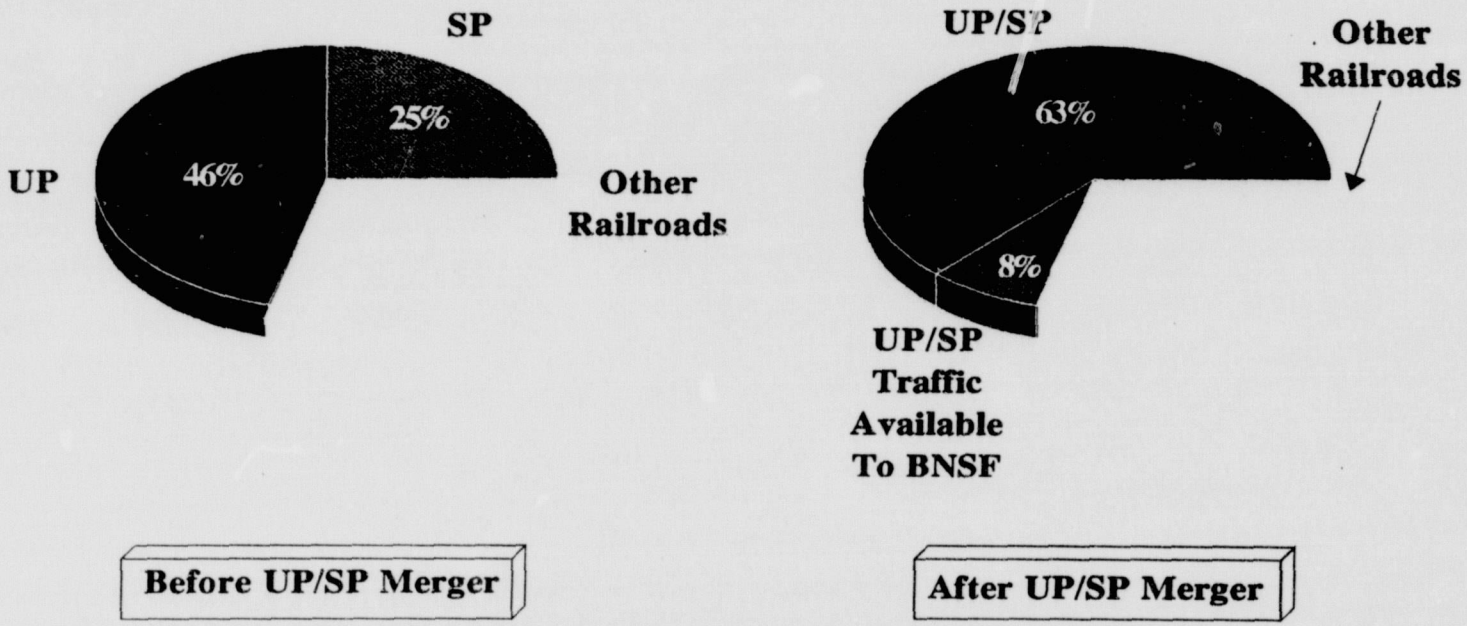


Figure No. 3

SOURCE: ICC's 1994 Costed Waybill File and UP/SP Traffic Tapes
Traffic available to BNSF reflects application of witness Peterson's 50%/90% theory.

DISTRIBUTION BY ORIGIN RAILROAD -- LOUISIANA AND TEXAS POLYPROPYLENE

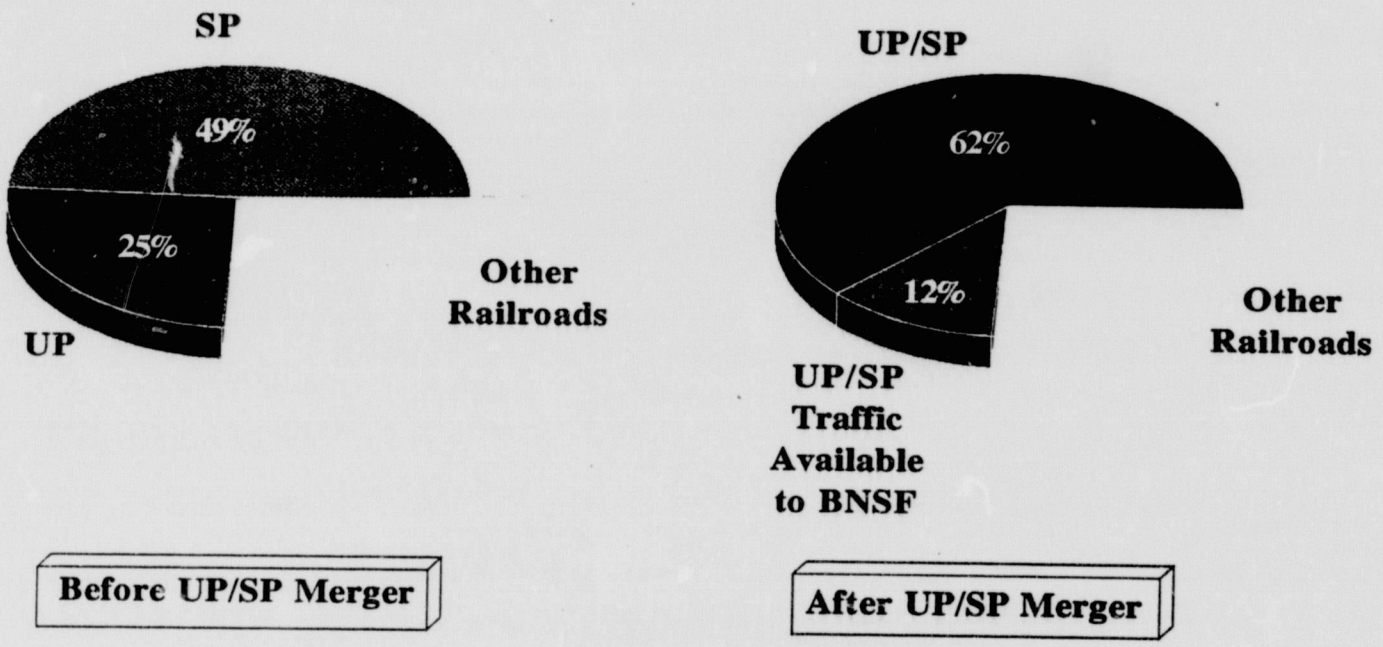


Figure No. 4

SOURCE: ICC's 1994 Costed Waybill File and UP/SP Traffic Tapes
Traffic available to BNSF reflects application of witness Peterson's 50%/90% theory.

Table 2
Distribution Of Polyethylene and Polypropylene
Originating Tonnages by Railroad -- LA/TX Origins

Originating Railroad (1)	Distribution of Tons	
	Polyethylene (2)	Polypropylene (3)
Before UP/SP Merger		
1. UP	46.0%	25.0%
2. SP	25.0%	49.0%
3. BNSF		
4. KCS		
5. Other Railroads		
After UP/SP Merger		
6. UP/SP	63.0%	62.0%
7. UP/SP Traffic Available to BNSF	8.0%	12.0%
8. BNSF		
9. KCS		
10. Other Railroads		

Source: ICC's 1994 Waybill Sample

As can be observed in Table 2 above, UP controls 46 percent of the polyethylene originations and 25 percent of the polypropylene originations while SP controls 25 percent and 49 percent of polyethylene and polypropylene originations, respectively. All other railroads

control 29 percent of the polyethylene originations and 26 percent of the polypropylene originations.

The post-merger analysis shows a pronounced consolidation of UP/SP market power. Again, even in consideration of the level of traffic made available through BNSF access, the combined UP/SP market power is substantially greater than any of the independent carriers which currently operate in the region.

As the above figures and table show, the maximum pre-merger market concentration exercised by a single carrier would increase from 46 percent (UP) to 63 percent (UP/SP) for PE. Maximum PP concentration factors increased from 49 percent (SP) to 62 percent (UP/SP). Thus, the somewhat balanced competition which currently exists in the region would be shifted to a single entity if the merger is approved.

C. UP/SP MARKET LEVERAGE BETWEEN PLANTS

The UP/SP Merger will also remove the competitive effects for chemical companies producing at plants served by UP or SP. For example, assume a company has two production facilities, one solely serviced by UP and the other solely served by SP. In today's competitive environment, a company can use the potential to shift production from one plant to another or selectively increase or decrease plant production in order to maintain competitive rates.[4/] Once the UP/SP merger is consummated, the producer will lose this form of geographic competition.

[4/] This example assumes that the plants produce the same goods, do not operate at capacity and that the individual plants do not have contractual commitments (either on raw material or finished product) which prohibits the shift in production.

D. LOSS OF LEVERAGE FOR "2-TO-1" PLANTS

Even if the BNSF does have access to a plant (i.e., a "2-to-1" location), the UP/SP-BNSF settlement agreement does not guarantee that BNSF competition be as effective as the intrinsic head-to-head competition which has existed between UP and SP.[5/] Because of its large market share, UP/SP will be able to prevent BNSF access two ways. First, UP/SP control enough production so that UP/SP can prevent BNSF from acquiring the base tonnage necessary to efficiently operate at "2-to-1" locations. Second, UP/SP can exercise market leverage at solely served plants to force higher rates and prevent BNSF participation.

For example, assume a company has 2 polypropylene or polyethylene plants. The first plant is served by UP and SP (a "2-to-1" location). The second plant is solely served by UP.

After the merger, the competition at the "2-to-1" plant will not serve to provide competitive rates because UP/SP can increase the rates at the solely served plant to make up for the potential decrease in revenue from BNSF competition at the "2-to-1" location. Alternatively, the UP/SP can bundle rates at the "2-to-1" location with the solely served plant to guarantee that BNSF will not get this business.[6/]

5/ As discussed below, BNSF's lack of infrastructure and UP/SP's contractual commitments may well foreclose BNSF participation in polyethylene and polypropylene traffic.

6/ It should be noted that currently, substantial traffic moving from Texas and Louisiana origins through New Orleans could be transported either by SP or by joint movement of KCS and UP. According to the 1994 ICC Costed Waybill Sample, 14 percent of the STCC 28211 traffic originating in Texas and Louisiana moves to New Orleans either for termination or for interchange to Eastern carriers. If the merger is approved under the current terms of the application shippers seeking efficient routing between Texas/Louisiana and New Orleans would be captive to UP/SP. Traffic which moves from Texas or from Lake Charles on the KCS interchanges with UP in DeQuincy, LA for further movement to New Orleans. Alternatively, Texas traffic moving on the SP can be carried directly to New Orleans. With the combined UP/SP system , the KCS/UP option to move traffic to New Orleans would not longer exist. Thus, plastics shippers moving traffic on KCS from points west of Lake Charles would have not choice other than to move traffic north to Shreveport, and then southeast to New Orleans, this circuitous routing is 274 miles longer than the SP movement between Lake Charles and New

IV. CALCULATION OF HHI VALUES

The concentration of the Gulf Coast plastics transportation markets was measured using the Herfindahl-Hirschman Index ("HHI").[7/] I computed this index separately for polyethylene and polypropylene. These calculations were made using 1994 data and were performed under the existing competitive conditions and for the case of a combined UP and SP system. For my analyses, I have defined individual markets within Gulf Coast plastics transportation as tonnages originated from plants in Louisiana and Texas by individual rail carriers and also by three groupings of non-rail modes of transportation: intermodal, motor and water. A description of the procedures used in my analyses as well as my results and conclusions are discussed under the following headings:

A. Development Of Market Shares

B. Transportation Survey

C. Calculation Of HHI Values

D. Summary

A. DEVELOPMENT OF MARKET SHARES

The originating tonnages by carrier and mode for Gulf Coast plastics used in my calculation of the polyethylene and polypropylene HHI values were developed in much the same manner as tonnages developed by UP's Witness Richard B. Peterson. Mr. Peterson describes his

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Orleans.

7/ The HHI is calculated by summing the squares of individual market shares within a given market.

development of Gulf Coast plastics tonnages in Appendix B to his November 30, 1995 evidence filed in this proceeding. My development of originating tons, like Mr. Peterson's calculations, relies on UP/SP's 100 percent traffic data for UP and SP origins. The values I used for tonnages originated by rail carriers other than UP or SP are based on the ICC's Costed Waybill Sample. The originations of polyethylene traffic used in my development of the HHI value includes commodities designated by STCC 2821142, Polyethylene other than liquid. The polypropylene traffic used in my analyses is designated by STCC 2821139, Polypropylene other than liquid.

Mr. Peterson's polyethylene and polypropylene includes tonnages from two (2) "basket" STCC's, or generic groupings for plastics.[8/] I have utilized this same adjustment by allocating tonnages from STCC 2821144, (Plastics, resins or gums, NEC, other than liquid) and STCC 2821163, (Plastic flakes, granules, lumps, pellets, powder or solid mass, other than expanded) to polyethylene and polypropylene based on a distribution of originating tonnages for plastics.

The traffic utilized in my development of the HHI values for all non-UP/SP rail originations is derived from the ICC's Costed Waybill Sample. Like the UP/SP traffic included throughout my analyses, this traffic includes STCC 2821142 for polyethylene shipments and STCC 2821139 for polypropylene shipments as well as the allocation of STCC 2821144 and STCC 2821163 tonnages to polyethylene and polypropylene traffic.

My development of Gulf Coast plastics traffic for non-rail originations is based on a distribution of all traffic by mode calculated using data provided to me by SPI member

[8/] See Peterson, Appendix B, page 312.

companies. Specifically, I summarized SPI member data by mode of transportation for polyethylene and polypropylene traffic originating in Louisiana and Texas.[9/] I then developed a distribution of the originating tonnages based on four (4) categories: rail, intermodal, motor and water. The total rail traffic from UP/SP and ICC data was divided by the percentage of rail traffic from the SPI member traffic distribution to arrive at a level of total traffic by all modes for my analysis. I then applied the SPI member traffic distribution for non-rail traffic to the level of total originating tons for all modes, resulting in traffic values for intermodal, motor and water originations.

Using 1994 statistics, I calculated the amount of polyethylene and polypropylene tonnages originated by each rail carrier and by each non-rail mode of transportation. These statistics demonstrate that the plastics markets on the Gulf Coast are currently "highly concentrated" and that the merger of the UP/SP would significantly increase this concentration and the corresponding market power of the merged railroads. My calculations are summarized below.

B. TRANSPORTATION SURVEY

In order to calculate the polyethylene and polypropylene traffic moving in non-rail service, I conducted a survey of the SPI members. The survey requested revenue and tonnage data for each producing plant by commodity. The data I requested included the separation of the tonnage

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9/ The company data were provided by SPI members in response to a survey conducted by L. E. Peabody & Associates, Inc. The rail portion of the company data used in my analysis, when compared to ICC Costed Waybill Sample data, reflects 31 percent of the total polyethylene originations and 50 percent of the total polypropylene originations. Thus, for both polyethylene and polypropylene, the company data that I have relied on to determine the proper share of traffic originated by non-rail modes reflects a significant portion of the market.

between rail shipments, intermodal, truck and water carriers. Surveys were sent to the 42 SPI members. Responses were received from 25 SPI members. For two of the respondents , the companies do not produce polyethylene or polypropylene in Texas and Louisiana. Of the remaining SPI members, 7 companies provided complete detail identifying the tons by mode of transportation. Table 3 below compares, for Texas/Louisiana, the total rail polyethylene and polypropylene tonnage shipped to the tonnage for these commodities received from the survey.

Table 3
Comparison Of Total
Rail Tonnage With SPI Survey

Item (1)	Amount (Tons) Polyethylene (Millions) (2)	Polypropylene (Millions) (3)
1. Total Rail Tons Originated	11.7	3.6
2. Tonnage In Survey Response	3.6	1.8
3. Percent Survey of Total Tons (L2 ÷ L1)	31%	50%

The respondents to the survey accounted for 31 percent of all rail shipments of polyethylene and 50 percent of all rail shipments for polypropylene.

Next, I analyzed the non-rail traffic that was also received from the survey respondents. The results of this analysis are shown in Exhibit__(TDC-1) and summarized in Table 4 below.

Table 4
Distribution Of Tons By Transportation Mode

Item (1)	Polyethylene (2)	Polypropylene (3)
1. Rail	82.6%	96.5%
2. Truck	15.1	3.3
3. Water	0.0	0.0
4. Intermodal	2.3	0.2
5. Total	100.0%	100.0%

Source: Exhibit_(TDC-1)

The vast majority of polyethylene and polypropylene traffic moves via rail. For polyethylene, 82.6 percent moves by rail with 15.1 percent via truck and 2.3 percent in intermodal service. For polypropylene, 96.5 percent moves via rail with 3.3 percent in truck and 0.2 percent in intermodal service. No polyethylene or polypropylene traffic is transported in barge (water) service.

Based on the distribution in Table 4 above, I calculated the number of tons in 1994 that moved via truck or intermodal service. Table 5 below summarizes my calculation.

Table 5
Summary Of Tons Mode Of Transportation

Item	Polyethylene Distribution	Polyethylene Tons (Millions)	Polypropylene Distribution	Polypropylene Tons(Millions)
(1)	(2)	(3)	(4)	(5)
1. Rail	82.6%	11.7[1]	96.5%	3.6[1]
2. Truck	15.1	2.1	3.3	0.1
3. Intermodal	2.3	0.3	0.2	[3]
4. Total	100.0%	14.1[2]	100.0%	3.7[2]

[1] Total rail shipments for all originations in Texas/Louisiana (Table 3 above).
[2] Line 1 tons divided by Line 1 distribution.
[3] Less than 100,000.

Based on the UP/SP traffic tapes, 1994 Costed Waybill Tape and the SPI survey, 14.1 million tons of polyethylene originated in Texas/Louisiana in 1994. Based on the same data 3.7 million tons of polypropylene originated in Texas/Louisiana in 1994. I have utilized the values in Table 5 above in my calculation of the HHI.

C. CALCULATIONS OF HHI VALUES

The HHI values for the Gulf Coast plastics transportation markets were developed by summing the squares of the share of originating tonnages from production plants for each rail carrier and each other mode of transportation. Exhibit_(TDC-2) shows my calculations of HHI values for both polyethylene and polypropylene, utilizing 1994 originating tons, and the results are summarized in Table 6 below.

Table 6
Summary Of HHI For
Polyethylene and Polypropylene -- 1994

Item	HHI	
	Polyethylene	Polypropylene
(1)	(2)	(3)
1. Before Merger	2,440	3,275
2. After Merger	4,075	5,778
3. Increase In HHI	1,635	2,503

Source: Exhibit__(TDC-2).

The HHI value for polyethylene equals 2,440 prior to the merger between UP and SP and 4,075 after the combination of UP and SP. This reflects an increase in the polyethylene HHI of 1,635 index points. The Department of Justice considers mergers that have an increase in HHI of over 100 index points to be representative of enhanced market power.

The results are also conclusive for the polypropylene HHI value. Prior to the UP/SP merger, the value equals 3,275. After the merger, the value equals 5,778. This reflects an increase of 2,503 index points. These HHI values for polyethylene and polypropylene show that the merger of UP and SP will significantly increase the market concentration in a market which is already highly concentrated. From an economic perspective, markets which are highly concentrated exhibit less competition. The large increase in market concentration resulting from a UP/SP merger will only serve to further reduce competition in the rail transportation of polyethylene and polypropylene.

D. SUMMARY

The HHI values of the Gulf Coast plastics transportation markets were developed by summing the squares of the market share of originating tonnages from production plants in Texas and Louisiana for each rail carrier and non-rail mode of transportation. I have calculated values separately for the polyethylene and polypropylene markets while assuming both separate and combined UP/SP systems. The U.S. Department of Justice ("DOJ") defines a market with an HHI value greater than 1,800 to be highly concentrated.[10/] I have found that the existing concentration of the Gulf Coast plastics transportation market have HHI values greatly above the 1800 point threshold for both polyethylene and polypropylene (2,506 and 3,275, respectively).

For the post merger market, I have determined that market concentration HHI values for the polyethylene and polyprophylene transportation markets of 4,075 and 5,778 respectively, yielding respective increase of 1,675 and 2,503 market concentration index points. According to DOJ standards "Where the post-merger HHI exceeds 1800, it is presumed that mergers producing an increase in the HHI for more than 100 points are likely to create or enhance market power or facilitate its exercise."[11/] I see no factors in this market that would mitigate this conclusion.

10/ U.S. Department of Justice and Federal Trade Commission: "Horizontal Merger Guidelines" April 2, 1992, pages 28-29.

11/ "Horizontal Merger Guidelines", pages 30-31.

V. BNSF IS NOT AN EFFECTIVE REPLACEMENT FOR MERGING RAILROADS

The key to UP/SP's plan to gain approval to their proposed merger is the settlement agreement with BNSF. UP/SP have attempted to address the obvious anti-competitive components of the their proposed merger through the settlement agreement. This section of my Verified Statement evaluates the UP/SP-BNSF settlement agreement to determine if the railroads were successful in eliminating the obvious anti-competitive problems. My research and findings are summarized under the following headings:

A. BNSF Market Access

B. Problems with Trackage Rights

C. Lack of BNSF Operating Plan

D. BNSF Operations and Costs -- Houston-Memphis

E. Compensation for BNSF Trackage Rights

A. BNSF MARKET ACCESS

In the BNSF's "Comments on the Primary Application" filed December 29, 1995, witness Larry M. Lawrence, National Director of KPMG Peat Marwick's Transportation Consulting Practice, submitted a Verified Statement which analyzes the UP/SP - BNSF settlement agreement. Mr. Lawrence concludes that the settlement agreement "is a complete and sufficient remedy for the loss of competition" for locations where the merger eliminate access to the UP or SP (Lawrence, page 2). He also concludes that the BNSF locations "will gain access to offer

a sizable market opportunity and attractive traffic density" and BNSF "should be motivated to compete aggressively for this traffic" (Lawrence, page 3).

Table 7 below summarizes Mr. Lawrence's calculation, by segment, of the new market revenues he claims BNSF will be able to access.

Table 7
Summary of Lawrence's
Calculation of BNSF Market Access

Segment (1)	Amount (millions) (2)
1. "2 to 1" Points	
a. Central Corridor	$555
b. Sealy - Eagle Pass	126
c. Houston - Brownsville	88
d. Houston - New Orleans	126
e. Houston - Memphis	62
f. "Independent" Points	105
g. Subtotal	$1,062
2. I-5 Corridor	327
3. Laredo Gateway	423
4. Total (L1g + L2 + L3)	$1,812

Source: V.S. Lawrence, Table 6, page 3-5.

In total, Mr. Lawrence has determined that BNSF will have access to $1.8 billion of UP/SP traffic.[12/]

[12/] UP's witness Peterson also claims that the UP/SP-BNSF settlement agreement will provide "competitive access to well over $1 billion in UP and SP traffic. ..." (Peterson, page 15). For the same reasons as discussed below, Mr. Peterson's quantification of BNSF's marked access is significantly overstated.

My critique of Mr. Lawrence's determination of BNSF market access is addressed under the following topics:

1. Magnitude of BNSF Market Access
2. Mr. Lawrence's Methodologies
3. Restatement of BNSF Market Access
4. Market Access Revenue Per Mile

1. Magnitude of BNSF Market Access

Mr. Lawrence's study purports to show that the access granted under the UP/SP-BNSF settlement agreement will equal $1.8 billion per year. If this were true, this is a staggering concession by UP/SP. If such a concession were actually to occur, the merger would be counter-productive to UP and SP interests.

In order to put Mr. Lawrence's calculation in perspective, Table 8 below compares his claimed BNSF market access to total revenues for the BNSF, UP and SP for 1994.

Table 8
Comparison of Lawrence's
Market Access With System Revenues

Item (1)	Amount (Millions) (2)	Percent of Market Access[1/] (3)
1. Lawrence Market Access	$1,812	xxx
2. BNSF Revenues		
a. BN	4,876	xxx
b. ATSF	2,639	xxx
c. BNSF	7,515	24%
3. UP/SP Revenues		
a. UP[1/]	$5,076	xxx
b. SP	2,839	xxx
c. UP/SP	$7,915	23%

[1/] Includes CNW.
Source: Exhibit_(TDC-4)

Mr. Lawrence's calculation of market access equals 24 percent of BNSF total revenues and 23 percent of UP/SP's total revenue. In other words, Mr. Lawrence claims that UP/SP will allow BNSF access to over 20 percent of the total revenue generated by the company.

2. Mr. Lawrence's Methodologies

Mr. Lawrence's determination of BNSF market access is based on UP/SP movements on the ICC's 1994 Waybill Tape. His procedures for developing the market access can be grouped into two categories: 1) "2 to 1" points; and 2) I-5 Corridor; and, the Laredo Gateway. The procedures for each are discussed below.

For the market access at "2 to 1" locations (i.e., stations currently served by both UP and SP and no other railroad), Mr. Lawrence grouped the traffic into six different line segments (Table 7, Line 1). For each line segment, Mr. Lawrence utilized the following steps to quantify the BNSF market access:

a. Identify the total revenues for all movements originating or terminating at the "2 to 1" location ("Total Station Traffic");

b. Identify the "Station Open Traffic". Based on Mr. Lawrence's study of switching tariffs, only 74%[13/] of all revenues to/from "2 to 1" locations are actively open to both UP/SP. Therefore, Station Open Traffic equals Total Station Traffic multiplied by .74;

c. Subtract the revenue already received by BNSF for the Station Open Traffic; and,

d. Subtract the interline revenue received by railroads other than UP, SP or BNSF ("Interchange Revenues").

Table 9 below summarizes Mr. Lawrence's calculation of the BNSF's market access for 2 to 1 locations.

13/ Bates Number BN/SF - 00436. The 74% reflects stations at a 2-to-1 SPLC which are accessible to UP or SP, but not both carriers.

Table 9
Summary of BNSF Market
Access For "2 to 1" Locations

Item (1)	Source (2)	Amount (millions) (3)
1. Total Station Traffic	1/	$1,677
2. Station Open Traffic	L1 x .74	1,241
3. Current BNSF Revenue	1/	46
4. Current Interchange Revenue	1/	133
5. Market Access - "2 to 1" Locations	L2-(L3+L4)	$1,062

1/ Lawrence, Table 6, page 3-5.

In total Mr. Lawrence claims that the BNSF market access for "2 to 1" locations equals $1.06 billion.

For the I-5 Corridor and Laredo Gateway,[14/] Mr. Lawrence utilized the following procedures:

a. Identify the total revenues for applicable UP/SP movements (i.e., the Pacific Northwest to California for the I-5 corridor and all traffic to/from Laredo for the Laredo Gateway);

b. For the I-5 corridor, subtract the closed traffic where BNSF will not gain access;

c. Subtract the revenue already received by BNSF for the Station Open Traffic; and,

d. Subtract the interline revenue received by railroads other than UP, SP or BNSF ("Interchange Revenues").

14/ The Laredo Gateway will be accessible to BNSF via the Texas Mexican Railway Company ("TM").

Table 10 below summarizes Mr. Lawrence's calculation of the market access for the I-5 Corridor and Laredo Gateway.

Table 10
Summary of BNSF Market Access
For I-5 Corridor and Laredo Gateway

Item	Source	Amount (millions) I-5	Amount (millions) Laredo
(1)	(2)	(3)	(4)
1. Total Station Traffic	1/	$369	$514
2. Closed Traffic	1/	8	0
3. Current BNSF Revenue	1/	31	30
4. Current Interchange Revenue	1/	3	61
5. Market Access	L1 - (L2 + L3 + L4)	$327	$423

1/ V.S. Lawrence, Table 6, page 3-5.

Mr. Lawrence's calculations of BNSF's market access for the I-5 Corridor equals $327 million (Table 10, Column (3), Line 5). Mr. Lawrence's calculation of the BNSF's market access for the Laredo Gateway equals $423 million (Table 10, Column (4), Line 5).

3. Restatement of BNSF Market Access

I have reviewed Mr. Lawrence's calculations and underlying workpapers and have found that Mr. Lawrence has utilized a flawed procedure which significantly overstates the traffic that BNSF will have the opportunity to divert from UP/SP. In addition, Mr. Lawrence's results

include several mathematical errors which also overstate the traffic that can be diverted to BNSF. Mr. Lawrence's study is flawed and should be rejected for the following reasons:

a. Mr. Lawrence's market access contains a significant number of movements where UP or SP control both the origin and destination (i.e., local moves). BNSF will not divert moves where UP/SP control both terminals[15/];

b. Mr. Lawrence's calculation of interchange revenue to other Railroads for the I-5 corridor equals $18.4 million not the $3 million he has shown;

c. Mr. Lawrence has assumed that BNSF will capture all movements to which BNSF has access. Following UP's witness Peterson's study, BNSF will capture 50% of traffic moving to an interchange railroad and 90% of traffic moving to a BNSF terminal; and,

d. Mr. Lawrence has ignored the impact of contracts on traffic available to BNSF. Much of the UP/SP traffic moves under contracts and depending upon the length of the term and volume commitment, this traffic will not be available to BNSF.

I have restated Mr. Lawrence's calculation of market access to eliminate the errors in items 1 through 3 above. Concerning traffic moving under contract, I have not made any adjustments for traffic which is not available to BNSF but would note that my result reflect the maximum traffic available to BNSF. The details of my calculation are shown in Exhibit__(TDC-3) and summarized in Table 11 below. Table 11 also compares my results to the market access presented by Mr. Lawrence:

15/ UP's witness Peterson's study recognized that local moves are not divertable to BNSF.

Table 11
Restatement of BNSF Market Access

Item	Amount (millions) Mr. Lawrence	Restated	Difference
(1)	(2)	(3)	(4)
1. "2 to 1" Points			
a. Central Corridor	$555	$82	$473
b. Sealy - Eagle Pass	126	6	120
c. Houston - Brownsville	88	11	77
d. Houston - New Orleans	126	28	98
e. Houston - Memphis	62	7	55
f. "Independent" Points	105	14	91
g. Subtotal	$1,062	$148	$914
2. I-5 Corridor	327	57	270
3. Laredo	423	53	370
4. Total	$1,812	$258	$1,554

Mr. Lawrence calculates that BNSF will have access to traffic with revenues of $1,812 million. When his errors are restated, the appropriate revenues that BNSF can divert from UP/SP equal $258 million, a reduction of $1,554 million.

4. Market Access
Revenue Per Mile

Mr. Lawrence claims that each line that BNSF gets access to "presents a sufficient density of shippers that BN/Santa Fe can be expected to compete aggressively" (Lawrence, page 3-5)[16/]. Mr. Lawrence bases his analysis on the available revenues per mile.

[16/] As shown below, BNSF can not attract sufficient traffic to pay for the necessary infrastructure and operating costs.

Exhibit__(TDC-4) develops the average freight revenue per mile and costs per mile for UP, SP and BNSF and compares these volumes with my restatement of revenue per mile over the line segments that BNSF will gain access to pursuant to the UP/SP-BNSF settlement agreement. Because the revenue from the traffic on the I-5 Corridor moves over the Central Corridor, I have grouped these revenues together. In addition, because the traffic to the Laredo gateway moves over a portion of the Houston-Brownsville line segment, I have grouped these revenues together. For movements to stations categorized by Mr. Lawrence as "independent points," I have included the revenues in my analysis but without any associated mileage. Table 12 below summarizes this data.

Table 12
Summary of Average Revenue and Costs Per Mile

Item (1)	Amount (2)
1. Revenue Per Mile UP/SP-BNSF Settlement	
a. Central Corridor (including I-5 Corridor)	$7?,192
b. Sealy - Eagle Pass	11,782
c. Houston - Brownsville (including Laredo)	114,662
d. Houston - New Orleans	150,691
e. Houston - Memphis	11,155
f. Independent Points	1/
g. Weighted Average	$67,990
2. System Average Revenue Per Mile (1994)	
a. UP/SP	$253,559
b. BNSF	246,369
3. System Average Operating Costs Per Mile (1994)	
a. UP/SP	$218,259
b. BNSF	210,316

1/ Not applicable.
Source: Exhibit__(TDC-4).

The revenue per mile over the trackage rights segments, when properly restated, range between $11,155 per mile and $150,691 per mile (Table 12, Line 1). Overall the BNSF's market access will generate revenues of $67,990 per mile (Table 6, Line 1g). In contrast, the system average revenue per mile equals $253,559 for UP/SP and $246,369 for BNSF (Table 12, Line 2). The system average operating costs equals $218,259 per mile for UP/SP and $210,316 per mile for BNSF. (Table 12, Line 3). The UP/SP-BNSF settlement agreement will provide BNSF revenues which are far short of the system average revenues per mile. In addition, the revenues from BNSF's market access will be substantial less than BNSF's operating costs per

mile. When viewed in this manner, the BNSF will have little incentive to compete for this traffic.

B. PROBLEMS WITH TRACKAGE RIGHTS

The trackage rights provisions contained in the UP/SP-BNSF settlement agreement are the major contingency to regulatory approval of the merger. In signing the settlement agreement, UP/SP has conceded the loss of competitive advantage to shippers who have previously been served by UP and SP in the event that the merger is approved. Therefore, the ability of the UP/SP-BNSF settlement agreement to provide a competitive alternative is critical to the merger. As I discuss in following sections of this testimony, the introduction of BNSF trackage rights is an impractical, and in many respects, unworkable solution to the loss of competitive options which shippers would suffer if the merger is approved.

In addition to the numerous specific problems associated with the trackage rights provisions of the settlement agreement, trackage rights, in general, have been viewed by railroads themselves as inferior to direct ownership of rail lines. Trackage rights are generally viewed as a device which is employed only in those instances where no other operating options are available. Those trackage rights arrangements which have worked out generally involve relatively clear cut operations, involving many fewer miles than those involved in the settlement agreement and where the tenant railroad exercises some leverage in the determination of operating priorities.

In this proceeding the trackage rights solution proposed by UP/SP and agreed to by BNSF involve approximately 3,800 miles of UP and SP rail line. As I discuss below, traffic rights operations and related finances can be problematic at best. Even the railroads involved here have had problems implementing trackage rights agreements which involved only a fraction of the miles covered in the UP/SP-BNSF settlement agreement.

Ironically, the most recent and notable indictment of traffic rights arrangements comes directly from the BNSF. It should be noted that this candid assessment of trackage rights occurred well after the settlement agreement had been signed. In a November 1995 interview by Forbes magazine, former BNSF chairman Gerald Grinstein addressed trackage rights as follows:

> Although Burlington Northern will not oppose the UP/SP merger because of its trackage rights agreement, Grinstein admitted that trackage rights do not necessarily insure unfettered competition. "It's service with some disability", he says. "You've got track maintenance issues and dispatch issues. It is quite different from owning your own track."[17/] (emphasis added)

A further indictment of trackage rights arrangements is included in a document entitled An Important Message from Chicago and Northwestern Railway Company. This document, dated January 27, 1995, relates to the BN - CNW Joint Line Agreement ("JLA") which provides operating conditions for the joint BN/CNW's use of trackage in the southern Powder River Basin coal region. Although, strictly speaking, the Joint Line Agreement does not represent a pure trackage rights arrangement, it nevertheless contains some features which are the exact

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17/ Forbes, December 18, 1995, Can Drew Lewis Drive the Golden Nail, pages 60 and 64.

equivalent of several crucial trackage rights terms included in the settlement agreement. There, CNW, entirely dissatisfied with the JLA states that:

> "The structural flaws of the Joint Line Agreement go beyond the issue of capacity additions. Under the JLA, BN is exclusively and perpetually authorized to control day-to-day operations over the joint line including the dispatching of BN and CNW trains, both loaded and empty. The JLA contains no standards to govern the dispatching of trains, other than a general requirement that it be done "without discrimination." (emphasis added)
>
> This is the competitive equivalent of having United Airlines and American Airlines operating out of the same busy airport, but giving United exclusive authority over the control tower!"

A similar control problem clearly exists within the UP/SP-BNSF settlement agreement where Section 9d, at page 16 states:

> The management and operation of the trackage rights line shall be under the exclusive direction and control of the owning carrier. The owning carrier shall have the unrestricted power to change the management and operations on and over joint trackage as in its judgement may be necessary, expedient or proper for the operations thereof intended. Trains of the parties utilizing joint trackage shall be given equal dispatch without any discrimination in promptness, quality of service, or efficiency in favor of comparable UP/SP traffic. (emphasis added)

CNW goes on to say that, "The ICC prescribed the existing Joint Line Agreement in 1982. At that time the principal focus of all parties properly was on bringing CNW's access to the PRB to fruition, so that shippers' mines in the Powder River Basin would begin to benefit from railroad competition anticipated when construction of the joint line was authorized. The flaws in the Joint Line Agreement, which gives so much power to BN, were far less obvious in 1982 than they are today." The CNW's comments should raise concerns here. The difficulties inherent in the complete control exercised by BNSF over the dispatching functions on the joint line (which are readily recognized by UP's C&NW subsidiary) exemplify the problems which

will inevitably occur under the much more extensive and largely unplanned UP/SP-BNSF trackage rights arrangements. The shippers will be the party injured if the UP/SP are able to prevent open and reliable access to the locations which are losing competition due to the merger.

C. LACK OF BNSF OPERATING PLAN

The UP/SP Operating Plan, as presently presented, which is summarized in Volume 3 of the Application contains approximately 434 pages of detailed operational descriptions, operating statistics and maps. Although the Operating Plan is not all-inclusive and, of necessity, relies upon some estimated data, it provides a competent and relatively complete projection of the consolidated operations of UP and SP in the event that the subject merger succeeds. Furthermore, UP/SP have provided thousands of pages of workpapers to support the operating plan. However, notably lacking in the UP/SP Operating Plan is any semblance of a detailed description and rationale of projected BNSF operations over the 3,800 mile trackage rights complex which BNSF will theoretically provide competitive service. In other words, UP/SP understands how the merger of UP/SP will affect operations (including the impact on employment, cycle time, dispatching, etc.), but the operations of BNSF is not addressed.

Although occasional mentions of BNSF operations appear in the verified statements, exhibits and workpapers, these references are usually limited to discussions of reciprocal benefits which the BNSF trackage rights operations provide, rather than detailed explanations of how such operations will be conducted. The only supplemental data regarding how BNSF operations would be conducted over UP/SP lines is contained in BN/Santa Fe's Comments on the Primary

Application, filed December 29, 1995, approximately one month after the Primary Application was filed. BNSF Witness Neal D. Owen endeavors to provide a description of BNSF's proposed customer service and train operations in connection with the merger Application (Owen, page 2). Mr. Owen's testimony states that "a formal traffic study was not conducted for the service planning" outlined in his statement (Owen, page 3). He further states that "This description reflects my judgments based on my research and on site visits, together with input from experienced BN/Santa Fe traffic and operating officers" (Owen, page 3).[18/]

The balance of Mr. Owen's statement provides a limited description of anticipated BNSF operations over six primary trackage rights access and purchased operating routes included in the settlement agreement. While this description may provide a useful general summary of projected BNSF trackage rights operations, neither it, nor any other source provided by the railroads have developed a detailed operating plan of the type necessary for the STB to assess the feasibility of the trackage rights operations and, therefore, assess the viability of BNSF as a competitive replacement to SP.

The 4,200 mile trackage rights/acquisition plan manifested in the UP/SP-BNSF settlement agreement constitutes the largest and most complex imposition of an independent carrier's operations over the lines of another independent carrier. As shown in Table 2 of witness Rebensdorf's testimony, the trackage rights in this proceeding are almost double the length of the extension trackage rights granted in the BN/ATSF merger. As such, even before such a massive strategy is suggested, detailed studies should have been undertaken. This infirmity

[18/] In response to interrogatories, BNSF stated that they did not conduct any study of operations.

places shippers who would be affected by the UP/SP-BNSF settlement agreement, and indeed the STB itself, in a position where the terms of the agreement must be accepted as a doctrine of faith, as opposed to a rational judgment based upon a detailed level of analysis.

In order to exemplify the inadequacy of planning for BNSF operations over existing UP/SP lines, I have compared the respective efforts in the analysis of projected operation over UP/SP with the inadequate plans postulated by BNSF. These comparisons are made in approximate order of their importance to future operations, although each function discussed would be integral ultimately to feasible trackage rights operations.

My comparison of the UP/SP operating plan data with that the plan submitted by BNSF an discussed under the following topics:

1. Train scheduling
2. Train dispatching
3. Crew Management
4. Equipment Utilization
5. Equipment Repairs
6. Yard & Local Train Activities
7. Operating Organization
8. Locomotive Fueling
9. Specific Route Operations

1. Train Scheduling

a. UP/SP -- In addition to detailed descriptions of coordinated train operations which are included in the UP/SP Operating Plan text, some 132 pages of detailed tabulations and schematics project post merger UP/SP operations (Application, Vol. 3, pages 267-398). This data identifies, by line segment, each train along with arrival/departure times. Additionally, explanations of train coordination and traffic flows are discussed throughout the application in the testimony of several other UP/SP witnesses.

b. BNSF -- By way of contrast, BNSF comments are limited to a description of the projected number of trains operating over the six corridors included in their analysis. No discussion is offered as to the relationship between existing or future train densities, handling of scheduled train meets, or how the BNSF traffic would be controlled and coordinated with UP/SP.

2. Train Dispatching

a. UP/SP -- The UP/SP operating plan calls for the current SP train dispatching function in Denver to be consolidated with the UP dispatching center in Omaha. Dispatch office and function relocation will be implemented in phases in order to accommodate changes in locomotive management and crew balancing in the earlier phases of the merger, with the train dispatchers being the last group to be relocated to the Omaha center. The UP/SP operating plan explains the relationship between train dispatching and crew and personnel requirement time

keeping functions. The consolidated system would use UP's TCS operating data system for the assignment of train crews. (Application, Vol. 3, page 241.)

b. BNSF -- Except to the extent that train dispatching functions are discussed in the settlement agreement (with no explanation as to how BNSF dispatching control will actually be accomplished), neither BNSF or UP/SP have provided crucial data relating to the addition of BNSF traffic over UP/SP owned lines.

3. **Crew Management**

a. UP/SP -- For crew assignments, crew calling and related activities UP/SP would employ its computerized crew calling system (crew management system - CMS) which interacts with the TCS system discussed above. The crew management function will be centralized in Omaha. Crew domicile and assignment locations are specifically detailed in the portion of the operating plan titled "Effects On Applicant Carriers' Employees". (Application, Vol. 3, pages 241-242 and pages 407-422.)

b. BNSF -- BNSF provides no explanation regarding train crew manpower requirements and projected post merger operations. Witness Owen projects that BNSF crew assignment locations will correspond with current UP/SP crew locations for several of the corridors which he discusses. Lacking however, is any strategic plan which would account for variations in traffic volumes the availability of experienced personnel or the suitability of UP/SP crew locations for BNSF, under BNSF operations.

4. Equipment Utilization

a. UP/SP -- UP/SP has drawn from its previous experience in earlier mergers in order to formulate a plan for both the assignment of through movement locomotives and existing car fleets. The operating plan calculates modifications in fuel consumption, freight car assignments and resulting car miles and the elimination of empty car movements resulting from the combined traffic base. (Application, Vol. 3, pages 235-241.) UP/SP operations study fails to consider, and does not mention nor quantify the estimated effects of traffic displacements and equipment utilization which would occur as the result of the implementation of the settlement agreement.

b. BNSF -- BNSF offers no details regarding the source, assignment, or availability of motive power and rolling stock requirements under the terms of the settlement agreement.

5. Equipment

a. UP/SP -- The UP/SP operating plan specifies in detail the post merger disposition of both locomotive and car heavy repair facilities. It specifies which facilities will be closed, which will be expanded and which corridors each facility would serve. (Application, Vol. 3, page 229, and Various Corridor Descriptions, pages 20-230.)

b. BNSF -- Despite the fact that operations under the comprehensive agreement would involve train movements which are hundreds of miles from BNSF-UP/SP junction points, BNSF has explained no plan for the repair and servicing of either locomotives or freight cars. While the distances involved may not present serious problems for BNSF scheduled maintenance,

running repairs and/or non-scheduled heavy repairs will be extremely problematic in the absence of a formalized maintenance plan.

6. Yard and Local Train Activities

a. UP/SP -- UP/SP provides a detailed explanation of the projected post merger status of current UP/SP yards and terminals. The current functions of each yard and terminal rail operation is discussed, and rationales for the retention or revision of operation are provided. Additionally, the effects of yard and terminal operations on line haul service were analyzed. (Application, Vol. 3, Various Corridor Descriptions, pages 20-230.)

b. BNSF -- Witness Owen offers a brief explanations of projected BNSF yard and terminal operations within his "route segment analysis". These explanations are limited to the assertion that, according to developments in yard and terminal activities, BNSF may elect either reciprocal switching or direct BNSF service in order to meet operational requirements.

7. Operating Organization

a. UP/SP -- In the post merger period UP/SP projects that it will consolidate the current UP/SP general management staff of eight regional general managers to a staff of six regional general mangers located in Omaha. These general managers will supervise 21 service unit superintendence. Again, UP/SP makes no special provision to account for the projected introduction of BNSF traffic over its merged system. (Application, Vol. 3, pages 248-249.)

b. BNSF -- BNSF offers no information regarding the impact on management, superintendence and/or direction of its projected traffic over UP/SP lines.

8. Locomotive Fueling

a. UP/SP - UP/SP does not provide a detailed description of post merger fueling locations or procedures. However, this is not required because the fueling locations on the current UP and SP will be adequate to service the combined traffic of the carriers. No provision is mentioned with respect to the fueling of BNSF trackage rights traffic and no discussion is offered as to the adequacy of these facilities to handle BNSF locomotive fueling in the event that UP/SP elects to allow BNSF use of such facilities under projected BNSF access.

b. BNSF -- As is discussed above, many of the projected BNSF movements under the trackage rights agreement would involve transportation which would occur at locations that are at considerable distance from BNSF owned lines and the fueling facilities which service those lines. Again, BNSF has failed to offer any plan regarding this crucial consideration.

9. Specific Route Operations

a. UP/SP -- UP/SP devoted the majority of the opening sections of its operating plan (228 pages) to a detailed analysis of operations over each section of the combined UP and SP system. This analysis includes consideration of current operations, modified consolidated operations, projected densities, local train operations, switching and interchange operations, as well as revised train frequencies and resulting impacts upon various shipper locations. Although

some mention is made respecting the integration of BNSF trackage rights traffic, no analysis is provided regarding the treatment of this traffic. (Application, Vol. 3, Various Corridor Descriptions, pages 20-230.)

b. BNSF -- In contrast, BNSF witness Owen devotes approximately 22 pages of narrative to an explanation of operations over the six primary service routes which he discusses. Again, his analysis is limited to a simple declaration of the number and types of trains which are anticipated to operate over the trackage rights. His analysis disregards any consideration of the personnel and infrastructural requirements that the movements would involve. Most importantly, Mr. Owen fails to analyze how BNSF operations would "fit" with the operations that are so specifically detailed in the UP/SP operating plan.

In summary, as presently constituted, the plans for trackage rights operations developed by the UP/SP and BNSF are conjectural at best. Given the operating problems recently experienced by each of the three rail entities which are party to the agreement it is difficult to conceive that the introduction of the many complications which are inherently involved in trackage rights operations could, within a reasonable time period, be successfully overcome by the participants.

The recent merger (1995) between UP and CNW is an example of the problems with operations after the merger. The UP operates 17,499 miles of road and the CNW has 5,211 miles of road.[19/] After the UP's consolidation of a railroad, one-third its size, substantial operating problems occurred. The operating problems became so bad that in November 1995, UP's President Ron Burns sent letters to customers to assure them that the problems would be

[19/] For comparison, the SP has 13,715 miles of road.

resolved. In that letter of Mr. Burns blamed the operating problems on the UP/CNW merger. This is contrary to the UP's claim that the UP/CNW merger would "enable the two carriers to improve service through closer coordination of operation and marketing activities" (UP 1994 10-K, Volume 7, page 379). (emphasis added) In reality, the UP/CNW merger resulted in service that "has deteriorated to a level never before seen on UP."[20/]

D. BNSF OPERATIONS AND COSTS -- HOUSTON-MEMPHIS

Several factors impact the effective operation BNSF over UP/SP lines under the terms of the UP/SP-BNSF settlement agreement. When these factors are investigated in detail it becomes evident that BNSF can not provide the viable competitive options which the parties contend would be preserved under the terms of the UP/SP-BNSF settlement agreement. A major, and perhaps overriding, impediment to successful BNSF participation under the trackage rights provision of the Agreement involves the volume of traffic which BNSF will realistically be able to capture, should the merger be approved. Another factor weighing against successful BNSF competition for traffic involves the cost of operations. This cost must be considered at two levels. The first consideration involves the investment in infrastructure and expenses which would be required in order to service the minimal volumes of traffic. The second level of cost reflects BNSF's ability to compete, from a cost standpoint, with the UP/SP.

[20/] Mr. Burns' letter as quoted in *Traffic World*, November 13, 1995, page 13.

My analysis is discussed under the following topics:

1. Traffic Volumes Available To BNSF
2. Operational Issues
3. BNSF Cost To Install Infrastructure
4. BNSF Cost Disadvantage

1. Traffic Volumes Available to BNSF

According to the Applicants, the anti-competitive aspects of the merger would be cured through the granting of trackage rights to BNSF for 2 to 1 shipper locations. Volume and train frequencies are obviously important elements in the determination of the viability of BNSF as a competing entity. Capturable volume will be a major determinant of BNSF's infrastructural requirements, operating expenses, and most significantly, its ability to price competitively.

UP/SP Witness Peterson's methodology by which UP/SP estimates the amount of traffic that would divert to BNSF is based on "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" (Peterson, page 292). Movements that were to or from UP/SP locations not served by BNSF would not be diverted to BNSF. The percentage distributions provided by Mr. Peterson are made without consideration of BNSF's ability to service the diverted traffic or UP/SP's ability to accommodate it. Additionally, although Mr. Peterson acknowledges the fact that contracts impact the availability of traffic to BNSF, he assumed that "the existence of a transportation contract would not preclude diversion..." (Peterson, Page 256). These analytical

deficiencies, if corrected, would reduce substantially Mr. Peterson's projection of the volume of UP/SP traffic actually available to BNSF. However, even without correction of the deficiencies, and adhering to Mr. Peterson's diversion formula, divertable traffic volumes over many trackage rights lines are substantially below volumes required to justify the infrastructure investment and operational expenses.

I have employed a conservative approach in order to determine traffic volume diversion and resulting train frequencies for the Houston-Memphis corridor. Using Mr. Peterson's methodology, the results of my analysis indicate very low BNSF trackage rights volume densities over the route.

In order to determine the eligibility of traffic for BNSF transport over the Houston - Memphis corridor I analyzed each movement from the 1994 ICC Costed Waybill Tape originating or terminating in the Houston and Memphis areas and/or traffic which could qualify for overhead movement over the Corridor (e.g., traffic moving through from Beaumont, Texas to Birmingham, Alabama which could utilize the Houston-Memphis corridor). A schematic of this corridor for the UP/SP and BNSF major lines are shown in the schematic included as Exhibit__(TDC-5).

The traffic available to BNSF was placed in 3 categories. The first category reflects BNSF originated or terminated traffic which could be rerouted to the Houston-Memphis corridor. ("Reroute of BNSF To Trackage Rights"). This rerouted traffic was determined from a manual review of the origins, destinations and interchange locations. For example, a movement

originating on the BNSF in Tenaha, Texas for movement to Birmingham, Alabama could be rerouted by BNSF over the Houston-Memphis corridor (instead of moving through Beaumont and Dallas). However, a movement originating in Houston for movement to Denver would not be subject to rerouting. A movement originating in the Houston area and moving to Chicago could be routed either through Dallas or over the Houston-Memphis Corridor. BNSF's Witness Owen, in his deposition, stated that traffic would traverse the "most effective routing" (Tr. 194). Because of the compensation level and the inherent operational problems, the most efficient BNSF routing for traffic in the Houston area to the St. Louis and Chicago gateways will be routed through Dallas instead of the Houston-Memphis Corridor. In total, my analysis indicates that BNSF can divert 245,580 tons per year from BNSF lines to the Houston-Memphis corridor.

The second category reflects traffic available to BNSF from "2 to 1" locations which can be diverted from UP/SP to BNSF. In order to determine eligible diversions of UP/SP traffic to BNSF trackage rights transported over the Corridor, I identified all traffic originating or terminating at 2-to-1 locations on the Houston-Memphis corridor. I then separated the traffic into three groups:

a. Traffic where UP/SP control the originating and terminating location,

b. Traffic where UP/SP control the 2-to-1 location and BNSF controls the other terminal, and;

c. Traffic where UP/SP control the 2-to-1 location and a carrier other than UP/SP or BNSF controls the other terminal.

Traffic controlled by UP/SP at both ends of the movement was designated as not available to BNSF. Following Mr. Peterson's formula, I have designated 90 percent of traffic which originates or terminates from or to an exclusive BNSF location and 50 percent of traffic to or from a competitive location or gateway as divertible to BNSF. The results of this analysis is shown as "Traffic From "2-to-1" locations. In total, BNSF can divert 0.9 million tons per year.

The final category involves traffic available to BNSF from non-Class I Railroads. The settlement agreement provides that BNSF will be allowed to interchange with any non-Class I carrier which currently interchanges exclusively with UP and SP. Shortline traffic from the 1994 ICC Costed Waybill Tape was analyzed using the same procedures summarized for UP/SP originations. The result of this analysis is shown as "Traffic from Shortlines." Based on the use of the efficient routes, the BNSF will divert traffic only form shortlines it has access to which are on the route between Houston and Memphis (i.e., the Little Rock and Western Railway). In total, BNSF can divert 50,940 tons per year.

BNSF traffic which would logically be rerouted over the Houston-Memphis Corridor is summarized in Table 13 below. For purposes of calculating the number of loaded trains BNSF will operate over the corridor, I have utilized BNSF's average load of 74.9 tons per car and average train size of 75 cars per train.

Table 13
Summary Of Traffic Available To BNSF
(Houston - Memphis Trackage Rights)

Item (1)	Amount (2)
1. Annual Tons For Traffic Available To BNSF[1/]	
a. Reroute Of BNSF To Trackage Rights	
b. Traffic From "2 to 1" Locations	-
c. Traffic From Shortlines	
d. Total	1,170,323
2. Average Tons Per Car	74.9
3. Average Loaded Cars Per Year (L1d ÷ L2)	15,625
4. Average Cars Per Train	75
5. Average Loaded Trains Per Day (L3 ÷ L4 ÷ 365 Days)	0.57

1/ 1994 ICC Costed Waybill Tape.

BNSF will be able to divert 1.2 million tons per year to the Houston-Memphis corridor. This tonnage level will support 0.6 loaded trains per day.

2. Operational Issues

This section of my statement addresses numerous deficiencies in the opening testimony of both the UP/SP and BNSF relating to projected BNSF trackage rights operations over the Houston-Memphis Corridor. Three specific issues impact the operation on the Houston-

Memphis Corridor. First, the UP/SP will operate in such a way as to create a directional flow problem. Second, the BNSF will not have trackage rights through Shreveport, LA. Finally, the BNSF will not have storage facilities in the Texas/Louisiana area to support the plastics industry.

a. **Directional Flow** ---The UP/SP operation plan for the Houston-Memphis Corridor calls for trains on the UP line to operate northbound and the trains over the SP line to be operated southbound (UP/SP, Application, Volume 3, page 43). According to UP/SP's Witnesses King and Ongerth, this configuration "suits the operation and suits the terrain and suits the existing facilities much better..." (Tr. 508). The conclusion to operating this way, according to Mr. Ongerth, is "what I would call a no-brainer to operate the way we did it" (Tr. 509). This mode of operation is intended to free-up capacity on both railroads. UP/SP reaches the conclusion that "---even with BN/Santa Fe's diversions of traffic from UP/SP as the result of our settlement, neither the UP routes nor the SP routes could separately handle the traffic of both roads." (Operating Plan, Page 42) A schematic of the UP/SP plan operating flow is shown on Exhibit__(TDC-5).

The South Central directional plan which is depicted on Exhibit_(TDC-5) calls for the routing of all southbound traffic over the current SP (Pine Bluff) line and the routing of all northbound traffic over the current UP (Little Rock) line. According to the applicants, BNSF trackage rights traffic will use the current SP route for both north and southbound movements. Therefore, the directional operation would result in the northbound loads traveling against the

combined southbound volume of UP/SP traffic. Although the settlement agreement states that train dispatching and resulting train superiority will favor neither UP/SP nor BNSF traffic, any traffic (whether UP/SP or BNSF) will be disadvantaged when moving against the predominant directional movements. Compounding the directional flow problem is the fact that the current SP line between Houston and Shreveport is dark (unsignaled).

b. **KCS Control of Shreveport** -- It is a well known fact that KCS has mounted strenuous opposition to the UP/SP merger and the attendant settlement agreement. The SP is dependent upon trackage rights over KCS lines at Shreveport, LA (Volume 3, page 299).[21/] These KCS trackage rights agreements do not transfer to BNSF. The UP/SP Operating Plan and testimony of Neil D. Owen assume that the STB will grant trackage rights through the Shreveport yard at a compensation level which will keep BNSF competitive.

c. **Lack of Storage Facilities** -- The storage of commodities for the chemical and plastics industry is integral to the transportation and marketing of these products. UP/SP Witness Richard B. Peterson acknowledges the importance of storage with his statement that:

> "Shippers of some bulk commodities such as plastic pellets often need in-transit storage of their product in shipper-owned railcars on railroad yard tracks. Storage in transit ("SIT") allows plants to be run at capacity and product to be readily available for prompt movement to various end markets as product price and demand change. The UP/SP merger will make new SIT yard capacity available at UP's Amelia Yard (near Beaumont) and in St. Louis, which will importantly increase the competitiveness of the merged system or these commodities. Also, UP's more extensive Gulf Coast SIT capabilities will be made available to SP shippers." (Application, Vol. 2, Peterson, Page 65)

21/ The same problem exists at Beaumont, TX where the SP relies upon trackage rights over the KCS.

UP/SP Witness Robert D. Willig further validates the crucial role of storage with the following statement:

> "Storage for plastics represents another major dimension of nonprice competition between railroads, as plastics generally move from production directly to rail cars, and are often sold while they are in storage in railcars." (Applicatio.., Vol.2, Willig, Page 619)

Although stated for entirely different reasons, this portion of Dr. Willig's testimony puts a fine point on the importance of storage capacity in the determination of the relative viability of carrier competing for chemicals and plastics traffic. Again, as is the case with other facets of operations, the Applicants have analyzed UP/SP's capabilities with respect to storage capacity while disregarding the storage capabilities of BNSF. BNSF does not have the storage capacity that is available to UP/SP. While the UP/SP have the massive Dayton yard for storage, BNSF would have to rely on the yard at Teague, Texas. BNSF's Witness Neal D. Owen, in his deposition, discussed BNSF's capabilities to utilize the Teague yard for chemicals traffic (Tr.191-193). However, as noted by Mr. Owen, the Teague yard is "a little over 100 miles north of Houston" (Tr. 193). This will hinder BNSF's ability to compete with UP/SP for the chemicals and plastics traffic in the Houston area.

3. BNSF Cost to Install Infrastructure

As is discussed previously, the traffic volume capturable by BNSF to and from the Gulf Coast and transported over the Houston - Memphis Corridor translates to only 0.6 loaded trains per day. For the Houston-Memphis Corridor, BN will have trackage rights over 575.6 miles

of SP track and 101.4 miles of UP track.[22/] The only BNSF intersections between Houston and Memphis are at Cleveland, Texas and Tenaha, Texas.[23/]

BNSF's tenant status under trackage rights operations provisions of the UP/SP-BNSF settlement agreement would necessitate a substantial investment in infrastructure even before any BNSF trackage rights traffic moves over the Corridor. The trackage rights provisions of the settlement agreement account for only those "below the wheel" costs which are considered under the compensation terms of the agreement. Provision of the "above the track" infrastructure investments and operating expenses necessary to implement the trackage rights operations is entirely incumbent upon BNSF. As I discuss subsequently, BNSF has not only failed to quantify infrastructural and expense requirements, by its own admission it has also failed to analyze them. In the absence of this data I have estimated the infrastructure and expense requirements for BNSF above-the-track operations over the Houston-Memphis route in the following section.

a. **Identification of Infrastructure Required** -- As a guide for the identification of infrastructure and expense requirements I have employed those elements which are analyzed by UP and SP in the merger application. The items which I identify were considered by UP and SP to be crucial to the coordination, successful operation and integration of two previously independent rail systems.

With the exception of limited track construction, such as that required for junction point connections, all of the items which I have identified involve above-the-track operations.

22/ The UP-owned track runs from North Little Rock, AR to Pine Bluff, AR and Fair Oaks, AR to Bridge Junction, AR.

23/ All BNSF traffic from Tenaha runs through Beaumont.

Although I have tailored my estimates to reflect the actual projected train frequencies over the line, several of the infrastructure items identified require full implementation to service even minimal train frequency. Stated simply, a number of significant infrastructural requirements must be met even before the first BNSF train moves over UP/SP lines. Table 14 below identifies infrastructural additions and/or expansions and associated values provided by UP/SP in this proceeding (where stated) which are required for minimal implementation in of BNSF trackage rights for the subject route.

Table 14
Infrastructure Requirements For The
Implementation Of BNSF Trackage Rights--Houston-Memphis

Item (1)	UP/SP Merger Values (2)
1. Locomotives	$2 Million Per Locomotive
2. Freight Cars	$57,000 Per Car
3. Locomotive Repair Facilities	$5.2 Million to $24 Million Per Facility
4. Freight Car Repair Facilities	Not Specified
5. General Management	Not Specified
6. Crew Management	Not Specified
7. Communications	Not Specified
8. Terminal Expansion/Modification	$22 Million Per Terminal
9. Fuel Servicing Facilities	$2.4 Million Per Facility
10. Customer Service	Not Specified
11. Connections	$2.3 Million Per Connection
12. Dispatching Coordination	Not Specified
13. Storage Construction/Expansion	Not Specified
14. New Computer Applications	$43 Million

b. Cost of Infrastructure Required For BNSF Trackage Rights -- In developing the estimates of BNSF's minimal infrastructure requirements, I have taken into account BNSF Witness Owen's limited outline of projected BNSF operations, proximity and availability of current BN operational support facilities and the length of the route. I have also considered the reduction in through train frequencies as determined in the preceding Section of this statement.

The infrastructural investments summarized in Table 14 above were estimated on the following bases:

(1) Locomotives, Through Train: The cost ($2.0 million per locomotive) was derived from the UP/SP Operating Plan. The number of locomotives per train (3.3) were multiplied by the 0.60 loaded trains per day. Loaded train locomotives were multiplied by 2 (loaded and empty trains) and increased by 10 percent for locomotive spare requirements. Average train cycle times over the Houston-Memphis Corridor were derived from attachment 13-1 to the UP/SP Operating Plan and equal 27.23 hours. Cycle times was divided by 24 hours in order to determine complete cycle requirements. The total number of locomotives required equals 5.[24/]

(2) Locomotives, Switching: The cost per locomotive is based upon the average cost of BNSF reconditioned power for units less than 2,000 horsepower ($318,000 per unit). Two units were applied to each designated switching assignment (Houston, Shreveport, Pine Bluff and Memphis). An additional locomotive was added as a spare.

(3) Locomotive Maintenance Facilities: BN will require a locomotive maintenance facility on this line. Cost per facility is based upon UP/SP estimates of facility expansions at 8 small facilities of $41.6 million or $5.2 million per facility.

(4) Car Shops: These are facilities required as equipment maintenance bases and storage for supplies needed for minor repair services. It is estimated that one

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[24/] 0.60 loaded trains per day x 2.0 loaded to empty ratio x 3.3 locomotives per train x 27.23 hours ÷ 24 hours per day x 1.10 spare factor = 4.9 locomotives

building with related storage and equipment will be required for the route. The cost estimated for this facility is derived from my experience in recent proceedings where such cost has been identified.

(5) Fuel Servicing Facilities: The aggregate investment cost is derived from UP/SP's estimate for fuel servicing facilities as shown in the merger application ($2.4 million per facility). Facilities are required at Shreveport and Pine Bluff.

(6) Connections: The cost per connection is derived from UP/SP Operating Plan ($2.3 million per connection). Connections are required at the four BNSF-UP/SP junction points (Houston, Memphis, Cleveland, TX and Tenaha).

(7) General Management Building: The BNSF will require facilities at Shreveport and Pine Bluff. The cost of a building is estimated at $1.50 million per building. The cost estimated for this facility is derived from my experience in recent proceedings where such cost has been identified.

(8) Computer Applications: In the UP/SP merger, UP/SP are spending $43.3 million for computer hardware/software. UP/SP operate over 31,214 miles. Based on a mileage prorate of the Houston and Memphis trackage rights (677 miles), the BNSF will incur $939,000 for computer needs.

(9) Terminal Expansion: The BNSF will need to expand yard facilities to handle the trains operation over the trackage rights. In the UP/SP operating plan, UP/SP

states that the investment to upgrade the BNSF interchange with UP/SP at Nelson-Buda, Illinois is $21.7 million for various projects. The BNSF will require upgraded facilities at the four yard locations. I have estimated that each facility will require one-half the cost of the Nelson-Buda upgrade.

(10) Communications: Communications cost is derived from my experience in recent proceedings where such cost has been identified I have prorated the cost according to the 677 miles of trackage rights involved on this route.

Table 15
BNSF Infrastructural Cost For
Implementation Of Operations Over
The Houston-Memphis Trackage Rights Route

Item (1)	Unit Cost (2)	Number Required (3)	Investment Cost (000)[1/] (4)	Annual Cost (000)[2/] (5)
1. Locomotive Investment				
a. Through Train	$2,000,000	5	$10,000	$1,947
b. Switching	310,000	9	2,790	543
2. Locomotive Maintenance Facility	5,200,000	1	5,200	1,012
3. Car Shop	14,700,000	1	14,700	2,862
4. Fuel Servicing Facility	2,400,000	2	4,800	934
5. Connections	2,300,000	4	9,200	1,791
6. General Management Building	1,500,000	2	3,000	584
7. New Computer Applications	939,000	1	939	183
8. Terminal Expansions	10,300,000	4	41,200	8,021
9. Communications	5,700,000	1	5,700	1,110
10. Total	xxx	xxx	$97,529	$18,987

[1/] Column (2) x Column (3).
[2/] Annual investment costs are based on an annuity of 15 year life on a cost of capital of 17.8 percent.

In total, I estimate that the BNSF will be required to invest $98 million in order to put the required infrastructure in place to operate over the Houston-Memphis corridor. The annual cost for the investment equals $19.0 million per year.

4. BNSF Cost Disadvantage

The BNSF will not enjoy costs which are as low as those of the UP, in part, due to the trackage rights compensation. I have costed the movement of plastics for each carrier over the Houston-St. Louis route. First, I have developed BNSF's variable costs between Houston and St. Louis utilizing the trackage rights over the Houston-Memphis Corridor. Next, I developed the BNSF's variable costs between Houston and St. Louis based on the BNSF route using BNSF's own rail lines through Dallas, Texas and Talsa, Oklahoma. Finally, I have developed UP's variable cost between Houston and St. Louis over UP's route. My cost analysis is based on ICC 1994 URCS unit costs for each railroad and indexed to fourth quarter 1995 levels ("4Q95"). The costing methodology is based on the procedures utilized by UP's witness Rebensdorf. The average load for plastics rail shipments equals 87.9 tons per car. Because this commodity is predominately transported in shipper-owned equipment, car costs have been excluded. The BNSF mileage between Houston and St. Louis over the trackage rights between Houston and Memphis equals 844.5 miles.[25/] The mileage between Houston and St. Louis over BNSF's owned lines equals 969 miles. The movement over UP's lines between Houston and St. Louis equals 803.5 miles.

My development of variable costs is shown in Exhibit__(TDC-6) and summarized in Table 16 below:

[25/] For movement over trackage rights, one-half of the mileage was applied to ATSF unit costs and one-half to BN unit costs.

Table 16
Summary of Variable Costs of
Houston-Memphis Corridor--4Q95

Railroad (1)	Cost Per Ton (2)
1. BNSF(via trackage rights)	$9.85
2. BNSF (over BNSF tracks)	8.86
3. UP	7.56

Source: Exhibit__(TDC-6).

BNSF's variable costs equal $9.85 per ton utilizing the trackage rights on the Houston-Memphis Corridor. BNSF's variable costs from Houston to St. Louis, over BNSF tracks, equals $8.86 per ton. UP's variable cost equal $7.56 per ton. Therefore, BNSF will be at a cost disadvantage and will not be able to price as competitively as UP/SP. In addition, BNSF has little incentive to reroute traffic over the Houston-Memphis Corridor due to the increase costs compared to running over its own rail lines.

E. COMPENSATION FOR BNSF TRACKAGE RIGHTS

In the event that the UP/SP merger is consummated, the access provided to BNSF is designed to do no more than return shippers to the pre-merger competitive status. The UP/SP

has acknowledged that the trackage rights compensation was meant to "place both carriers on a level playing field" (Rebensdorf, page 301). Therefore, compensation to the merged UP/SP entity should be limited to the reimbursement of UP/SP's costs, including a return on investment based on the current cost of capital.[26/] The use of cost-based trackage rights payments is common in the railroad industry. Also, the proper adjustment mechanism for the compensation should be based on actual cost changes or a method that approximates, as closely as possible, the cost changes. Each issue is discussed below under the following topics:

1. Compensation in the UP/SP-BNSF Agreement
2. Other UP/SP Agreements
3. Adjustment Mechanism

1. Compensation in the UP/SP-BNSF Agreement

The level of the trackage rights compensation included in the UP/SP agreement with BNSF provides a substantial profit to UP/SP when the BNSF utilizes the UP/SP's line segments. For purposes of this analysis, profit refers to compensation in excess of UP/SP's operating costs, depreciation, rents, and a return on investment at the current cost of capital. Compensation at a level higher than the cost incurred provides UP/SP a monopoly rent. Stated differently, the compensation level stated in the UP/SP-BNSF settlement agreement rewards UP/SP for the problems created by UP's and SP's decision to merge. In order to avoid providing UP/SP a monopoly rent, variable costs should utilize the original cost less depreciation of the railroads'

[26/] For instances where the BNSF will utilize haulage services, those charges should also be based on variable cost of service (including return based on the current cost of capital). The UP/SP settlement agreement does not specify the level of charges for haulage service.

assets. This is the actual cost incurred by UP/SP. The proper level for determining costs in this proceeding are the combined UP/SP URCS costs for 1994 indexed to fourth quarter 1995 ("4Q95") wage and price levels. Trackage rights at this level reflect a maximum change because the variable costs do not include the cost savings projected by UP/SP as one of the benefits of the merger.

Trackage rights compensation in the UP/SP-BNSF settlement agreement is based on a payment per gross ton-mile. The payment reflects all gross ton-miles of the tenant (i.e., loaded and empty) and the charge is also applicable to gross ton-miles generated by the locomotives of the tenant (BNSF). Table 17 below summarizes the compensation in the UP/SP-BNSF settlement agreement.[27/]

Table 17
Summary of BNSF
Compensation For Trackage Rights
(Mills Per Gross Ton-Mile)

Traffic (1)	Line Segment: Keddie-Stockton/Richmond (2)	Line Segment: All Other (3)
1. Intermodal	3.48	3.10
2. Carload	3.48	3.10
3. Bulk (67 Cars or move of One Commodity)	3.00	3.00

27/ The agreement also provides UP/SP trackage rights over selected line segments owned by the BNSF. The compensation for these trackage rights also should be based on BNSF's variable costs.

Based on data provided by UP/SP as part of its application, I have developed the compensation level which covers the UP/SP's costs incurred (including a return on investment). The detailed procedures developing the variable costs caused by BNSF running over UP/SP's tracks are shown on Exhibit__(TDC-7). Because the costs are generated on a gross ton-mile basis, the costs are equal for all line segments and train sizes. Table 18 below summarizes the trackage rights charge restated to reflect UP/SP's costs incurred:

Table 19
Summary of BNSF Trackage Rights
Charges Based on Costs -- 4Q95
(Mills Per Gross Ton-Mile)

Traffic (1)	Line Segment: Keddie-Stockton/Richmond (2)	Line Segment: All Other (3)
1. Intermodal	1.48	1.48
2. Carload	1.48	1.48
3. Bulk (67 Cars or move of One Commodity)	1.48	1.48

Source: Exhibit__(TDC-7).

Based on the costs incurred by UP/SP, the STB should impose as a condition of the merger that trackage rights payment equal 1.48 mills per gross ton-mile.

2. Other UP/SP Trackage Rights Agreements

Another way to test the reasonableness of the UP/SP's proposed trackage rights fee per gross ton-mile is to compare the proposed fee to trackage rights fees in other existing UP/SP trackage rights agreements. As part of the discovery process, UP/SP provided me with the access to a number of trackage rights agreements. I have reviewed these agreements and identified the parties to the joint facility and the level of compensation. For those agreements where compensation is determined by the costs over the line segment, I have developed the mills per gross ton-mile, based on 1994 UP and SP URCS, for those components of the costs related to the trackage rights payments.[28/]

[28/] The UP/SP did not provide any of the actual bills upon which the costs are divided.

Table 19
Summary of Compensation Included
in Other UP/SP Trackage Rights Agreements

	Segment (1)	Contract Number (2)	Ownership Landlord (3)	Ownership Tenant (4)	Contract Year (5)	Mills Per GTM (6)
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

1/
2/
3/
4/
5/
6/

For trackage rights agreements based on costs, the trackage rights compensation ranges between mills per gross ton-mile and mills per gross ton-mile. For all of these trackage rights agreements, the adjustment mechanism is based on cost changes, not an index.

3. Adjustment Mechanism

The UP/SP agreement with BNSF provides for future adjustment to the trackage rights charges. The agreement calls for charges to be adjusted based on a price index reflecting 70 percent of the change in the STB's Rail Cost Adjustment Factor, excluding productivity ("70%

RCAFU"). UP's witness Rebensdorf claims that "the 70% factor shares some productivity gains with BN/Santa Fe..." (Rebensdorf, page 308).

The use of 70% RCAFU to adjust trackage rights charges will increase the UP/SP profits over time because the charges are based on a price index, not a cost index. The difference in the two indexes is productivity. The UP/SP will not be "sharing" productivity, but instead, will be increasing profits.

The Interstate Commerce Commission ("ICC") recognized in Ex Parte 290 (Sub-No. 4), Railroad Cost Recovery Procedures - Productivity Adjustment that productivity must be part of the index to adjust rates and charges if cost changes are to be recognized. Specifically the STB stated:

> We will implement this decision by use of two indices, the RCAF (Unadjusted), an index reflecting input prices which will continue to be filed by the AAR, and the RCAF (Adjusted), an index that reflects output (productivity-adjusted) costs. 5 I.C.C.2d 434,437

The ICC's decision recognized the shippers' view on productivity which the ICC summarized as follows:

> These shippers argue that, even during the periods when wages or material prices have been rising, their rise has been moderated or offset by increasing productivity, and that by ignoring the productivity gains, the present input index allows rates to rise faster than the actual cost of providing service. (Decision served November 17, 1988, Unprinted).

To demonstrate how an adjustment mechanism based on 70% RCAFU will overstate cost changes, I have compared the cumulative change in 70% RCAFU with UP and SP's actual costs

changes for the 1990-1994 time period.[29/] In addition, I have compared the actual cost changes to the change in the ICC's Rail Cost Adjustment Factor, including productivity ("RCAFA") over the same 1990-1994 time period.

The changes in the indexes and cost are shown in Exhibit__(TDC-8) and summarized in Table 20 below:

Table 20
Comparison of Change In
70% RCAFU and RCAFA With
UP/SP Actual Cost Changes -- 1990-1994

Item	Cumulative Percent Change
(1)	(2)
1. 70% RCAFU	+9.0%
2. RCAFA	(-)5.1%
3. Actual Cost Change Per Gross Ton-Mile	
a. UP	(-)10.9%
b. SP	(-)12.8%

Over the 1990 through 1994 time period, 70% RCAFU increased 9.0 percent (Table 20, Line 1). The RCAFA decreased 5.1 percent over the 1990 through 1994 time period (Table 20, Line 2). Finally, the UP's and SP's cost per gross ton-mile decreased 10.9 percent and 12.8

[29/] The cost changes measured here reflect the same components shown in Exhibit__(TDC-8), i.e., the below-the-wheel costs.

percent, respectively (Table 20, Line 3). The annual changes in these indexes and UP/SP's costs are graphically depicted in Exhibit__(TDC-9).

The only proper measure of the level of the trackage rights compensation is the variable cost of service. The proper measure for the adjustment mechanism is cost changes. The adjustment mechanism applicable to the UP/SP-BNSF settlement agreement, which is calculated annually, should be based on the change in costs following the procedures shown in Exhibit__(TDC-7). The adjustment should reflect a 1-year lag so that the 1997 adjustment would be based on the change in costs between 1995 and 1996. Alternatively, if actual costs are not used, then the adjustment should be based on the changes in the RCAFA.

As shown above, the recognition of actual cost changes is not uncommon to trackage rights agreements and, in fact, is reflected in the UP/SP-BNSF agreement. Section 12 of the agreement provides that the parties can "review the operations of the adjustment mechanism and renegotiate its application "every fifth year." The UP/SP and BNSF agreed that the restated trackage rights charges reflect the same "relationship to operating costs as upon execution" of the agreement. In my opinion, this further shows that cost changes are the proper measure of the adjustment mechanism, not price index changes.

In addition, in the merger between the BN and ATSF,[30/] the ICC recognized that the renegotiation of trackage rights charges "to take into account the cost basis of potential future changes in traffic volumes... is reasonable" (BN/ATSF Decision, page 92). The BN/ATSF decision rejected a provision to increase the trackage rights fee paid by SP if SP were purchased

30/ I.C.C. Finance Docket No. 32549, decided August 16, 1995. ("BN/ATSF Decision")

by UP because the ICC was not convinced that this increase was cost based (BN/ATSF Decision, page 92).

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

THOMAS D. CROWLEY, being duly sworn, deposes and says that he has read the foregoing statement, knows the contents thereof and that the same are true as stated.

Thomas D. Crowley

Sworn to and subscribed
before me this 27th day
of March, 1996.

Witness my hand and official seal.

My Commission Expires July 31, 1996

STATEMENT OF QUALIFICATIONS

My name is Thomas D. Crowley. I am an economist and President of the economic consulting firm of L. E. Peabody & Associates, Inc. The firm's offices are located at 1321 Cameron Street, Alexandria, Virginia 22314.

I am a graduate of the University of Maine from which I obtained a Bachelor of Science degree in Economics. I have also taken graduate courses in transportation at George Washington University in Washington, D.C. I spent three years in the United States Army and since February 1971 have been employed by L. E. Peabody & Associates, Inc.

I am a member of the American Economic Association, the Transportation Research Forum, and the American Railway Engineering Association.

The firm of L. E. Peabody & Associates, Inc. specializes in solving economic, marketing and transportation problems. As an economic consultant, I have organized and directed economic studies and prepared reports for railroads, freight forwarders and other carriers, for shippers, for associations and for state governments and other public bodies dealing with transportation and related economic problems. Examples of studies I have participated in include organizing and directing traffic, operational and cost analyses in connection with multiple car movements, unit train operations for coal and other commodities, freight forwarder facilities, TOFC/COFC rail facilities, divisions of through rail rates, operating commuter passenger service, and other studies dealing with markets and the transportation by different modes of various commodities from both eastern and western origins to various destinations in the United

STATEMENT OF QUALIFICATIONS

States. The nature of these studies enabled me to become familiar with the operating and accounting procedures utilized by railroads in the normal course of business.

Additionally, I have inspected both railroad terminal and line-haul facilities used in handling various commodities, and in particular unit train coal movements from the Powder River Basin to various utility destinations in the midwestern and western portion of the United States. These field trips were used as a basis for the determination of the traffic and operating characteristics for specific movements of coal, both inbound raw materials and outbound paper products to and from paper mills, crushed stone, soda ash, aluminum, fresh fruits and vegetables, TOFC/COFC traffic and numerous other commodities handled by rail.

I have presented evidence before the Interstate Commerce Commission ("ICC") in Ex Parte No. 347 (Sub-No. 1), Coal Rate Guidelines - Nationwide which is the proceeding that established the methodology for developing a maximum rail rate based on stand-alone costs. I have submitted evidence applying the ICC's stand-alone cost procedures in "Coal Trading,"[1/] "DP&L,"[2/] and "Westmoreland"[3/] along with other proceedings before the ICC.[4/]

1/ ICC Docket No. 38301S, Coal Trading Corporation v. Baltimore & Ohio Railroad, et al., ("Coal Trading").

2/ ICC Docket No. 38025S, The Dayton Power and Light Company v. Louisville and Nashville Railroad Company ("DP&L").

3/ ICC Docket No. 38301S (Sub-No. 1), Westmoreland Coal Sales Company v. Denver and Rio Grande Western Railroad Company, et al., ("Westmoreland").

4/ ICC Docket No. 40224, Iowa Public Power and Light Company v. Burlington Northern Railroad Company; ICC Docket No. 37029, Iowa Public Service Company v. Burlington Northern, Inc.; ICC Docket No. 39386, The Kansas Power and Light Company v. Burlington Northern Railroad Company and Union Pacific Railroad Company; ICC Docket No. 38783, Omaha Public Power District v. Burlington Northern Railroad Company; Docket No. 36180, San Antonio, Texas, Acting By and Through Its City Public Service Board v. Burlington Northern Railroad Company, et al.

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Moreover, I have developed numerous variable cost calculations utilizing the various formulas employed by the ICC for the development of variable costs for common carriers, including Burlington Northern Railroad Company,[5/] with particular emphasis on the basis and use of Rail Form A. I have utilized Rail Form A costing principles since the beginning of my career with L. E. Peabody & Associates Inc. in 1971.[6/]

I have also analyzed in detail, the Uniform Railroad Costing System ("URCS") and presented the results of my findings to the ICC in Ex Parte No. 431, *Adoption of the Uniform Railroad Costing System for Determining Variable Costs for the Purposes of Surcharge and Jurisdictional Threshold Calculations*. I have been involved in the URCS process, either directly

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5/ The following two (2) cases are examples of litigation before the ICC where I developed and presented Burlington Northern Railroad Company's variable costs of handling unit coal trains. These two cases involve the most detailed examination of the variable cost of moving coal in unit train service of any proceeding thus far brought before the ICC. The first example involved the variable cost of service evidence I presented on behalf of the City of San Antonio, Texas in ICC Docket No. 36180, *San Antonio, Texas, Acting By and Through its City Public Service Board v. Burlington Northern Railroad Company, et al.*, 1 I.C.C. 2d 561 (1986) ("San Antonio"). In that case, the ICC extensively analyzed the variable costs for a unit train movement of coal on the Burlington Northern Railroad Company from the Powder River Basin, Wyoming to San Antonio, Texas. Also I presented the variable cost of service evidence in ICC Docket No. 38783, *Omaha Public Power District v. Burlington Northern Railroad Company* 3 I.C.C. 2d 123 (1986) ("OPPD"), in which the ICC developed the variable costs for the unit train movement of coal from the Powder River Basin, Wyoming to Arbor, Nebraska on the Burlington Northern Railroad Company. In San Antonio, the ICC found that the variable cost of service as of the first quarter of 1984 was $12.62 per ton, just 46 cents higher than my cost calculation of $12.16 per ton and substantially lower than Burlington Northern Railroad Company's calculation of $17.54 per ton. In OPPD, the ICC determined variable cost for the first quarter of 1985 was $5.31 per ton, just 11 cents higher than my calculation of $5.20 per ton, and substantially lower than Burlington Northern Railroad Company's calculations of $6.53 per ton.

6/ Rail cost finding has been the cornerstone of this firm. Dr. Ford K. Edwards the senior partner of the firm Edwards & Peabody*, was the major architect in the development of Rail Form A. Mr. Peabody carried on this tradition of innovative cost finding until his retirement in 1983. Mr. Peabody's work included participation in the Tennessee Valley Authority's ("TVA") computerization of Rail Form A. Mr. Peabody was a member of a committee of transportation consultants which was organized to assess the TVA procedure in order to make available more complete and simplified input data for the Rail Form A computer program.

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* Subsequent to the retirement of Dr. Edwards in 1965, the firm name was changed to L. E. Peabody & Associates, Inc.

STATEMENT OF QUALIFICATIONS

or indirectly, since the first interim report of the contractors was released. Throughout this process, I have consistently asked for and reviewed the support and workpapers underlying the different developmental stages of the formula. I received and presented comments in February 1982 on the ICC's *Preliminary 1979 Rail Cost Study*. In December 1982, the ICC released the *Uniform Rail Costing System, 1980 Railroad Cost Study* which I reviewed along with the workpapers supporting that study and the entire developmental stage of URCS which was the basis for my Ex Parte No. 431 comments.

I have frequently presented both oral and written testimony before the Interstate Commerce Commission, Federal Energy Regulatory Commission, Railroad Accounting Principles Board, Postal Rate Commission and numerous state regulatory commissions, federal courts and state courts. This testimony was generally related to the development of variable cost of service calculations, fuel supply economics, contract interpretations, economic principles concerning the maximum level of rates, implementation of maximum rate principles, and calculation of reparations, including interest. I have also presented testimony in a number of court and arbitration proceedings concerning the level of rates and rate adjustment procedures in specific contracts.

I have participated in every major ICC rulemaking proceeding since the mid-seventies, including each phase of Ex Parte 290 (Sub-No. 2), (Sub-No. 4), (Sub-No. 5) and (Sub-No. 7). On a number of occasions my predecessor, L. E. Peabody, Jr., and I have submitted evidence

STATEMENT OF QUALIFICATIONS

to the Commission concerning the determination of the Rail Cost Adjustment Factor ("RCAF") and the need for a productivity adjustment to properly reflect the change in railroad costs.[7/]

Since the implementation of the *Staggers Rail Act of 1980*, which clarified that rail carriers could enter into transportation contracts with shippers, I have been actively involved in negotiating transportation contracts on behalf of coal shippers. Specifically, I have advised utilities concerning coal transportation rates based on market conditions and carrier competition, movement specific service commitments, specific cost-based rate adjustment provisions, contract reopeners that recognize changes in productivity and cost-based ancillary charges. In particular,

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7/ L. E. Peabody, Jr.'s Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, July 17, 1980; L. E. Peabody, Jr.'s Verified Statement, Ex Parte No. 290 (Sub-No.-2), Railroad Cost Recovery Procedures, August 20, 1980; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, January 9, 1981; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, July 9, 1982; L. E. Peabody, Jr.'s Verified Statement, Ex Parte No. 290 (Sub-No.4), Railroad Cost Recovery Procedures -- Productivity Adjustment, October 25, 1982; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, February 11, 1985; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, March 28, 1985; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2) Railroad Cost Recovery Procedures, March 12, 1986; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2) Railroad Cost Recovery Procedures, March 12, 1987; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, December 16, 1988; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4), Railroad Cost Recovery Procedures -- Productivity Adjustment, January 17, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7), Productivity Adjustment-Implementation, May 26, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 4) and Ex Parte No. 290 (Sub-No. 7), Railroad Cost Recovery Procedures -- Productivity Adjustment, June 1, 1989; Thomas D. Crowley's Verified Statement, Ex parte No. 290 (Sub-No. 5) (89-3), Quarterly Rail Cost Adjustment Factor, June 13, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7), Productivity Adjustment -Implementation, June 26, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No.4), Railroad Cost Recovery Procedures - Productivity Adjustment, August 14, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No.4), Railroad Cost Recovery Procedures - Productivity Adjustment, August 29, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 5) Quarterly Rail Cost Adjustment Factor, September 18, 1989; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7), Productivity Adjustment Implementation, April 5, 1991; Thomas D. Crowley's Verified Statement, Ex Parte 290 (Sub-No. 2) Railroad Cost Recovery Procedures, November 9, 1992; Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 2), Railroad Cost Recovery Procedures, November 30, 1992; and, Thomas D. Crowley's Verified Statement, Ex Parte No. 290 (Sub-No. 7) Productivity Adjustment - Implementation, January 7, 1994.

STATEMENT OF QUALIFICATIONS

I have advised utilities on the theory and application of different types of rate adjustment mechanisms for inclusion in coal transportation contracts.

I have been actively engaged in negotiating coal supply contracts for various users throughout the United States. In addition, I have analyzed the economic impact of buying out, brokering, and modifying existing coal supply agreements. My coal supply assignments have encompassed analyzing alternative coals to determine the impact on the delivered price of operating and maintenance costs, unloading costs, shrinkage factor and by-product savings.

I have been, or am currently, involved in the negotiation of transportation or coal supply contracts for over forty (40) utilities which burn coal or lignite produced in the west. These utilities purchase coal or lignite produced in Colorado, Illinois, Missouri, Montana, New Mexico, North Dakota, Oklahoma, Texas, Utah and Wyoming. Generating stations operated by these utilities are located in the following nineteen (19) states: Arizona, Arkansas, California, Colorado, Illinois, Iowa, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, Nevada, North Dakota, Oklahoma, Oregon, Texas, Wisconsin, and Wyoming.

As a result of assisting coal users in the eastern and western portions of the United States, I have become familiar with operations and practices of the rail carriers that move coal over the major coal routes in the United States as well as their cost and pricing practices.

I have developed different economic analyses for over sixty (60) electric utility companies located in all parts of the United States, and for major associations, including American Paper Institute, American Petroleum Institute, Chemical Manufacturers Association, Coal Exporters

STATEMENT OF QUALIFICATIONS

Association, Edison Electric Institute, Mail Order Association of America, National Coal Association, National Industrial Transportation League, the Fertilizer Institute and Western Coal Traffic League. In addition, I have assisted numerous government agencies, major industries and major railroad companies in solving various economic problems.

I have participated in various proceedings involved with the division of through rates. For example, I participated in ICC Docket No. 35585, *Akron, Canton & Youngstown Railroad Company, et al. v. Aberdeen and Rockfish Railroad Company, et al.* which was a complaint filed by the northern and midwestern rail lines to change the primary north-south divisions. I was personally involved in all traffic, operating and cost aspects of this proceeding on behalf of the northern and midwestern rail lines. I was the lead witness on behalf of the Long Island Rail Road in ICC Docket No. 36874, *Notice of Intent to File Division Complaint by the Long Island Rail Road Company*.

SPI COMPANY DATA FOR LA & TX PLANTS
DEVELOPMENT OF THE DISTRIBUTION FOR ORIGINATING TONNAGES BY ALL MODES - 1994

Company	Plant Location		Originating Tons by Mode				
	City	State	Rail	Motor	Water	Intermodal	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
POLYETHYLENE 1/							
Total			3,633,247	664,723	0	100,546	4,398,516
Distribution by Mode			82.6%	15.1%	0.0%	2.3%	100.0%
POLYPROPYLENE 3/							
Total			1,807,539	61,100	0	4,110	1,872,749
Distribution by Mode			96.5%	3.3%	0.0%	0.2%	100.0%

1/ STCC 2821142.
2/
3/ STCC 2821139.

DEVELOPMENT OF 1994 HHI FOR POLYETHYLENE AND POLYPROPYLENE - LA & TX

Carrier/Mode	1994 Originating Tons PE	1994 Originating Tons PP	Distribution PE	Distribution PP	HHI PE	HHI PP
(1)	(2)	(3)	(4)	(5)	(6)	(7)
BEFORE MERGER						
UP 1/						
SP 1/						
BNSF 2/						
CSXT 2/						
IC 2/						
KCS 2/						
NS 2/						
Intermodal 3/	322,887	8,141	2.3%	0.2%	5	0
Truck 3/	2,134,649	121,027	15.1%	3.3%	228	11
Water 3/	0	0	0.0%	0.0%	0	0
Total	14,125,115	3,709,534	100.0%	100.0%	2,440	3,275
AFTER MERGER						
UP/SP 1/						
BNSF 2/						
CSXT 2/						
IC 2/						
KCS 2/						
NS 2/						
Intermodal 3/	322,887	8,141	2.3%	0.2%	5	0
Truck 3/	2,134,649	121,027	15.1%	3.3%	228	11
Water 3/	0	0	0.0%	0.0%	0	0
Total	14,125,115	3,709,534	100.0%	100.0%	4,075	5,778

1/ UP/SP's 100 percent traffic data.
2/ ICC's Costed Waybill Sample.
3/ Developed using distribution of traffic by all modes based on sample of information provide by SPI members.

Restatement of BNSF Market Access

Corridor	Total Revenue 1/	UP/SP Controlled	Not UP/SP Controlled 2/	BNSF Terminals		UP/SP - Other Carriers		Revised Total Station Traffic 5/	Market Access 6/
				Total	Access 3/	Total	Access 4/		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Central Corridor								$110,892,313	$82,060,311
2. Sealy - El Paso								7,577,677	5,607,481
3. Houston - Brownsville								14,457,977	10,698,903
4. Houston - New Orleans								38,303,447	28,344,551
5. Houston - Memphis								10,205,388	7,551,987
6. Independant Stations								18,518,190	13,703,460
7. I-5 Corridor								58,113,636	56,798,594
8. Laredo								53,419,388	53,419,388
9. TOTAL								**$311,488,015**	**$258,184,675**

Source: Bates Nos. BN/SF-1071 - BN/SF-1074.
1/ Witness Lawrence, Table 6.
2/ UP/SP act as an Overhead Carrier.
3/ Column (5) times 90%.
4/ Column (7) times 50%.
5/ Column (6) plus Column (8).
6/ For Lines 1 to 6, Market Access equals Total Station Traffic times 74%.
Market Access for the I-5 Corridor is based on Witness Lawrence's Calculation of Open Revenues (97.7%).
Market Access for Laredo equals Total Station Traffic.

SUMMARY OF REVENUE AND COSTS PER MILE FOR UP/SP, BNSF AND TRACKAGE RIGHTS SEGMENTS -- 1994

(UP/SP SYSTEM AVERAGE REVENUE AND COSTS PER MILE)

Item (1)	Source (2)	Amount (3)
UP/SP		
1. Aggregate Frieght Revenues (000)		
a. UP	R-1,Sch 210, L1	$5,075,528
b. SP	R-1,Sch 210, L1	2,839,059
c. Total	Line 1a + Line 1b	$7,914,587
2. Aggregate Operating Expenses (000)		
a. UP	R-1,Sch 210, L14	$4,094,723
b. SP	R-1,Sch 210, L14	2,718,027
c. Total	Line 2a + Line 2b	$6,812,750
3. Miles of Road Operated		
a. UP	R-1,Sch 755, L1	17,499
b. SP	R-1,Sch 755, L1	13,715
c. Total	Line 3a + Line 3b	31,214
4. Revenue per Mile		
a. UP	Line 1a / Line 3a x 1000	$290,047
b. SP	Line 1b / Line 3b x 1000	207,004
c. Total	Line 1c / Line 3c x 1000	**$253,559**
5. Costs per Mile		
a. UP	Line 2a / Line 3a x 1000	$233,998
b. SP	Line 2b / Line 3b x 1000	198,179
c. Total	Line 2c / Line 3c x 1000	**$218,259**

SUMMARY OF REVENUE AND COSTS PER MILE FOR UP/SP, BNSF AND TRACKAGE RIGHTS SEGMENTS -- 1994

(BNSF SYSTEM AVERAGE REVENUE AND COSTS PER MILE)

Item (1)	Source (2)	Amount (3)
BNSF		
1. Aggregate Frieght Revenues (000)		
a. BN	R-1,Sch 210, L1	$4,875,912
b. ATSF	R-1,Sch 210, L1	2,639,095
c. Total	Line 1a + Line 1b	$7,515,007
2. Aggregate Operating Expenses (000)		
a. BN	R-1,Sch 210, L14	$4,163,232
b. ATSF	R-1,Sch 210, L14	2,252,035
c. Total	Line 2a + Line 2b	$6,415,267
3. Miles of Road Operated		
a. BN	R-1,Sch 755, L1	22,151
b. ATSF	R-1,Sch 755, L1	8,352
c. Total	Line 3a + Line 3b	30,503
4. Revenue per Mile		
a. BN	Line 1a / Line 3a x 1000	$220,122
b. ATSF	Line 1b / Line 3b x 1000	315,984
c. Total	Line 1c / Line 3c x 1000	**$246,369**
5. Costs per Mile		
a. BN	Line 2a / Line 3a x 1000	$187,948
b. ATSF	Line 2b / Line 3b x 1000	269,640
c. Total	Line 2c / Line 3c x 1000	**$210,316**

SUMMARY OF REVENUE PER MILE FOR UP/SP, BNSF AND TRACKAGE RIGHTS SEGMENTS -- 1994

(TRACKAGE RIGHTS SEGMENTS AVERAGE REVENUE PER MILE)

	Segment (1)	Aggregate Revenues (000) 1/ (2)	Miles 2/ (3)	Revenue Per Mile 3/ (4)
	RESTATED			
1.	Central Corridor (including I-5 Corridor)	$138,859	1,897.2	$73,192
2.	Sealy - Eagle Pass	5,607	475.9	11,782
3.	Houston - Brownsville (including Laredo)	64,119	559.2	114,662
4.	Houston - New Orleans	28,345	188.1	150,691
5.	Houston - Memphis	7,552	677.0	11,155
6.	Independant Points	13,703	4/	4/
7.	Total	$258,185	3,797.4	$67,990

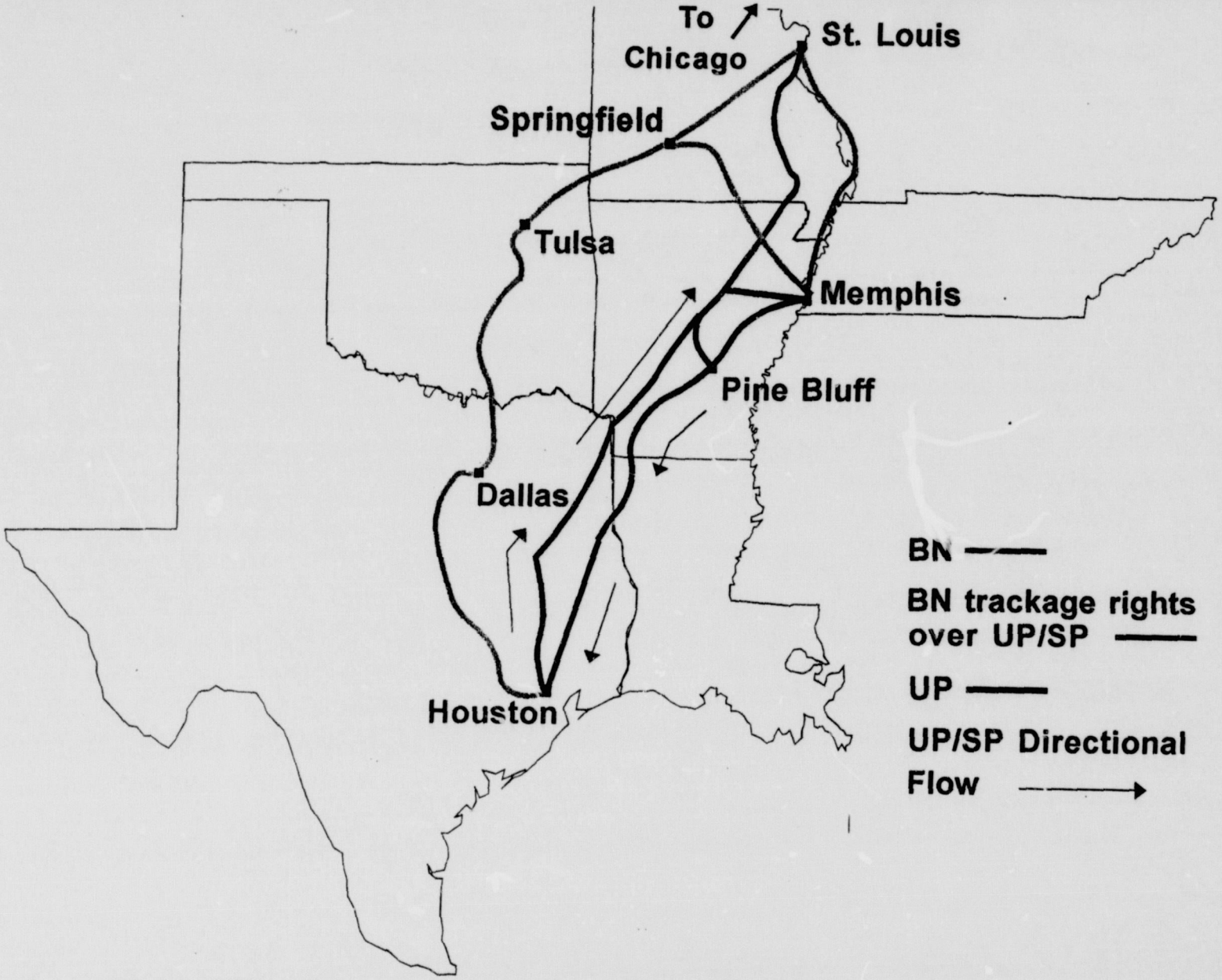
1/ Aggregate revenues from Mr. Lawrence as shown in Table 6 of his text and as shown in his underlying workpapers. Restated revenues as shown in his underlying workpapers. Restated revenues from Exhibit___(TDC - 8).

2/ Based on mileage by line segment as shown on N04-700002. Mileage for I-5 Corridor is based on miles shown in Mr. Lawrence's workpapers (Bates No. BNSF-01001).

3/ Column (2) divided by Column (3) x 1000.

4/ Not applicable.

Schematic of BN Routing Alternatives to St. Louis



L. E. PEABODY & ASSOCIATES, INC.
ECONOMIC CONSULTANTS

Exhibit_(TDC-5)
Page 1 of 1

CALCULATION OF VARIABLE COST OVER TRACKAGE RIGHTS – HOUSTON - ST. LOUIS 1/
(BNSF TRACKAGE RIGHTS)

	Movement Costs	OPR	DL	OPR & DL	ROI	Units	OPR & DL	ROI	Total
ATSF-1	Gross ton mile	0.0019066	0.0003733	0.0022799	0.0013204	0	$0.00	$0.00	$0.00
ATSF-2	Gross ton mile on rights	0.0012319	0.0001679	0.0013998	0.0002939	41,247	57.74	12.12	69.86
ATSF-3	Train mile other than crew	0.08484	0.00686	0.09170	0.00836	0.00	0.00	0.00	0.00
ATSF-4	Train mile other than crew on rights	0.08098	0.00686	0.08784	0.00836	7.30	0.64	0.06	0.70
ATSF-5	Train mile - crew	6.57676		6.57676		7.30	48.00	0.00	48.00
ATSF-6	Locomotive unit mile	1.77163	0.24639	2.01802	0.43133	21.53	43.45	9.29	52.74
ATSF-7	CLOR other than clerical	0.74353		0.74353		0.00	0.00	0.00	0.00
ATSF-8	CL orig or term. - clerical	7.33955		7.33955		0.00	0.00	0.00	0.00
ATSF-9	Switch engine minute	2.99164	0.13547	3.12711	0.71592	0.00	0.00	0.00	0.00
ATSF-10	Car Miles	0.05589	0.01183	0.06772	0.03403	0.00	0.00	0.00	0.00
ATSF-11	Car Days	5.54005	6.35060	11.89065	4.98524	0.00	0.00	0.00	0.00
ATSF-12	ATSF Total Variable - 1994						$149.83	$21.47	$171.30
ATSF-13	Index (RCAF-A)								0.967
ATSF-14	ATSF Total Variable - 4Q95								165.65
BN-1	Gross ton mile	0.0014389	0.0004837	0.0019226	0.0007147	0	$0.00	$0.00	$0.00
BN-2	Gross ton mile on rights	0.0007461	0.0001826	0.0009287	0.0000221	41,262	38.32	0.91	39.23
BN-3	Train mile other than crew	0.25780	0.02041	0.27821	0.02025	0.00	0.00	0.00	0.00
BN-4	Train mile other than crew on rights	0.19701	0.02041	0.21742	0.02025	7.30	1.59	0.15	1.74
BN-5	Train mile - crew	6.56173		6.56173		7.30	47.91	0.00	47.91
BN-6	Locomotive unit mile	1.81577	0.44657	2.26234	0.05416	21.54	48.73	1.17	49.89
BN-7	CLOR other than clerical	1.14607		1.14607		1.00	1.15	0.00	1.15
BN-8	CL orig or term. - clerical	14.44116		14.44116		1.00	14.44	0.00	14.44
BN-9	Switch engine minute	3.56912	0.19720	3.76632	0.53512	11.78	44.36	6.30	50.66
BN-10	Car Miles	0.03390	-0.00422	0.0296815	0.01760	0.00	0.00	0.00	0.00
BN-11	Car Days	3.21050	10.20431	13.4148100	2.42337	0.00	0.00	0.00	0.00
BN-12	BN Total Variable - 1994						$196.49	$8.53	$205.02
BN-13	Index (RCAF-A)								0.967
BN-14	BN Total Variable - 4Q95								198.26
	BNSF Total Variable - 4Q95								363.90
	Trackage Rights/Gross ton mile		$0.0031	$0.0031		90,842	$281.61	$0.00	$281.61
	Variable Cost with Trackage Rights - Houston to Memphis								$645.51
	Variable Cost Per Ton - Memphis to St. Louis (from Page 2 of 4)								$220.44
	Variable Cost Per Ton								**$9.85**

Inputs			ATSF	BN	UPSP
1	Lading	Avg.: ICC 1994 Costed Waybill Sample - STCC 28211	87.9	87.9	87.9
2	Tare	E2L106C1	31.4	31.4	31.4
3	Empty/Return ratio	Given	2.0	2.0	2.0
4	Gross tons per car	Line 1 plus (Line 2 times Line 3)	150.7	150.7	150.7
5	One way miles excl rights	2/	0	0	547.5
6	Gross ton miles/car	Line 4 times Line 5	0	0	82,508
7	Cars/Train	[A1L115C1+A1L117C1]+[A1L101C1+A1L103C1]	75	75	
8	Train miles excl. rights per car	Line 3 times Line 5 divided by Line 7	0.00	0.00	
9	One way miles incl. rights	2/	273.7	273.8	
10	Train miles incl. rights per car	Line 3 times Line 9 divided by Line 7	7.30	7.30	
11	Locomotives per train	[A1L105C1+A1L107C1]+[A1L101C1+A1L103C1]	2.95	2.95	
12	Locomotive unit miles per car	Line 10 times Line 11	21.53	21.54	
13	Orig/Term - Clerical	Given	0	1	
14	Switch engine minutes	(2 times Line 13) times E2L106C25	0	11.7778	
15	Car miles	(private)	0.00	0.00	
16	Car days	(private)	0.00	0.00	
17	Ratio : Loco, car content GTM to car, content GTM	3/			1.101
18	Trackage right GTM	Line 4 times Line 5 times Line 17			90,842

1/ Following the methodology of Witness Rebensdorf as shown on C04 - 700030 through C04 - 700033.
2/ Mileage from Houston to Memphis from N04-700002 and N02-400698, Mileage distributed 50% to BN and 50% to ATSF.
3/ C04-700030

CALCULATION OF VARIABLE COST OVER TRACKAGE RIGHTS -- MEMPHIS - ST. LOUIS 1/
(BN OPERATION)

	Movement Costs	OPR	DL	OPR & DL	ROI	Units	OPR & DL	ROI	Total
BN-1	Gross ton mile	0.0014389	0.0004837	0.0019226	0.0007147	44,758	$86.05	$31.99	$118.04
BN-2	Gross ton mile on rights	0.0007461	0.0001826	0.0009287	0.0000221	0	0.00	0.00	0.00
BN-3	Train mile other than crew	0.25780	0.02041	0.27821	0.02025	8.03	2.23	0.16	2.40
BN-4	Train mile other than crew on rights	0.19701	0.02041	0.21742	0.02025	0.00	0.00	0.00	0.00
BN-5	Train mile - crew	6.56173		6.56173		8.03	52.67	0.00	52.67
BN-6	Locomotive unit mile	1.81577	0.44657	2.26234	0.05416	23.68	53.57	1.28	54.85
BN-7	CLOR other than clerical	1.14607		1.14607		0.00	0.00	0.00	0.00
BN-8	CL orig or term. - clerical	14.44116		14.44116		0.00	0.00	0.00	0.00
BN-9	Switch engine minute	3.56912	0.19720	3.76632	0.53512	0.00	0.00	0.00	0.00
BN-10	Car Miles	0.03390	-0.00422	0.0296815	0.01760	0.00	0.00	0.00	0.00
BN-11	Car Days	3.21050	10.20431	13.4148100	2.42337	0.00	0.00	0.00	0.00
BN-12	BN Total Variable - 1994						$194.53	$33.43	$227.96
BN-13	Index (RCAF-A)								0.967
BN-14	BN Total Variable - 4Q95								$220.44
BN-15	Variable Cost Per Ton								**$2.51**

	Inputs		BN
1	Lading	Avg.: ICC 1994 Costed Waybill Sample - STCC 28211	87.9
2	Tare	E2L106C1	31.4
3	Empty/Return ratio	Given	2.0
4	Gross tons per car	Line 1 plus (Line 2 times Line 3)	150.7
5	One way miles excl rights	2/	297
6	Gross ton miles/car	Line 4 times Line 5	44,758
7	Cars/Train	[A1L115C1+A1L117C1]+[A1L101C1+A1L103C1]	74
8	Train miles excl. rights per car	Line 3 times Line 5 divided by Line 7	8.03
9	One way miles incl. rights	2/	297
10	Train miles incl. rights per car	Line 3 times Line 9 divided by Line 7	8.03
11	Locomotives per train	[A1L105C1+A1L107C1]+[A1L101C1+A1L103C1]	2.95
12	Locomotive unit miles per car	Line 10 times Line 11	23.68
13	Orig/Term - Clerical	Given	0
14	Switch engine minutes	(2 times Line 13) times E2L106C25	0
15	Car miles	(private)	0.00
16	Car days	(private)	0.00

1/ Following the methodology of Witness Rebensdorf as shown on C04 - 700030 through C04 - 700033.
2/ Mileage from Memphis to St. Louis from Rand McNally.