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via hand delivery

Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, SW
Washington, D.C. 20423

RE: Docket No. NOR 42123, M&G Polymers USA, LLC v. CSX Transportation, Inc.

Dear Ms. Brown:

Enclosed for filing in the above-captioned case please find an original and ten (10) copies of the **Public Version** of the Rebuttal Market Dominance Evidence ("Rebuttal") of M&G Polymers USA, LLC ("M&G"). M&G has also enclosed the original and ten (10) copies of the **Highly Confidential Version** of the Rebuttal. Nine (9) compact disks are also included: three with the Public Version, three with the Highly Confidential Version (CD 1 of 2), and three with the Highly Confidential Version (CD 2 of 2).

I have enclosed one additional paper copy of each pleading for stamp and return. Kindly date-stamp the additional copies for return to this office by messenger.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

Jeffrey O. Moreno
Counsel for M&G Polymers USA, LLC

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cc: Counsel for defendant CSX Transportation, Inc.

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BEFORE THE
SURFACE TRANSPORTATION BOARD

M & G POLYMERS USA, LLC	)	
Complainant,	)	
v.	)	**Docket No. NOR 42123**
CSX TRANSPORTATION, INC.	)	
Defendant.	)	

REBUTTAL MARKET DOMINANCE EVIDENCE OF M&G POLYMERS USA, LLC

Volume I of II

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Jeffrey O. Moreno
Sandra L. Brown
David E. Benz
Thompson Hine LLP
Suite 800
1920 N St. NW
Washington, DC 20036
Phone: (202) 331-8800
Fax: (202) 331-8330

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Part I

PUBLIC VERSION

PART I

COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

A. Quantitative Market Dominance.

Although CSXT concedes that it possesses quantitative market dominance because all of the challenged rates have R/VC ratios in excess of 180%, the parties do not agree on the precise calculation of the R/VC for many case lanes. Their differences are attributable to a single URCS Phase III input, loaded miles.

M&G used the predominant route miles in order to eliminate unexplained anomalies and apparent errors in CSXT's data. CSXT has used a weighted average approach to calculate miles. However, in an apparent acknowledgment that data anomalies and errors exist, CSXT excluded from its loaded-mile analysis any route that handled less than 10% of the issue traffic for each issue origin/destination pair. But, CSXT's 10% rule is an arbitrary basis for identifying anomalies and errors, whereas M&G's predominant route approach is rationally based upon the route that handled the most shipments of any other route.

Despite CSXT's claims, FMC Wyoming Corp. v. Union Pac. R.R. Corp., 4 STB 699 (2000) ("FMC"), does not support either its weighted average approach or its arbitrary 10% rule. The STB merely reviewed three special studies submitted by the parties in that case for a single movement and selected the study that it found most convincing. The issue for that single movement concerned how the local turn train crew handled the movement. CSXT has not presented any evidence in this case of the type that was presented in FMC to address that issue.

Although M&G continues to disagree with CSXT's approach, there are many issue movements where the difference between the parties' approaches has only a small impact on the variable costs. Therefore, in order to minimize the points of contention, M&G has accepted

CSXT's miles for all but 13 of the issue movements. For the remaining 13 movements, M&G demonstrates why its approach is superior to CSXT's

B. Qualitative Market Dominance

CSXT begins its Reply Evidence with an elegant, albeit largely irrelevant, litany of the history of rail rate regulation since the Staggers Act.[1] This litany culminates in the citation of several decisions in which the agency has found trucks to be viable and effective competitive options for other commodities. From these decisions, CSXT somehow concludes that trucks must therefore be a viable and effective competitive option for the issue movements of PET, without making any attempt to identify similarities between the facts in those decisions and the transportation requirements for PET. CSXT surmises that, "because the ICC's early decisions so clearly endorsed the competitive effectiveness of truck transportation, in recent years few shippers of commodities that are reasonably susceptible to trucking have attempted to argue that railroads are market dominant."[2] Finally, CSXT asserts that M&G "is one of the recent rate litigants attempting to change that long-settled understanding."[3]

Of course, there is no such long-settled understanding. CSXT makes no reference to the many decisions in which the Board determined that trucks were not a viable and effective option, even when there was a history of truck usage. Nor does CSXT delve into the specific facts of the decisions it does cite that differentiate those movements from M&G's issue PET movements. Finally, as the Board has heard many times, the reason why shippers like M&G have not filed many rate cases in the past is not because of market dominance concerns, but because the enormous expense of pursuing rate remedies for their constantly changing carload traffic patterns

[1] CSXT Reply at I-1-3 and II-9-14.

[2] Id. at II-13.

[3] Id. at I-2.

has made such cases uneconomical. The reason that shippers like M&G are beginning to pursue rate remedies now is because the rail industry has pushed the envelope on rate increases so far that rate cases can now be economically justified.

M&G's qualitative market dominance evidence is a case in point. CSXT has pushed through triple digit rate increases over the course of just two years. M&G explored alternative transportation options and found them economically and commercially infeasible. The polymer industry supply chain is built around the rail car and rail transportation. Direct trucking and rail-to-truck transloading play niche roles in that supply chain (*e.g.* short hauls, non-rail destinations, and emergency shipments), as proven by the very small percentage of polymers that are delivered to customers by trucks. Those roles are further limited by product integrity issues that restrict the number of transloads per shipment. In summary, there are very few areas where truck and rail compete in overlapping markets.

Nevertheless, CSXT's Reply Evidence effectively boils down to a single primary contention: if truck rates and rail rates are similar, market dominance does not exist. Of course, this is not the standard for market dominance. Any supposed competition must be "effective." 49 U.S.C. 10701(a). Similar rates, without more, do not show effective competition. E.I. du Pont de Nemours and Company v. CSX Transportation, Inc., STB Docket No. 42099, slip op. at 7-8 (served June 20, 2008) ("DuPont (Plastics)"). See also Amstar Corporation v. The Atchison, Topeka and Santa Fe Railway Company, ICC Docket No. 37478, slip op. at 8 (n. 11) (served Dec. 8, 1987) ("Amstar-ATSF"). M&G's Opening Evidence presented innumerable facts and arguments to demonstrate why similar pricing between rail and trucks for PET shipments, where it does exist, is not indicative of an effective competitive constraint upon CSXT's rates. CSXT denigrates that evidence with contentions that M&G has simply chosen to be captive in order to

pursue this rate case. CSXT also attempts to support its position by portraying the very small proportion of PET that is trucked or transloaded in this country in very narrow circumstances as if such options could easily be substituted for any rail shipment of PET in the regular course of business.

In this Rebuttal Evidence, M&G responds to the many inaccuracies, omissions and misrepresentations in CSXT's Reply Evidence.

1. Summary of Major Issues and Arguments by Groups of Case Lanes.

Both M&G and CSXT have presented numerous issues and arguments that are pertinent to various subsets of the case lanes. Some of these arguments also apply to multiple or overlapping subsets. In order to facilitate the matching of the parties' principal arguments with the case lanes to which those arguments apply, this section presents a synopsis of those arguments and groups together all the lanes to which those arguments apply.

As a threshold matter, CSXT has challenged market dominance in just 43 of the 69 case lanes. Therefore, M&G has carried its burden to demonstrate market dominance in the remaining 26 lanes. Those lanes for which market dominance has not been contested are: Lanes A-2, 3, 6, 7, 9, 12, 13, 15, 16, and 18; and Lanes B-12, 13, 17, 23, 27, 28, 29, 31, 38, 42, 43, 44, 45, 46, 47, and 52.

CSXT alleges that the other 43 case lanes have effective competition because there are competitive intermodal alternatives available to M&G at a comparable or lower price than CSXT's rail service.[4] In Part II-B-2.a.(2), M&G identifies numerous errors in CSXT's rate calculations. Furthermore, in Part II-B-2.a.(3), M&G takes issue with CSXT's definition of "comparable" in some lanes where the alternative rates, even using CSXT's rate calculations, are

[4] CSXT has not alleged the existence of intramodal competition.

more than 10% higher than CSXT's rates. Also, in Part II-B-2.a.(4), M&G demonstrates that the much higher cost structure of CSXT's alternative intermodal proposals prove that those alternatives are not effectively constraining CSXT's rates to competitive levels.

In the following subparts, M&G has grouped the 43 contested lanes into five sub-groups based upon certain characteristics of CSXT's proposed intermodal alternatives that implicate objections raised by M&G. Because some characteristics apply to more than one case lane, there is some overlap of case lanes among the groups. Within each group, M&G summarizes its principal arguments applicable to that group.

a. Lanes where CSXT has failed to identify transportation alternatives between the same origin and destination to which the challenged rate applies.

In the following case lanes, CSXT has not presented true alternatives to its "bottleneck" rail service in compliance with Board precedent: Lanes B-3, 8, 10, 11, 14, 15, 18, 19, 20, 32, 34, 35, 37, 39, and 41. In Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, 4 STB 288, 292 (n. 13) (1999) ("DMIR"), the Board stated:

> For a separately challengeable bottleneck-segment rate, transportation alternatives between the "same origin and destination points" (*Product and Geographic II* at 10, 12) must necessarily refer to those between the interchange point at which the bottleneck carrier obtains the traffic and the point of delivery.

According to the Board, "transportation alternatives involving service to or from other points would constitute geographic competition." Id. at 292.

In each of the above case lanes, the CSXT alternative is to a destination that is different from the destination of the CSXT rail service that is subject to the challenged rate. CSXT's proposed transportation alternatives either cover the entire movement, including the non-CSXT rail segments, or they truck to transload facilities that are not at the same location as the interchange point that is the destination for the issue movement. The specific discrepancies in

CSXT's proposed destinations are discussed in Part II-B-2.a.(1). The Board should find that market dominance conclusively exists in these lanes because CSXT has not identified any alternative to the transportation covered by the challenged tariff.[5]

b. Lanes where CSXT proposes to deliver PET to M&G's customers in bulk trucks.

CSXT proposes to deliver PET in bulk trucks to M&G customers in the following case lanes: Lanes A-4, 5, 10, and 14; and Lanes B-3, 4, 5, 6, 8, 10, 11, 14, 15, 18, 19, 20, 32, 34, 35, 39, 41, 49, and 50. CSXT, however, has failed to account for the customers' need for rail delivery.[6] For all customers, this need is driven by their reliance upon rail cars for storage of PET until it is needed in their production process. Some customers may require rail cars due to high volume purchases and/or consignment purchases. Most of M&G's sales contracts express these needs by specifying rail delivery. However, even for sales made outside of contracts, the customer specifies whether delivery should be by rail or by truck at the time an order is placed. As evidence of these customer requirements, M&G has presented contracts from several customers that require rail delivery;[7] five years of traffic data to show that truck shipments to its rail-served customers have never exceeded {{ [redacted] }}[8] of total PET volume delivered by M&G;[9] five years of traffic data to show that all but three of the case customers received less than 10% of PET deliveries from M&G by trucks;[10] and five years of average rail car hold data to show

[5] For Lanes B-10, 15, 32 and 34, CSXT has presented two alternatives, only one of which violates DMIR.

[6] See M&G Op. Ev. at II-B-20-26; and Part II-B-2.e., infra.

[7] See M&G Op. Ev. at II-B-22-23; and Part II-B-2.e.(1)(b), infra.

[8] Pursuant to the Protective Order in this proceeding, information in single brackets {...} has been designated "CONFIDENTIAL" and information in double brackets {{...}} has been designated "HIGHLY CONFIDENTIAL."

[9] See M&G Op. Ev. at II-B-20-21; M&G Op. Exs. II-B-3 and 4; and Part II-B-2.e.(1)(a), infra.

[10] See M&G Op. Exs. II-B-5 and 6; Reb. Ex. II-B-12; and Part II-B-2.e.(1)(a), infra.

that the case customers retain the loaded rail cars for days and weeks at a time.[11] CSXT's market dominance may be "deduced" from this evidence, despite CSXT's allegations that M&G must present more. See Product & Geographic Competition, 2 I.C.C.2d 1, 21 (1985) (identifying historical traffic data as information from which the effectiveness of truck competition "may be deduced").

c. Lanes where CSXT proposes to deliver PET to non-customer locations in bulk trucks.

CSXT proposes to deliver PET in trucks to non-customer facilities in the following case lanes: Lanes A-1, 8, 11, and 17; and Lanes B-1, 2, 7, 36, and 48. These non-customer facilities are M&G's Apple Grove, WV production plant; the Belpre, OH rail car storage and transload facility; the Parkersburg, WV lease track; and the Aguila, AZ rail car storage and transload facility.

Lanes A-1, 8, 11, and 17 are all single-line shipments between M&G's Apple Grove plant and rail car storage facilities at Belpre, Ohio and Parkersburg, West Virginia. Trucking between these facilities is absurd because Belpre and Parkersburg are rail car storage facilities. In addition, Belpre is a bulk terminal for loading trucks from rail cars. Therefore, trucking between these points would defeat the entire objective of the transportation, which is to move a loaded rail car of PET to storage track until the PET is sold to a customer.

CSXT's proposed alternative would entail transloading a rail car at the origin into four trucks and transloading the four trucks back into a rail car at destination. At Belpre, that same rail car could subsequently be transloaded back into trucks for transport to a customer. Although CSXT also proposes transloading to/from rail cars at its Parkersburg rail yard, it has not explained why or whether it would permit M&G to do so, since CSXT owns the yard. CSXT has

[11] See M&G Op. Ev. at II-B-23-25; M&G Op. Ex. II-B-7; and Part II-B-2.e.(1)(c), infra.

also not shown that the Parkersburg yard is even a suitable transload location, with truck access to rail lines, ample space for truck maneuvering, paving, a truck scale, a rail scale, and covered areas for truck to rail car transfers. Parkersburg is not a CSXT TRANSFLO terminal.

Finally, because each of the Exhibit A movements would require a minimum of two transloads (at both the origin and destination), and potentially more in subsequent transportation to a customer or back to Apple Grove (in the case of Lanes A-11 and 17), the multiple transloads would implicate the product integrity concerns in Part II-B-2.f.

Lane B-2 is a joint line movement from M&G's Altamira, Mexico production facility to the Belpre storage facility. The illogic of delivering trucks to Belpre in this lane is the same as that described in the preceding paragraphs and also implicates the same product integrity concerns.

Lanes B-7 and 36 are joint line movements from Apple Grove and Belpre to the rail car storage and transload facility in Aguila. M&G ships rail cars to Aguila for transload to a single customer in Phoenix. CSXT's alternative would require transloads at Apple Grove and Belpre into trucks, another transload at Lima, Ohio back into a rail car, and a third transload at Aguila back into trucks.

Lane B-36, from Belpre to Aguila, involves even more transloads. Keep in mind that CSXT also has proposed that PET move from Apple Grove to Belpre (Lane A-1) via a double transload at each end of that movement. Thus, before the movement from Belpre to Aguila even occurs, the PET will have been transloaded twice. Add to that a third transload at Belpre back into trucks, a fourth transload at Lima back into a rail car, and a fifth transload at Aguila back into trucks. The product integrity concerns are present in spades for this alternative.

Finally Lanes B-1 and B-48, from Altamira and Sweetwater, are for return shipments of PET to Apple Grove. Even if the PET is transloaded into trucks at Lima for delivery to Apple Grove, the empty rail car still has to find its way to Apple Grove for reloading.

d. Lanes where CSXT proposes to originate trucks at Apple Grove.

CSXT proposes to originate PET in trucks at Apple Grove as part of its alternate intermodal transportation proposal for the following case lanes: Lanes A-1, 4, 5, 8, and 10; and Lanes B-7, 8, 9, 10, 11, 14, 15, 16, 18, 19, 20, 21, 22, 24, 25, 26, 30, 32, 33, 34, 35, 36, 37, and 40. However, M&G has demonstrated that it does not have the capacity at Apple Grove to load significantly more trucks.[12] Therefore, any increase in trucks to serve existing rail customers must displace other customers that only have access to trucks. Moreover, M&G would have to expend approximately {{ [redacted] }} to build additional capacity.[13]

e. Lanes that require transloading from trucks into rail cars.

CSXT proposes to use a truck-to-rail transload for the following case lanes: Lanes B-7, 8, 9, 10, 15, 16, 18, 19, 21, 22, 24, 25, 26, 30, 32, 33, 34, 36, 37, and 40. Except for Lanes B-36, 37 and 40, which originate at Belpre, every lane would originate at Apple Grove. At both origins, however, the PET would first have to be transloaded from a rail car into four trucks. CSXT then proposes that the trucks be transloaded back into rail cars at bulk terminals located either in Columbus, Ohio; Lima, Ohio; or St. James, MD. None of these transload alternatives is feasible because each movement would be subject to a double transload—once at Apple Grove and again at a bulk terminal—which imposes unacceptable risks to the product integrity of the PET, as discussed in Part II-B-2.f.[14]

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[12] See M&G Op. Ev. at II-B-33-50; Part II-B-2.g.(1).

[13] See Part II-B-2.g.(2).

[14] See also, M&G Op. Ev. at II-B-27-32.

In addition, because none of these facilities is covered, truck-to-rail transloading could not take place during any precipitation. Since rain and snow are common occurrences year-round, the inability to transload at random and unpredictable times would impose unacceptable uncertainty and disruption into M&G's supply chain to the customers served in these lanes.

Moreover, {{ [redacted] }} See Rebuttal Ex. II-B-30. However, even if that were not the case, the proposed bulk terminal at St. James is an unacceptable facility for transferring PET from trucks to rail cars because the site is not paved, it lacks both a truck and a rail scale, and it is not covered. In addition, the NS rates assumed by CSXT are in fact {{ [redacted] }} too low and do not include demurrage charges that M&G would have to pay NS to store rail cars at the site until loaded.[15]

Lastly, truck-to-rail transloads are more difficult and complicated than rail-to-truck transloads. In the much more common rail-to-truck transload, PET is unloaded from the bottom of the rail car into trucks. In contrast, truck-to-rail transloading requires the PET to be loaded through the top hatch of the rail car, which exposes the PET to greater risk of contamination from dust and moisture. It also requires longer hoses, more hose curvature, two employees, and longer transfer times, which generates more of the heat and friction that causes product degradation. As noted by M&G Witness Granatelli, truck-to-rail transloading is a rarity and he knows of no polymer producer who uses such transloading as a regular mode of transportation. Nor has CSXT presented any evidence of a single polymer producer that uses truck-to-rail transloading as its primary mode of transportation.

[15] M&G raised most of these same objections to the St. James facility in the "Reply of M&G Polymers USA, LLC In Opposition To Motion For Expedited Determination of Jurisdiction Over Challenged Rates," pp. 44-47 (filed Feb. 18, 2011). ("Bifurcation Reply") Despite having over four months fore-knowledge of M&G's objections, CSXT has not acknowledged, much less addressed, them in its Reply Evidence.

2. Rebuttal of CSXT Arguments.

a. CSXT misrepresents the role of truck alternatives in the transportation of PET.

M&G has demonstrated that trucks play a niche role in the transportation of PET primarily in areas where rail cannot compete. First, trucks are necessary to serve destinations that do not have rail access, either directly from the PET supplier or via a rail-to-truck transload. This accounts for one-half to two-thirds of all M&G truck shipments. Second, trucks are needed for expedited or emergency shipments to rail-served customers when a rail shipment cannot get to the customer in time to prevent a plant shut down due to depleted PET inventories. Third, trucks are used to serve small volume customers who order PET in less than rail car quantities. Fourth, trucks can be used to supply customers within approximately 200 miles of the supplier, because the short distance makes trucks more cost competitive with rail and mitigates the customer's inventory concerns. There is very little overlap between rail and truck service in any of these categories.

Nevertheless, CSXT contends that, because PET moves by truck in some circumstances, it can move by truck in all circumstances. CSXT's approach is two-pronged: first, it cites to examples where M&G and other polymer producers have used or threatened to use trucks, and second, it cites to STB precedent where trucks were determined to provide effective competition. The problem with this approach is that CSXT has utterly failed to consider any of the facts and circumstances surrounding those examples and to demonstrate any connection to the issue movements.

CSXT overstates the role of trucks in the transportation of PET. CSXT claims that "M&G regularly ships PET to customers via truck" because M&G loaded {{[redacted]}} trucks over five years. CSXT Reply at II-14. But, CSXT fails to note that this volume accounted for

just {{[redacted]}} of M&G's total PET shipments over this time period and that between one-half and two-thirds of those shipments went to destinations without access to rail service. Moreover, in all but three of the case lanes, the proportion of truck shipments was between {{[redacted]}}. Indeed, if one averages the number of trucks moved across all the case lanes over the past five years, it equals just {{[redacted]}} trucks per lane annually. This historical traffic data strongly supports M&G's position that trucks do not compete with rail and that the small number of truck shipments to rail-served customers are emergency shipments where rail cannot compete with truck. It is all the more poignant that M&G presented this data in its Opening Evidence and CSXT simply ignored it.

Although the STB's "market dominance guidelines" state that whether truck competition is effective "may be deduced from...(1) the amount of the product in question that is transported by motor carrier where rail alternatives are available," Product & Geographic Competition, 2 I.C.C.2d at 21, CSXT contends that M&G's data cannot be indicative of market dominance because subsequent agency decisions have found effective competition despite a small truck market share. CSXT Reply at I-2, notes 3 and 4; II-10-11. But once again, CSXT has failed to draw any connection between the facts in those cases and the issue movements. In fact, as detailed by M&G in Part II-B-2.e.(1)(a), infra, those cases are all highly distinguishable.

CSXT's evidence of truck competition based upon its own experience also is unavailing for several reasons. CSXT Reply at II-31-34. First, some of CSXT's examples are for completely different commodities, and thus are inapposite. See Southwest R.R. Car Parts Co. v. Missouri Pac. R.R. Co., STB Docket No. 40073, slip op. at 3 (served Feb. 20, 1998) ("We base our analysis on the specific market(s) involved, and not broad-brush generalities about competitive conditions in unspecified markets.").

Second, where CSXT has referenced appropriate examples, it once again makes no attempt to explore the facts behind them, and in some instances, appears to deliberately obscure those facts.[16] Many of CSXT's examples are in customer e-mails that threaten to shift product from rail to truck, but without providing any indication as to whether that threat was credible, how CSXT reacted to the threat or whether the traffic ultimately shifted to trucks. Without those additional details, these statements are mere posturing, which is not evidence of effective competition. See FMC, 4 STB at 718 ("Statements made...in rate negotiations can only be regarded as posturing in aid of [the shipper's] negotiation position."). M&G has distinguished each of CSXT's examples in Part II-B-2.d.(4), infra.

The one example where CSXT does provide substantial details is the shipment of {{ }} trucks annually by {{ }}. CSXT Reply at II-31. But that example reinforces M&G's position, because that truck movement is only 67 miles. The short distance makes it more difficult for rail to be competitive and it permits the PET purchaser to operate without a large on-site inventory of PET in rail cars.

Finally, CSXT hangs so much of its case on a single example in which M&G recently converted a case customer from CSXT direct service to a rail-to-truck transload that bypasses CSXT at the destination. The customer is {{ }}.[17] Although CSXT has made this movement the poster child for its claim that rail-to-truck transloading at the destination is an effective competitive constraint, the facts truly make this lane the epitome of a monopolist pricing at its outer limit.

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[16] In one example, CSXT had additional details and chose not to provide them. {{ }}

[17] {{ }}

The {{ [redacted] }} facility switched to trucks out of necessity, not because of CSXT's rates, but because CSXT's rail service was so consistently poor that the customer faced a constant risk of shut-downs and was incurring substantial demurrage costs. In order to switch this destination to a rail-truck transload that by-passed CSXT, M&G had to originate the PET at its Altamira, Mexico plant rather than Apple Grove, which also was captive to CSXT. Instead of a 975 mile single line direct rail movement from Apple Grove to {{ [redacted] }}, this became a 2560 mile four railroad movement {{ [redacted] }} from Altamira to {{ [redacted] }}, plus a 47 mile truck haul from {{ [redacted] }} The rate for the 975 mile CSXT direct movement exceeded the combined rates for the 2560 mile four railroad movement plus 47 mile truck movement by {{ [redacted] }} per rail car.[18] This savings only amounted to a {{ [redacted] }} lower transportation cost for M&G. The very idea that comparable pricing with a route that is 2.7 times longer and has four more interchanges would be an effective competitive constraint upon CSXT's rates is farcical. If there ever was an example of CSXT pricing to an "outer limit" constraint, as opposed to an effective competitive constraint, this would be it. See DuPont (Plastics), slip op. at 7-8 ("even a monopolist finds that there is a profit-maximizing price beyond which it cannot raise prices without adversely affecting its bottom line."); Ariz. Pub. Serv. Co. v. U.S., 742 F.2d 644, 650-51 (D.C. Cir. 1984) ("At some point the availability of an alternative such as the horse and buggy...theoretically prevents railroads from raising their rates beyond an outer bound.") ("APS").

b. The demand for rail service by M&G's customers is an important market dominance factor.

M&G's market dominance argument is based in part upon the fact that M&G's customers demand rail transportation. This demand is predicated upon the substantial integration of rail

[18] {{ [redacted] }}

cars into the PET supply chain as not just transportation vessels, but as storage vessels at both the origin and destination. When M&G's customers demand delivery in rail cars, that "makes a switch to trucks highly infeasible from an economic standpoint due to the risk of losing [the] customer or incurring breach-of-contract liability." E.I. du Pont de Nemours and Company v. CSX Transp. Inc., STB Docket No. 42101, slip op. at 6 (served June 30, 2008) ("DuPont (Nitrobenzene)"). See also, DuPont (Plastics), slip op. at 7; McCarty Farms v. Burlington Northern, Inc., 3 I.C.C.2d 822, 829 (1987) ("needs of the shipper or receiver" may determine feasibility of truck transportation).

CSXT's attempt to distinguish this precedent is unavailing. CSXT asserts that DuPont (Nitrobenzene) does not apply because M&G has the ability to renegotiate the rail requirements in its contracts every few years. CSXT Reply at II-51. But there was no indication in DuPont (Nitrobenzene) that DuPont did not have the same ability. More importantly, however, CSXT assumes that M&G's customers will agree to accept trucks. But why would they do so when they depend upon rail cars so heavily and multiple other PET producers are willing to supply them in rail cars?

CSXT also contends that McCarty Farms is inapposite because needs are not the same as preferences. CSXT Reply at II-49, n. 50. But as M&G has demonstrated, customers need rail cars as their primary mode of delivery; this is not merely a preference. That is why M&G's contract customers require rail delivery in their PET supply contracts.

CSXT attempts to distinguish DuPont (Plastics) on the basis that "the Board's market dominance determination there rested upon multiple factors...." Of course, every market dominance decision rests upon multiple factors. The salient point is that customer requirements are a relevant factor.

Lastly, CSXT retreats to the argument that "M&G has presented no evidence that customers insist upon rail deliveries over truck deliveries regardless of the price." CSXT Reply at II-48 (underline in original). With that statement, CSXT betrays its true position that price is all that matters. Of course, there will always be a point at which the substantial advantages of rail delivery are outweighed by the price. That is the "outer limit" in DuPont (Plastics) and the "horse and buggy" in APS.

Inherent in CSXT's statement is the implication that rail and truck are essentially equal alternatives, where rail is "an attractive option for some of M&G's customers under some conditions," while truck is more attractive under other conditions.[19] In truth, however, rail is the most attractive option for most of M&G's customers under most conditions. The principal advantage of rail transportation is that rail cars can be used by the customer to store its inventory of PET at the destination. The customer does not have to construct and maintain costly storage silos at its facility for each grade of PET that it purchases. In addition, rail cars can hold four times the volume of a truck, which minimizes handling and administrative costs. Also, rail car deliveries do not have to be scheduled, like truck deliveries, and the unloading of rail cars is more automated. Finally, the product integrity is much more secure in a rail car, because the quality of the PET is certified by the supplier upon loading the rail car, which is sealed and remains sealed until the customer is ready to unload. In contrast, all truck shipments are transloaded, during which there is the risk of both contamination from outside particles and product degradation from the transload process itself. Rail has far greater advantages over trucks that cause PET purchasers overwhelmingly to demand rail transportation whenever it is an option.

[19] Id.

c. Industry "best practice" for assuring product integrity is to transload PET no more than once per shipment.

Product integrity is an important reason why rail dominates the market for transportation of PET. The handling of PET during transport adversely affects product integrity by degrading the product and increasing the risk of contamination. This is a fact that CSXT does not dispute and in fact acknowledges as "a fact of life in the plastic polymers industry" that cannot be entirely eliminated, only "mitigated." CSXT Reply at II-58. Nevertheless, CSXT contends that (1) M&G's refusal to double-transload PET shipments is a "made-for-litigation" claim, (2) M&G regularly engages in double-transloading, and (3) M&G can effectively mitigate the product integrity issues through a variety of "best practices." As demonstrated in Part II-B-2.f., M&G's refusal to double-transload is an industry practice, M&G does not routinely double-transload, and M&G already follows industry best practices, of which Rule #1 is to minimize the handling of PET.

The first rule of product integrity in the polymer industry is to handle the product as few times as possible between production and consumption. The clean hopper car serves as a mobile storage vessel that is sealed immediately upon loading the polymer at the point of production and is not opened again until the purchaser is ready to consume the polymer. Transloading is in direct conflict with these precautions, because each transload exposes the polymer to heat, high velocity, and contaminants, such as dirt, foreign matter, and hose material, during the transfer process. For example, heat can change the properties of polymer; velocity creates the friction that causes the dusts, fines and streamers that clog customer's equipment; and just a single piece of foreign matter can cause very expensive downtime and damage to a customer's processing equipment.

Nevertheless, a certain amount of transloading is unavoidable. Because some customers do not have access to rail, the only way to serve them is to transload polymer from rail to truck. Also, sometimes the faster transit time associated with trucks is necessary to prevent a customer from running out of polymer. To address these situations, the industry has developed "best practices" to mitigate the transfer risks. But, "best practices" do not eliminate the problems with transloading; they merely bring them within acceptable tolerances. Dusts, fines and streamers still are created during the transload process, but to a lesser degree. Because the quantity accumulates with subsequent handling, the industry makes every possible effort to limit transloading to just once per shipment.

M&G never double-transloads a single shipment in the ordinary course of business. Although CSXT purports to present multiple examples of M&G engaging in double-transloading, none in fact are double-transloads. CSXT's assumption that all imported PET undergoes double transloading also is incorrect. M&G provides a full analysis of each supposed transload example in Part II-B-2.f.(3), infra.

When transloading of polymers does occur, it almost always is from rail to truck. However, most of the double-transloading that CSXT proposes as alternative transportation options for the issue movements involve truck-to-rail transloading. Transloading from trucks back into rail cars rarely ever occurs, and when it does, it usually is an act of desperation to prevent the customer from running out of polymer. In those situations, the risks associated with a second transload are typically out-weighed by the cost of a certain shut-down. It is telling that neither of the two major industry guides to handling resin, the "Resin Handling Guide" and the "Pellet Handling Manual," or CSX TRANSFLO literature refer to truck-to-rail transloading. It

simply is not a common practice because of the product integrity issues and because it is highly inefficient.[20]

Finally, CSXT's own evidence does not stop at just a second transload. Several lanes in which CSXT has proposed a double-transload are to a destination bulk terminal where a third transload must occur in order to deliver the PET to a non-rail customer location. In addition, under CSXT's proposal all of the PET that originates at Belpre, Ohio, must be transported to Belpre by truck, which necessarily involves a transload at both the origin and destination. Therefore, CSXT's plan for transloading again from Belpre to the customer or into a rail car at a bulk terminal involve a third and fourth transload. Even CSXT's own experts have not opined on the efficacy of a third and fourth transload. M&G has identified all of the affected case lanes in Part II-B-2.f.(5), infra.

d. CSXT grossly overstates Apple Grove's truck loading capacity and understates the cost of expanding that capacity.

In Opening Evidence, M&G demonstrated that its existing truck loading capacity at Apple Grove cannot handle substantially higher volumes and that the cost of expanding that capacity would be approximately {{[redacted]}}. In Reply, CSXT contends that Apple Grove currently has the capacity to load {{[redacted]}} more trucks, which is more than {{[redacted]}} times its 2010 truck loadings, without spending a single cent on additional infrastructure. CSXT Reply

[20] Clean empty rail cars must be pre-positioned and waiting at a bulk terminal to receive the trucks. Not only is there a transportation charge associated with that, but the polymer producer must stage the empty rail cars before it even receives a customer order so that a rail car is waiting for the trucks when they arrive. Also, the trail of product information that must follow every load of resin (*e.g.* certificate of analysis, billing, inventory) is more complex. When the rail car contents are transloaded into four bulk trucks at the production facility, the documentation has to be reissued for each truck, and then re-issued again when the trucks are transferred back into a rail car at an intermediate bulk terminal. Moreover, although a practical rule of thumb is four trucks per rail car, the actual figure is somewhere between 4 and 4.5 trucks. Thus, either a portion of the contents must be left behind in the first rail car, in which case the customer does not truly receive a full rail car, or a light-loaded fifth truck must be employed to haul the remaining polymer between the two rail cars. This process is unsustainable on a routine basis.

at II-62-65. Moreover, CSXT contends that M&G could expand Apple Grove's truck loading capacity for only a fraction of {{[redacted]}}. CSXT's evidence is just not credible.

CSXT's overly simplistic and formulaic evidence completely collapses under the real-world constraints at Apple Grove. In Part II-B-2.g.(1)(a), M&G addresses the overly aggressive assumptions that form the basis of CSXT's truck loading capacity estimate. In Part II-B-2.g.(1)(b), M&G introduces real-world factors into the equation. The most significant fact is that CSXT's mainline splits Apple Grove's infrastructure down the middle, including its PET loading tracks, storage tracks, and transloading tracks. Moreover, Apple Grove produces {{[redacted]}} grades of PET that load on different sides of the mainline. There is a fundamental imbalance between the side of the Apple Grove plant that loads the most PET and the side that has the most storage and transload tracks. There also is only a single truck scale, which means that, based upon CSXT's assumption that Apple Grove will load {[redacted]} trucks daily and require 30 minutes to weigh each truck, it will take {[redacted]} hours to weigh every truck. Of course that is {[redacted]} and far more than the 12 hours that CSXT has assumed for all transloading activities.

Moreover, as detailed in Part II-B-2.g.(1)(c), infra, CSXT's evidence does not withstand scrutiny based upon a recent expansion project at a PET facility in {{[redacted]}}. A joint project between CSXT and {{[redacted]}} constructed {{[redacted]}}. CSXT's formula for Apple Grove estimates that M&G can load {{[redacted]}} trucks per year at each transloading car spot. If one assumes that {{[redacted]}} could load the same number of trucks from its {{[redacted]}} spots, it should be able to load {{[redacted]}} trucks annually, or approximately {{[redacted]}} metric tons. But the plant only has the capacity to produce {{[redacted]}} metric tons per year. If CSXT's formulaic approach to capacity is

accurate, this would mean that {[redacted]} and CSXT constructed {{[redacted]}} even if 100 percent of the plant's production was shipped via truck. If trucks are such the effective competitor alleged by CSXT, why would it cooperate in a joint project that would enable its customer to handle {{[redacted]}} of its production capacity by truck? The obvious answer is two fold. First, the {{[redacted]}} do not in fact give {{[redacted]}} anywhere near the transload capacity indicated by CSXT's methodology. Second, CSXT knows that truck and rail do not compete for most of the same movements, because each has distinct advantages over the other in entirely different transportation circumstances.

Because CSXT has ignored, much less attempted to refute, M&G's evidence of the real-world constraints upon transloading at Apple Grove, the only evidence of record is that provided by M&G. As such, the Board should find for M&G on these issues. "As a general matter, whenever the party with the burden of proof makes a *prima facie* showing with respect to an element bearing on the issue at hand, the other side then must rebut that showing or suffer the consequence." McGraw Edison Co. v. The Alton and Southern Ry. Co., 2 I.C.C.2d 102, 106 (1986). See also, Climate Master Inc. and International Environmental, Inc. – Petition for Declaratory Order – Certain Rates and Practices of Trans Tech Solutions, Inc., F&M Bank, and Midland Transportation Company, STB Docket No. 42085, slip op. at 1-2 (served Sept. 28, 2004); Duke Energy Corporation v. Norfolk Southern Railway Company, 7 STB 89, 161 (2003); Union Pacific Railroad Company – Abandonment – In Carver and Scott Counties, MN, STB Docket No. AB-33 (Sub-No. 255), slip op. at 3 (served April 1, 2008). Cf. Arkansas Electric Cooperative Corporation – Petition for Declaratory Order, STB Docket No. 35305 (served

March 3, 2011), slip op. at 3 ("we must resolve this controversy based upon the evidence available at this time").

Finally, in Part II-b-2.g.(2), M&G defends its {{[redacted]}} estimate to expand Apple Grove's truck loading capacity. CSXT has ignored the need for additional storage and transload tracks on both sides of the CSXT mainline at Apple Grove to handle a substantial increase in PET truck volumes. All of the off-site rail car storage upon which M&G currently depends must be brought on-site at Apple Grove to enable truck loading. In addition, because customers will no longer be storing their PET inventory in rail cars at their production facilities, M&G will have to store those rail cars at Apple Grove until the customer is ready to receive those volumes by truck. CSXT's solution is to keep using off-site storage and move the rail cars back to Apple Grove for transloading. But of course that increases the cost of transloading by requiring M&G to pay CSXT to move the rail cars to and from the storage sites. Moreover, M&G's proposed increase in storage capacity is consistent with the amount of storage track for the {{[redacted]}} project.

As discussed above, CSXT's own evidence proves that Apple Grove needs more truck scales to load more trucks. M&G has proposed {{[redacted]}} scales that would be positioned directly adjacent to the transload tracks so that the trucks could be weighed during the loading process, just like rail cars. This will substantially reduce weighing time and eliminate the overloading or underloading that occurs much too often today.

M&G's need for additional locomotives is justified by the additional switching that is required for extra truck loading and by the need to operate over the additional storage tracks.

M&G's proposal for two car washing facilities is necessitated by the fact that rail cars would have to be washed on-site since they seldom would have occasion to leave Apple Grove.

It is not sufficient for CSXT to claim that the rail cars can be washed on trips to rail-served customers because there is far more volume in the 43 lanes for which CSXT has challenged market dominance than the 26 lanes in which it has not. If M&G did not build the car wash facilities, it would have to pay a round trip rate of {[redacted]} to CSXT to send the cars out for washing.

M&G's lighting costs are appropriate because they include lighting for the rail car storage tracks, whereas CSXT's estimate does not. Even according to CSXT's truck loading plan for Apple Grove, rail car switching to and from the transload tracks would have to occur at night. Therefore, both the transload tracks and the storage tracks must be lighted.

CSXT's evidence on roads and paving is confusing and contradictory. To the extent that CSXT contends that it is unnecessary to pave the roads within Apple Grove, that simply is not true. The current roads were not designed for frequent traffic by 80,000 pound trucks. Such heavy traffic would quickly cause the roads to deteriorate and the dust would contravene West Virginia air quality emission controls. The roads and paving that M&G has proposed are comparable to those constructed as part of the {{[redacted]}} project.

3. M&G Witness Granatelli validates the issues and facts presented in M&G's Opening Evidence.

In subpart b., M&G presents the testimony of Robert Granatelli, who has more than 20 years experience handling transportation and logistics matters in the polymer industry with LyondellBasell Industries and its predecessor, Basell. Because CSXT has attempted to portray M&G's arguments as contrived and "made-for-litigation," M&G asked Mr. Granatelli to provide his insights as a third party with many years of relevant experience into the issues and concerns that M&G Witnesses Andre Meyer and Melba Aguilar have raised in M&G's Opening Evidence. Mr. Granatelli has confirmed that the polymer industry is designed around rail and in particular

the use of rail cars for storage at both the origin and destination. This provides enormous efficiency and flexibility to the industry. In addition, the level of rail integration into the polymer distribution chain has created a structural dependency upon rail.

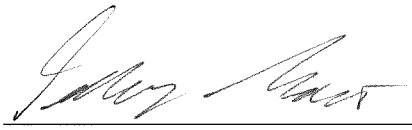
Mr. Granatelli also attests to the importance of product integrity and that the number one best practice to protect product integrity is to minimize, if not eliminate, handling of PET between production and consumption. Towards that end, he states that the industry practice is to restrict transloading to one occurrence per shipment whenever possible.

Finally, Mr. Granatelli reveals inconsistencies in the testimony of CSXT Witness Gordon Heisler and Mr. Heisler's real-world positions when he worked for Sunoco.

C. CONCLUSION

For the foregoing reasons, M&G requests that the Board find that CSXT possesses market dominance over each of the 69 lanes in M&G's Third Amended Complaint.

Respectfully submitted,



Jeffrey O. Moreno
David E. Benz
Thompson Hine LLP
1920 N Street, N.W., Suite 800
Washington, D.C. 20036
(202) 331-8800

August 4, 2011

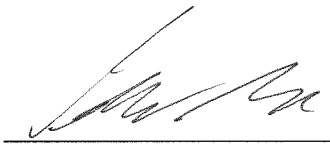
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CERTIFICATE OF SERVICE

I hereby certify that this 4th day of August 2011, I served a copy of the foregoing upon Defendant via hand-delivery at the address below:

G. Paul Moates
Paul A. Hemmersbaugh
Sidley Austin LLP
1501 K Street, NW
Washington, DC 20005

Counsel for CSX Transportation, Inc.



Jeffrey O. Moreno

Part II-A

II. A. QUANTITATIVE EVIDENCE[1]

CSXT generally accepts M&G's Opening presentation as to the calculation of variable costs for the issue movements for purposes of determining the jurisdictional threshold under 49 U.S.C. §§ 10701 (d)(1) and 10707.

In its Reply, CSXT agrees with M&G on eight of the nine inputs required to run the STB's URCS Phase III model for each issue movement, i.e., CSXT agrees with each of M&G's inputs, except loaded miles. In addition, CSXT agrees with M&G's calculation of the tariff rates including fuel surcharges for each issue movement for each quarter from 1Q10 through 1Q11[2]. CSXT also agrees with the indexes developed by M&G to adjust calendar year 2009 CSXT URCS costs to each quarter of 2010 and the first quarter of 2011 with one minor exception.[3]

The difference between M&G and CSXT's calculation of loaded miles centers on the CSXT records forwarded to M&G in discovery. CSXT was critical of M&G's predominant route approach to develop loaded miles. M&G's predominant route approach was designed to eliminate CSXT records with obvious data errors. In an attempt to justify the use of some extremely high loaded mileages, CSXT claims that their operating practices result in these extraordinary long distances between rail stations and therefore the longer miles should be used for costing purposes.

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[1] The evidence in Part II-A is sponsored by M&G Witnesses Thomas D. Crowley and Timothy D. Crowley.

[2] In Reply, CSXT used the rates and fuel surcharges developed by M&G in Opening even though a difference in loaded mileages exists for a number of issue lanes. In this Rebuttal, we have updated the rates and fuel surcharges to reflect the loaded compromised miles that we use in Rebuttal. The details of these calculations are shown in Rebuttal Exhibit II-A-7.

[3] In Opening, M&G used a Producer Price Index ("PPI") for All Commodities which is used to adjust other indexable expenses downloaded on April 14, 2011 which contained preliminary values for December 2010 through March 2011. In Reply, CSXT used a PPI All Commodities index downloaded on June 29, 2011 which contained actual values for December 2010 through January 2011 and preliminary values for February 2011 and March 2011. In Rebuttal, we used the PPI All Commodities index downloaded on July 20, 2011 which contained actual values through February 2011 and a preliminary value for March 2011. The results are included in our Rebuttal work papers at "CSXT09 to 1Q11 Phase III Index_Rebuttal.xlsx".

CSXT's inclusion of these circuitous routings and their weighted average mileage approach is based on the STB's *FMC* decision[4].

The *FMC* decision does not support CSXT's weighted average approach used in Reply. The difference in loaded miles for the routes CSXT includes in its weighted average approach are not comparable to the loaded mileage differences in *FMC*. The reasons *FMC* does not apply in this case include:

1. *FMC* resolved a dispute regarding a single specific movement and did not set a general precedent. Both parties in *FMC* presented explanations for how the issue traffic moved and submitted a total of three special studies regarding the movement of the issue traffic. The STB did not decide that "actual" mileage or "weighted average" mileage was superior in *FMC* but rather reviewed the three special studies presented by the parties and selected the study it found most convincing. No similar special studies have been submitted by CSXT in this proceeding and CSXT did not provide the data necessary to perform a special study;

2. The movement in *FMC* involved a local turn train that served a specified route each trip and always served the issue location of Don, ID because Don, ID is located on the local train's specified route. The local turn train in FMC moved from Pocatello Yard, ID to Borah, ID and returned to Pocatello Yard, ID. {{[redacted]}};

3. The movement referenced in the *FMC* decision dealt with how the issue traffic was handled by the local turn train crew. The *FMC* dispute was whether or not the issue traffic was picked up by the local train on the way out to Borah or on the way back from Borah to Pocatello Yard. CSXT has not provided any information regarding whether or not local trains served Apple Grove, WV and if they do, how does CSXT rationalize these extremely circuitous routings; and

4. The issue location in *FMC* (Don, ID) is located approximately 8 miles from Pocatello Yard, ID. {{[redacted]}}. This distance is too great for a local train turn crew to operate and therefore the M&G movement is not operationally similar to the movement in *FMC*.

[4] See, *FMC Wyoming Corp. Wyoming Pacific R. R. Cp. ("FMC")*, 4 STB 699 (2000).

While CSXT is critical of M&G's approach to developing loaded miles by eliminating unexplained, anomalous routings, it arbitrarily removed some records from its calculation of loaded miles. CSXT recognized (but did not highlight) the fact that the CSXT produced traffic records contained records with data errors and excluded "these data anomalies from its mileage calculations"[5]. CSXT's approach to identifying anomalies constituted the application of an arbitrary "10% rule". Specifically, any route that handled less than 10% of the issue traffic for each issue origin/destination pair was arbitrarily eliminated from their loaded-mile analysis.

For the 13 issue lanes where M&G continues to disagree with CSXT loaded mileage calculations (see discussion below), Rebuttal Exhibit II-A-8 summarizes (on a lane-by-lane basis) the miles and carloads arbitrarily eliminated by CSXT through application of its "10% rule". Rebuttal Exhibit II-A-8 also indentifies the route followed by the CSXT eliminated traffic, as well as other explanatory notes.

When the CSXT eliminated routes are compared to routes CSXT included for the remaining 13 issue lanes (as described below), the arbitrary nature of CSXT's approach is readily apparent. CSXT's 10% rule plus the unexplained circuitous operating routes for the remaining 13 issue lanes leads to only one conclusion, i.e., CSXT's loaded mileages are not legitimate and cannot be used to develop variable costs and maximum rates for the M&G issue traffic.

A lane-by-lane critique of the differences in loaded mileages included in M&G's Opening presentation verses those included in CSXT's Reply presentation follows. This lane-by-lane critique demonstrates why M&G's mileages should be used for rail costing purposes.

[5] See CSXT Reply, p. II-6, footnote 7.

1. Remaining Differences In Loaded Miles

While M&G does not fully agree with CSXT's approach for calculating loaded miles, the difference between the parties for most issue lanes is relatively small. To minimize disputes, M&G will accept CSXT's calculations of loaded miles for 57 issue lanes but will not accept CSXT's calculation for the 13 issue lanes summarized in Rebuttal Table II-A-1 below.

Rebuttal Table II-A-1
Comparison of M&G Opening And CSXT Reply
Loaded Miles For Issue Traffic Lanes Still In Dispute
(Arrayed Largest to Smallest On Column(7))

Complaint Lane ID (1)	Origin (2)	Destination (3)	Location Where CSXT Interchanges Traffic (4)	M&G Opening Miles 1/ (5)	CSX Reply Miles 1/ (6)	Loaded Mileage Difference 2/ (7)
1. A02	APPLEGROVE WV	BORDENTOWN NJ	xxx	{{		186
2. A10	APPLEGROVE WV	ROCHESTER NY	xxx			113
3. A04	APPLEGROVE WV	CLIFTON FORGE VA	xxx			95
4. A06	APPLEGROVE WV	ORLANDO FL	xxx			45
5. B27	APPLEGROVE WV	RUSSELLVILLE AR	EAST ST LOUIS IL			42
6. B31	APPLEGROVE WV	TEXARKANA TX	EAST ST LOUIS IL			42
7. B29	APPLEGROVE WV	SUISUN FAIRFIELD CA	EAST ST LOUIS IL			42
8. B24	APPLEGROVE WV	NICHOLASVILLE KY	COLUMBUS OH			41
9. B15	APPLEGROVE WV	FREMONT OH	COLUMBUS OH			41
10. B17	APPLEGROVE WV	HAMILTON ON	TOLEDO OH			41
11. B28	APPLEGROVE WV	ST JEAN PQ	TOLEDO OH			41
12. B13	APPLEGROVE WV	DONEY SPUR PQ	TOLEDO OH			41
13. A01	APPLEGROVE WV	BELPRE OH	xxx		}}	33

1/ Miles represent movement between Column (2) and Column (3) stations if Column (4) is blank. If Column (4) includes a station, miles represent movement between Column (2) and Column (4) stations.
2/ Column (5) minus Column (6)

The reasons why M&G's loaded miles are superior to CSXT's loaded miles for each of the 13 issue lanes summarized in Rebuttal Table II-A-1 are summarized below on a lane-by-lane basis.

Complaint Lane A02 - - Apple Grove, WV to Bordentown, NJ - - During the study period (3Q09-2Q10), {{ }} issue traffic carloads traveled from Apple Grove to Bordentown.

{{[redacted]}} carloads moved {{[redacted]}} miles[6] between Apple Grove, WV and Bordentown, NJ, {{[redacted]}} carloads moved {{[redacted]}} miles,[7] and {{[redacted]}} carloads traveled {{[redacted]}} miles[8]. In Opening, M&G used the longer {{[redacted]}} mile route (rather than the shorter {{[redacted]}} mile route) from Apple Grove to Bordentown. In Reply, CSXT used all routes which resulted in {{[redacted]}} loaded miles from Apple Grove to Bordentown or {{[redacted]}} miles longer than the route used by M&G.

CSXT did not provide any empirical based explanation as to why the much longer {{[redacted]}} mile route was included (72% longer) in their analysis. The CSXT analysis that resulted in certain CSXT records being excluded from the calculating of loaded miles, provided no explanation why this {{[redacted]}} mile route between Apple Grove and Bordentown (that on its face appears to be an anomalous routing) should logically be included in the analysis. Without support or explanation from CSXT in Reply, M&G can find no rationale to include the anomalous {{[redacted]}} mile route as a legitimate operational route from Apple Grove to Bordentown. Therefore, M&G continues to use {{[redacted]}} loaded miles for this route in Rebuttal.

Complaint Lane A10 - - Apple Grove, Rochester, NY - - During the study period (3Q09-2Q10), {{[redacted]}} issue traffic carloads travelled from Apple Grove to Rochester. For {{[redacted]}} carloads the route equaled {{[redacted]}} miles[9] from Apple Grove to Rochester. {{[redacted]}} additional routes appear in the CSXT provided data - - one route handled {{[redacted]}} carloads and totaled {{[redacted]}}

[redacted]

[redacted]

[redacted]

[redacted]

miles and one route handled {{[redacted]}} carloads and totaled {{[redacted]}} miles[10]. In Opening, M&G used the longer {{[redacted]}} mile route (rather than the shorter {{[redacted]}} mile route). In Reply, CSXT used all routes which resulted in {{[redacted]}} loaded miles or {{[redacted]}} miles longer than the miles used by M&G.

CSXT Reply loaded miles for the Apple Grove to Rochester lane should be rejected and M&G's Opening loaded miles should be included in the development of URCS Phase III variable costs and the resulting maximum rates for the following reasons:

1. CSXT did not provide any operational or other explanation why the much longer {{[redacted]}} mile route was included (78% longer than the {{[redacted]}} mile route);

2. CSXT's analysis that resulted in certain CSXT records being excluded from the calculation of loaded miles made no mention of this {{[redacted]}} mile route between Apple Grove and Rochester that on its face appears to be an anomalous routing that should be either explained or excluded from the analysis;

3. Over 75% of the issue traffic moving from Apple Grove to Rochester travelled {{[redacted]}} miles or less between origin and destination during the study period;

4. The {{[redacted]}} carloads that CSXT records claim moved the {{[redacted]}} miles all traveled in the 3Q09-4Q09 time period and no carloads moved over this route in the 1Q10-2Q10 time period. By comparison, the {{[redacted]}} mile (or less) Apple Grove to Rochester route was used during the entire study time period; and

5. CSXT's trip plan provided to M&G in discovery and covering certain M&G routes identified the schedule for the Apple Grove to Rochester route to equal {{[redacted]}} miles[11].

Without support or explanation from CSXT in Reply, M&G can find no rationale to include the anomalous {{[redacted]}} mile route as a legitimate operating route from Apple Grove to Rochester. Therefore, M&G continues to use {{[redacted]}} loaded miles for this route in Rebuttal.

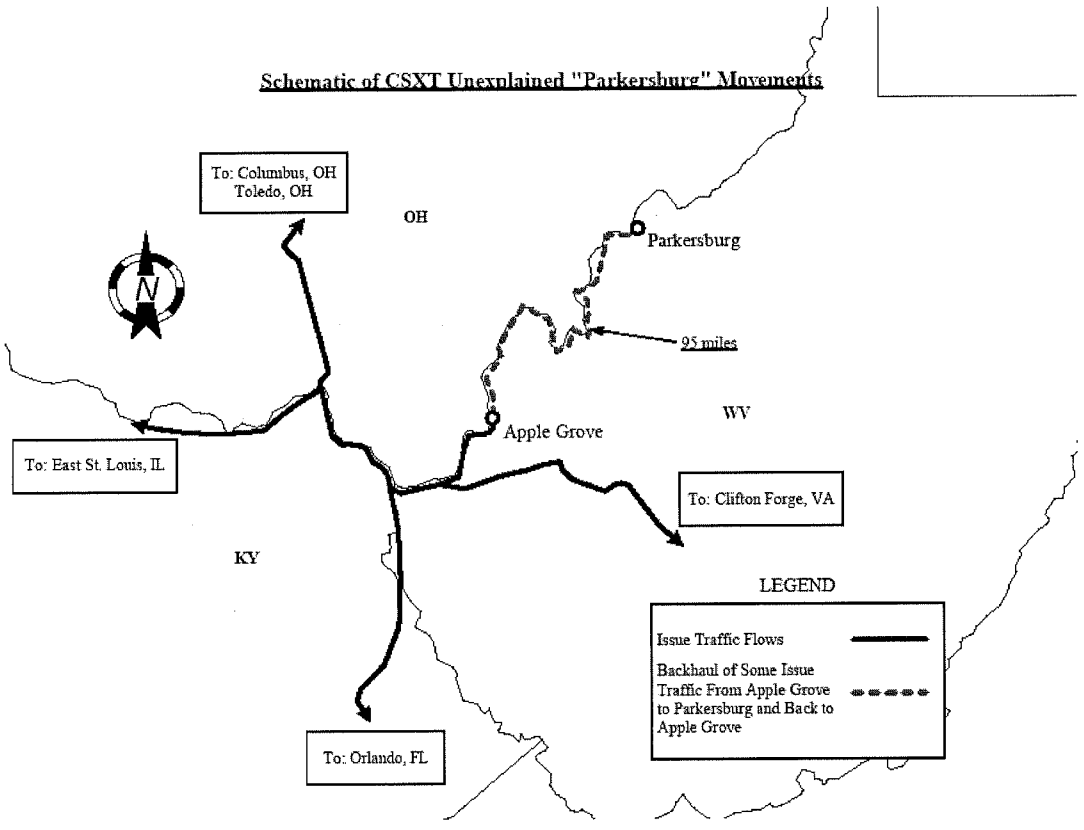
For the next ten (10) issue lanes identified in Rebuttal Table II-A-1 above, the same mileage issue causes the difference in M&G's Opening loaded miles versus CSXT's Reply, i. e., whether or

[10] {{[redacted]}}

[11] See CSX-M&G-C-030820.

not to base the loaded miles for costing purposes on the movement of the loaded M&G traffic from Apple Grove to Parkersburg and back to Apple Grove prior to moving to the CSXT destination. M&G did not include these miles but CSXT did[12] based on its weighted average approach, plus a general rationalization that not all traffic moves over the same route between origin and destination. This CSXT general rationalization does not provide any rationale for the movement of loaded traffic from Apple Grove to Parkersburg and back to Apple Grove prior to transporting the traffic to destination.

A schematic demonstrating the Apple Grove to Parkersburg to Apple Grove operations that is used by CSXT to artificially increase the line haul miles for the next ten (10) issue lanes in dispute is shown below.



[12] A review of Rebuttal Exhibit II-A-8 demonstrates that CSXT eliminated the Apple Grove to Parkersburg to Apple Grove miles for a number of routes that they eliminated. CSXT did not explain this apparent contradiction in their study approach to calculating loaded miles.

Complaint Lane A04 - - Apple Grove, Clifton Forge, VA - - During the study time period (3Q09-2Q10), {{[redacted]}} issue traffic carloads travelled from Apple Grove to Clifton Forge. {{[redacted]}}. These are the miles used by M&G to develop CSXT URCS Phase III variable costs. These miles also correspond to CSXT's trip plan miles of {{[redacted]}} provided by CSXT in discovery[13] {{[redacted]}} The round trip between {{[redacted]}} adds an additional {{[redacted]}} miles to the trip.

Complaint Lane A06 - - Apple Grove, Orlando, FL - - During the study period (3Q09-2Q10), {{[redacted]}} issue traffic carloads travelled from Apple Grove to Orlando. Of the {{[redacted]}} issue traffic carloads, {{[redacted]}} or 77% followed the same route from origin to destination, even though CSXT assigned different miles to the route (i. e., {{[redacted]}} carloads moved {{[redacted]}} miles and {{[redacted]}} carloads moved {{[redacted]}} miles)[14]. This route and these miles correspond to CSXT's {{[redacted]}} trip plan miles provided by CSXT in discovery[15].

The route traveled by the remaining {{[redacted]}} carloads of issue traffic traveled {{[redacted]}} miles from Apple Grove to Orlando. CSXT included a route for these {{[redacted]}} carloads that began with the movement from {{[redacted]}}

[13] See CSX-M&G-C-030814.

[14] {{[redacted].}}

[15] See CSX-M&G-C-030816.

[redacted] over the identical route described above and used by M&G.

Complaint Lane B27 - - Apple Grove, Russellville, AR; Complaint Lane B31 - - Apple Grove, Texarkana, TX; Complaint Lane B29 - - Apple Grove, Suisun Fairfield, CA - These three lanes are CSXT interline forwarded movements with the issue traffic originating at Apple Grove and moving west to East St. Louis, IL where the issue traffic is interchanged with the delivering carrier. During the study period (3Q09-2Q10), {{[redacted]}} issue traffic carloads moved from Apple Grove to the East St. Louis Gateway. Of the {{[redacted]}} issue movements, {{[redacted]}}, or 84%, moved west from Apple Grove to East St. Louis and travelled between {{[redacted]}} miles according to CSXT records. According to CSXT's trip plan, Lane B27 and Lane B31 were scheduled to travel {{[redacted]}} miles from Apple Grove to the interchange location[16] while the Lane B29 traffic was scheduled to travel {{[redacted]}} miles[17].

CSXT included the remaining {{[redacted]}} movements in their loaded miles analysis. These {{[redacted]}} issue traffic carloads travelled {{[redacted]}} miles from Apple Grove to East St. Louis. The additional {{[redacted]}} miles are the result of the issue traffic being routed from {{[redacted]}}.

Complaint Lane B24 - - Apple Grove, Nicholasville, KY; Complaint Lane B15 - - Apple Grove, Fremont, OH - - These two lanes are CSXT interline forwarded movements with the issue traffic originating at Apple Grove and moving northwest to Columbus, OH where the issue traffic is interchanged with the delivering carrier. During the study period (3Q09-2Q10), {{[redacted]}} issue traffic carloads moved from Apple Grove to Columbus. Of the {{[redacted]}} issue movements, {{[redacted]}} or 78% moved northwest from Apple Grove to Columbus and travelled {{[redacted]}} miles. According

[16] See CSX-M&G-C-030856 and CSX-M&G-C-030860.
[17] See CSX-M&G-C-030858.

to CSXT's trip plan, these lanes were scheduled to travel {{[redacted]}} miles from Apple Grove to Columbus[18].

CSXT included the remaining {{[redacted]}} movements in their loaded miles analysis. These {{[redacted]}} movements travelled {{[redacted]}} miles from Apple Grove to Columbus. The additional miles are the result of the issue traffic being routed by CSXT from {{[redacted]}}.

Complaint Lane B17 - - Apple Grove, Hamilton, ON; Complaint Lane B 28 - -Apple Grove, St. Jean, PQ ; Complaint Lane B13 - - Apple Grove, Doney Spur, PQ - - These three lanes are CSXT interline forwarded movements with the issue traffic originating at Apple Grove and moving northwest to Toledo, OH where it is interchanged with the delivery carrier. During the study period (3Q09-2Q10), {{[redacted]}} issue traffic carloads moved from Apple Grove to Toledo. Of the {{[redacted]}} issue movements {{[redacted]}} or 78% moved northwest from Apple Grove to Toledo and traveled {{[redacted]}} miles according to CSXT records. According to CSXT's trip plan, these lanes were scheduled to travel {{[redacted]}} miles from Apple Grove to Toledo[19].

CSXT included the remaining {{[redacted]}} movements in its load miles analysis. The {{[redacted]}} movements travelled {{[redacted]}} miles from Apple Grove to Toledo. The additional miles are the result of the issue traffic being routed by CSXT from {{[redacted]}}.

Complaint Lane A01 - - Apple Grove, Belpre, OH - - During the study period, {{[redacted]}} issue traffic carloads travelled from Apple Grove to Belpre, OH. For {{[redacted]}} issue traffic carloads,

[18] See CSX-M&G-C-030853 and CSX-M&G-C-030844.
[19] See CSX-M&G-C-030846, CSX-M&G-C-030857, CSX-M&G-C-030842.

the route from Apple Grove to Belpre equaled {{[redacted]}} miles. For the remaining {{[redacted]}} issue traffic carloads, the route used in CSXT's analysis from Apple Grove to Belpre equals {{[redacted]}} miles.

Belpre is {{[redacted]}} miles north of Apple Grove. In order to increase the {{[redacted]}} mile route to a {{[redacted]}} mile route, CSXT moved the issue traffic {{[redacted]}}. This extremely circuitous routing is not supported by CSXT in its Reply and is approximately twice as far as CSXT's trip plan of {{[redacted]}} miles[20]. M&G continues to use {{[redacted]}} loaded miles for this route.

2. Variable Costs

M&G Rebuttal Exhibit II-A-1 through Rebuttal Exhibit II-A-5 summarize CSXT's variable costs, jurisdictional thresholds and revenue to variable cost ratios for each issue M&G movement during each quarter from 1Q10 through 1Q11 based on the above. Rebuttal Exhibit II-A-1 through Rebuttal Exhibit II-A-5 also compare M&G's results to the corresponding results in CSXT's Reply Exhibit II-A-2. Rebuttal Exhibit II-A-6 shows the operating characteristics utilized to develop M&G's Rebuttal Exhibit II-A-1 through Rebuttal Exhibit II-A-5.

[20] See CSX-M&G-C-030811.

Part II-B

B. QUALITATIVE MARKET DOMINANCE[1]

1. INTRAMODAL COMPETITION

Because CSXT does not contend that direct rail-to-rail intramodal competition exists for any issue movement, the Board can conclusively determine that no intramodal competition exists. See CSXT Reply at II-9.

[1] The facts and evidence in this Part II-B are jointly sponsored by Andre Meyer, M&G's Americas Supply Chain Manager; Melba Aguilar, M&G's North America Traffic Manager; and Gil Rogers, M&G Senior Project Engineer (only Part II-B-2.g). All three were Opening Evidence witnesses. In addition, Part II-B-2.b. is sponsored by Robert Granatelli, as well as other testimony throughout Part II-B that is specifically attributed to him. Their credentials are detailed in Part IV.

2. INTERMODAL COMPETITION

In this Part II-B-2, M&G exposes and responds to the many contentions, omissions and misrepresentations in CSXT's Reply Evidence under the following headings:

a. **The alternatives proposed by CSXT for 43 lanes do not provide effective competition to CSXT rail service.**

b. **M&G Witness Granatelli confirms the Opening Evidence of M&G as to the prevalence of rail transportation across the polymer industry.**

c. **M&G has not "chosen" to be captive.**

d. **CSXT misrepresents the extent to which direct truck and transload alternatives constitute effective competition.**

e. **Customer rail requirements are strong evidence of CSXT's market dominance.**

f. **M&G's product integrity concerns restrict transportation options.**

g. **CSXT's assessment of Apple Grove's truck loading capacity is over-simplistic and unsupported by real-world facts.**

a. The alternatives proposed by CSXT for 43 lanes do not provide effective competition to CSXT rail service.

CSXT claims that effective competition exists for 43 lanes at issue in this case.[2] As a threshold matter, that means CSXT concedes market dominance over the remaining 26 case lanes. As shown in this Section, CSXT's proposed alternatives for the 43 contested lanes do not provide effective competition because: (1) CSXT has not proposed alternatives for transportation from the same origin and destination as each issue movement; (2) CSXT has incorrectly priced some alternatives; (3) the alternative rates are simply too high to be an effective competitive constraint; (4) the alternatives have much higher cost structures that render them ineffective competitive constraints even at similar rate levels; and (5) CSXT has disregarded or simply ignored key issues such as customer requirements, PET degradation and contamination, and truck-loading limitations at Apple Grove.

(1) CSXT has not proposed alternative transportation between the same origins and destinations covered by the challenged rates.

For several case lanes, CSXT has not proposed alternative transportation between the same origin and destination as the CSXT transportation that is provided pursuant to the challenged rates. Under established precedent for "bottleneck" rate challenges, market dominance is to be evaluated solely between the origin and destination covered by the bottleneck rate. Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, 4 STB 288, 292 (n. 13) (1999) ("DMIR"). Only the CSXT tariff rate is subject to Board jurisdiction and M&G has challenged only the CSXT rate in this case. Therefore, the Board may only consider market dominance for the movement between the points covered by the challenged CSXT rate. Id. at 293 ("we will not consider the movement prior to the interchange point for rate complaint

[2] CSXT Reply at II-36-45.

purposes because that movement is governed by a rail transportation contract and is thus beyond our regulatory purview"). CSXT has not identified alternatives that satisfy this requirement for 14 of the joint-line issue movements. Because CSXT has not proposed a true "alternative" for those lanes, the Board should reject CSXT's alternative transportation evidence.

For the following eight lanes, the sole "alternative" proposed by CSXT is not between the same origin and destination as the actual transportation under the challenged tariff rates: B-3, B-11, B-14, B-20, B-35, B-37, B-39, and B-41. Pursuant to 49 USC § 10709, DMIR, and the Bottleneck decisions,[3] the Board should reject these alternatives because they cannot provide effective competition for the movement covered by the challenged rate; indeed, the Board should find that market dominance conclusively exists in these eight lanes because CSXT has not been able to point to any alternative to the transportation covered by the challenged tariff rates.

Lane	Challenged tariff transportation		Alternative transportation proposed by CSXT in Reply Evidence	
	Origin	Destination	Origin	Destination
B-3	Chicago, IL	Columbus, OH	Chicago, IL	Cambridge, OH
B-11	Apple Grove	Effingham, IL	Apple Grove	Champaign, IL
B-14	Apple Grove	Louisville, KY	Apple Grove	Franklin, IN
B-20	Apple Grove	Columbus, OH	Apple Grove	Hebron, OH
B-35	Apple Grove	Lynchburg, VA	Apple Grove	Waynesville, NC
B-37	Belpre	Allentown, PA	Belpre	St. James, MD
B-39	Belpre	Louisville, KY	Belpre	Franklin, IN
B-41	Belpre	Hagerstown, MD	Belpre	Hazleton, PA

For the following three lanes, CSXT has proposed two potential alternatives: B-8, B-18, and B-19. Neither alternative, however, is between the same origin and destination as transportation covered by the challenged tariff rate. Pursuant to the precedent discussed above, the Board should reject these alternatives because they cannot provide effective competition for

[3] Central Power & Light Co. v. Southern Pacific Transportation Company, 1 S.T.B. 1059 (1996), aff'd sub nom. MidAmerican Energy Company v. Surface Transportation Board, 169 F.3d 1099 (8th Cir. 1999),

the movement covered by the challenged rate. The Board should find that market dominance conclusively exists in these three lanes because CSXT has not been able to point to any alternative to the transportation covered by the challenged tariff.

Lane	Challenged tariff transportation		Alternative transportation proposed by CSXT in Reply Evidence	
	Origin	Destination	Origin	Destination
B-8	Apple Grove	Hagerstown, MD	Apple Grove	Allentown, PA
B-8	Apple Grove	Hagerstown, MD	Apple Grove	St. James, MD
B-18	Apple Grove	Hagerstown, MD	Apple Grove	Havre de Grace, MD
B-18	Apple Grove	Hagerstown, MD	Apple Grove	St. James, MD
B-19	Apple Grove	Hagerstown, MD	Apple Grove	Hazleton, PA
B-19	Apple Grove	Hagerstown, MD	Apple Grove	St. James, MD

For the following four lanes, CSXT has proposed two alternatives: B-10, B-15, B-32, and B-34. The alternative listed in the chart below, which is a direct truck route to M&G's customer, is not between the same origin and destination as transportation under the challenged tariff rate, which is from Apple Grove to a rail interchange. Again, under the afore-mentioned precedent, the Board should reject this alternative because it cannot provide effective competition for the movement covered by the challenged rate.

Lane	Challenged tariff transportation		Alternative transportation proposed by CSXT in Reply Evidence	
	Origin	Destination	Origin	Destination
B-10	Apple Grove	Chicago, IL	Apple Grove	Champaign, IL
B-15	Apple Grove	Columbus, OH	Apple Grove	Fremont, OH
B-32	Apple Grove	Chicago, IL	Apple Grove	University Park, IL
B-34	Apple Grove	Chicago, IL	Apple Grove	W. Chicago, IL

(2) CSXT has incorrectly priced some alternative movements.

CSXT claims to have utilized "M&G's current motor carrier contract rates" and "existing M&G contract rates" for rail transportation (Reply at II-37), but evaluation of CSXT Reply Exhibit II-B-3 and the supporting work papers show that this is not always the case. CSXT's deviation from the actual rates paid by M&G is greatest in the area of bulk truck transportation.

M&G Rebuttal Exhibit II-B-27 compares CSXT's rates to the correct rates. The details behind that Exhibit are contained in M&G Reb. Electronic Work Paper "Alternative Rates Restated".

As an example, Lane B-10 involves transportation from Apple Grove to Champaign, IL. CSXT contends that M&G's current truck rate using {{[redacted]}} for four bulk trucks (approximately one rail car) is {{[redacted]}}. CSXT Reply at II-39. In reality, though, the current {{[redacted]}} truck rate is {{[redacted]}}, a difference of 13.7%. In discovery, M&G provided its most recent rate quotation from {{[redacted]}}, which clearly showed the rate was {{[redacted]}}. M&G Reb. Ex. II-B-28. For the 399-mile trip from Apple Grove to Champaign, the rate is, therefore, {{[redacted]}} per truck.[4] With the fuel surcharge of {{[redacted]}}, the total rate per truck is {{[redacted]}}.[5] The {{[redacted]}} per rail car rate is derived by multiplying {{[redacted]}} by four, and adding accessorial costs such as cleaning, vacuuming, and tolls (if applicable).

In contrast to the actual M&G rate, CSXT claims that the current {{[redacted]}} rate from Apple Grove to Champaign, including fuel, is {{[redacted]}}.[6] The source of CSXT's incorrect {{[redacted]}} rate is not clear, nor is the division between the base rate and the fuel surcharge. CSXT witness Heisler clearly cited to the latest {{[redacted]}} rates provided by M&G in discovery.[7] CSXT also included the correct fuel surcharge of {{[redacted]}} in the same work paper. In any event, as shown in Rebuttal Exhibit II-B-27 and explained above, CSXT has used the incorrect {{[redacted]}} rate for Lane B-10. The Board should recognize that the lowest direct truck rate is {{[redacted]}} for four trucks.

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[4] At 399 miles, the rate is {{[redacted]}}.

[5] The fuel surcharge is {{[redacted]}}.

[6] See CSXT Reply work paper, Heisler folder, "Backup for CSXT Reply Ex II_B_3".

[7] See Reply work paper, Heisler folder, "CSX M G 2 Rail Rates Contract Sources 06 22 11" at page "MG2 Contract Source List" (citation to "Email update w/changes dtd 4/26/2011").

CSXT also has relied upon the wrong NS rail rate to show the cost of the entire through movement for Lanes B-8, 18, 19 and 37. {{[redacted]}} CSXT Reply at II-42 (n. 44). However, when M&G asked NS for contract rates from St. James to the three destinations, NS quoted rates that were {{[redacted]}} per car greater than from the Hagerstown origin. See M&G Reb. Ex. II-B-29. Therefore, CSXT's alleged rates for these alternatives, which already are above CSXT's tariff rates, would be still higher.

M&G refers the Board to the Rebuttal Exhibit II-B-27 for a complete list of the inaccuracies in CSXT's calculation of alternative rates. Additionally, M&G has provided the corrected rate for the alternative transportation asserted by CSXT in lane summaries found at Part II-B-3.

(3) CSXT's own evidence shows that the alternative rates are significantly higher than the challenged tariff rates in 21 lanes.

Even disregarding for the moment the errors in CSXT's attempt to use M&G's actual truck and rail rates to develop the cost of alleged alternatives, CSXT's own evidence confirms the lack of effective competition in Lanes A-5 and 14; and Lanes B-5, 7, 8, 9, 10, 16, 18, 19, 21, 22, 25, 26, 30, 32, 33, 34, 36, 37, and 50. For these 21 lanes, the alternatives proposed by CSXT (even at the rates claimed by CSXT) are at least 10% more expensive than the challenged tariff rates. Hence, CSXT's own evidence confirms that CSXT is market dominant over these movements. The following chart shows the rates theorized by CSXT in these 21 lanes:

Lane	Challenged tariff[8]	CSXT proposed alternative[9]	Alternative exceeds challenged tariff by:[10]
A-5	$2856 / $2885	{{ [redacted] }}	{{ [redacted] }}
A-14	$3930 / $3974	{{ [redacted] }}	{{ [redacted] }}
B-5	$7553 / $7670	{{ [redacted] }}	{{ [redacted] }}
B-7	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-8	$5430 / $5496	{{ [redacted] }}	{{ [redacted] }}
B-9	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-10	$5684 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-16	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-18	$5430 / $5496	{{ [redacted] }}	{{ [redacted] }}
B-19	$5430 / $5496	{{ [redacted] }}	{{ [redacted] }}
B-21	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-22	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-25	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-26	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-30	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-32	$5697 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-33	$5703 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-34	$5702 / $5755	{{ [redacted] }}	{{ [redacted] }}
B-36	$5907 / $5969	{{ [redacted] }}	{{ [redacted] }}
B-37	$4762 / $4813	{{ [redacted] }}	{{ [redacted] }}
B-50	$7553 / $7670	{{ [redacted] }}	{{ [redacted] }}

All of the above rates are based upon CSXT's alternative transportation cost calculations, not the corrected calculations in M&G Rebuttal Exhibit II-B-27. Therefore, the amount by which the alternative transportation rates exceed CSXT's rates is sometimes understated. Based on CSXT's own evidence, the Board should find that market dominance exists over these 21 lanes, because the alternative rates are not sufficiently comparable to constrain CSXT's pricing. The

[8] The first rate is from M&G Reb. Ex. II-A-5. The second rate is from CSXT Reply Ex. II-B-3. The slight differences appear to be attributable to fuel surcharge calculations.

[9] See CSXT Reply Evidence Exhibit II-B-2. In addition to the alternative rates listed in this chart, CSXT has proposed a "Direct Truck" alternative for Lanes B-8, 10, 18, 19, 32 and 34 that violates the rule set forth in DMIR because it is not between the same origin and destination as CSXT's rail service. See Part II-B-2.a.(1). Therefore, because those alternatives should be rejected out of hand, M&G has omitted them from this chart. Nonetheless, even though they are included in the above chart, alternatives for Lanes B-8, B-18, B-19, and B-37 also violate the DMIR standard.

[10] The first figure is based upon M&G's calculation of the CSXT tariff rate and the second is based upon CSXT's calculation. See note 158, supra.

best alternative that CSXT could find for each of these lanes confirms the lack of effective competition.

(4) Alternative transportation options with similar rates to rail do not provide "effective" competition if they operate at a large cost disadvantage to rail.

CSXT's position is that, because trucks are a physically feasible option for transporting PET and are, or have been, used for a small portion of PET traffic, market dominance cannot exist if trucking and rail rates are similar. That is simply not the law. CSXT has ignored the critical element of market dominance that any competition must be "effective."

In McCarty Farms v. Burlington Northern, Inc., 3 I.C.C.2d 822, 831-32 (1987) ("McCarty Farms"), the ICC still found market dominance even though "[t]he record indicates that truck and truck/barge service competes to some extent with BN rail service for carriage of wheat and barley from Montana to the PNW." Id. at 831. Indeed, the record showed that BN had reduced its rates to meet this competition. Id. at 830. But, the ICC properly recognized that the issue "is whether McCarty has made its case that the BN lacks *effective* competition, *i.e.*, competition adequate to restrain its rates at or below a maximum reasonable level." Id. at 831 (italics in original). A critical element in that determination was "the vigor of intermodal competition," which the ICC found lacking because, "even with truck and truck/barge competition, BN has been able to capture the vast majority of the total transportation market" and "its rates have significantly exceeded...the BN's costs of providing service." Id. at 831-32.

In FMC Wyoming Corp. v. Union Pac. R.R. Co., 4 STB 699, 717-18 (2000) ("FMC"), the STB concluded that a transload alternative with comparable rates to Union Pacific's rail rates did not provide effective competition, because the transload option operates at a large cost disadvantage to rail. That caused the Board to conclude that UP's ability to match prices set by

the higher-cost transload alternative, while maintaining a dominant market share, could not demonstrate effective competition for the issue traffic.

M&G has made these same showings, along with extensive other evidence, in this proceeding.[11] M&G has demonstrated that supposed alternatives to CSXT's transportation service have much higher costs. M&G also has shown that CSXT increased rates dramatically without losing market share. CSXT wrongly criticizes this evidence and argument as legally irrelevant and/or conceptually flawed, when in fact this is the same type of evidence that has caused the Board to find market dominance in other proceedings, despite the existence of some intermodal alternatives.

(a) CSXT has misrepresented M&G's argument..

In its Opening Evidence, at pages II-B-53 to 55, M&G argued the well-established principle that comparable pricing among modes does not, by itself, constitute effective competition if the alternative has higher costs.[12] See e.g., E.I. du Pont de Nemours and Company v. CSX Transportation, Inc., STB Docket No. 42099, slip op. at 7-8 (served June 20, 2008) ("DuPont (Plastics)"); FMC, 4 STB at 718 (2000); McCarty Farms, 3 I.C.C.2d at 831-32; Arizona Pub. Serv. Co. v. U.S., 742 F. 2d 644, 650-51 (D.C. Cir. 1984) ("APS"). M&G then proceeded to demonstrate that various truck and transload alternatives to CSXT for the issue traffic have much higher costs than CSXT.[13]

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[11] M&G Op. Exs. II-B-3, 4, 5, and 6 and M&G Reb. Ex. II-B-12 demonstrate rail's portion of M&G's traffic over the past five years. M&G Op. Ex. II-B-23, along with Reb. Ex. II-B-32, demonstrate CSXT's cost compared with alternative transportation options.

[12] CSXT's Reply to this argument is difficult to follow because CSXT uses the term "costs" in multiple instances when it appears to refer to "rates," especially at pages II-74-75. In some instances, it is not clear which term CSXT intended.

[13] See M&G Op. Ex. II-B-23. In Reb. Ex. II-B-32, M&G applies that same analysis to the modal alternatives that CSXT contends provide effective competition in 43 of the case lanes. CSXT Reply at II-36-44 and Reply Ex. II-B-3.

In a vain effort to overcome this precedent, CSXT first mischaracterizes M&G's position. According to CSXT, "[u]nder M&G's formulation, it would be impossible for a carrier to prove that it is not market dominant, for in M&G's view evidence that rail rates are comparable to other alternatives only proves that the railroad has priced to the 'outer limit' of its market power."[14] That is not M&G's position. Correctly stated, M&G's position refers to "other *higher cost* alternatives." This is the same formulation that the Board itself used in DuPont (Plastics) and FMC. CSXT's omission of the italicized terms makes all the difference.

Although CSXT unduly narrows the above precedent, M&G's facts nevertheless satisfy even that interpretation. According to CSXT, APS and DuPont (Plastics) stand for the proposition that similar rates do not constitute effective competition "where there is substantial evidence that the alternative is inherently *less efficient* and *less desirable* than rail transportation."[15] M&G has met that standard.[16] M&G has shown that the two principal advantages of truck over rail are speed and the ability to go where rail does not. As a result, trucks are used primarily to serve non-rail customers and for expedited shipments. Outside of those situations, however, rail dominates because it is more efficient and offers substantial cost savings when the rail cars are used for storage. M&G's evidence shows that, when there is a choice between rail and truck for normal routine service, rail has such a clear advantage over truck that there is very little truck presence at all. Clearly truck transportation of PET is less efficient and less desirable than rail transportation.

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[14] CSXT Reply at II-74.

[15] Id. at II-75 (italics added).

[16] See Part II-B-2.e.(2), supra.

(b) CSXT wrongly claims that the relative costs of rail and intermodal alternatives don't matter.

CSXT next proceeds to critique M&G's showing that the intermodal alternatives to CSXT are less efficient because they have much higher costs than CSXT.[17] According to CSXT, M&G's analysis is "both legally irrelevant and transparently flawed."[18] CSXT is wrong.

Although M&G provides a full discussion of the legal relevance of costs to a market dominance inquiry at pages II-53-55 of its Opening Evidence, CSXT charges that M&G provides no citation for this assertion.[19] In FMC at 718, the STB declared "the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition for the traffic at issue." In DuPont (Plastics), slip op. at 7-8, the STB observed that "[a] carrier possessing market power might set its rates so high that it would begin to lose business to a higher-cost alternative (such as a trucking company)." The ICC's finding of market dominance in McCarty Farms, 3 I.C.C.2d at 831, was based in part upon complainant's studies indicating that truck/barge costs exceeded rail costs for comparable movements. Thus, CSXT's claim that there is no precedent for comparing the relative costs of providing transportation service via rail and alternative modes is wrong.

CSXT then makes the incredible statement that:

> The costs that are relevant in a market dominance inquiry aren't the internal costs of CSXT or the other rail and motor carriers who compete with CSXT – the costs that matter are the actual out-of-pocket costs that M&G incurs for transportation services. If the price that M&G has actually secured in the marketplace for a rail-truck transportation alternative is comparable to CSXT's tariff rate, then it is hard to imagine why either M&G or the Board should

[17] CSXT Reply at II-79-82.

[18] Id. at II-79.

[19] Id., quoting M&G Op. Ex. II-B-23 at 4.

> care about the relative margins of those alternate transportation providers.[20]

That simply is not true. It flies directly in the face of each precedent cited above. Moreover, taken to its logical conclusion, if all that matters are the rates (not costs) of the alternatives, then even the "horse and buggy" illustration in APS would provide effective competition. In order for this precedent to have any meaning, it must refer to costs, not rates.

(c) M&G has demonstrated that CSXT's proposed intermodal alternatives have much higher costs.

In M&G Rebuttal Exhibit II-B-32, M&G Witnesses Burris and Nolan demonstrate that the direct truck and transload alternatives proposed by CSXT are in fact much higher cost (not rate) alternatives than CSXT rail transportation, which permits CSXT to earn much higher profits than these alternatives at the same rate levels. That analysis is based upon the same methodology that these M&G witnesses employed in M&G Opening Exhibit II-B-23. In this subpart, M&G presents the results of that analysis when applied to each of CSXT's alternative transportation proposals for 43 of the issue movements and responds to CSXT's critique of M&G's methodology.

Rebuttal Exhibit II-B-32 compares the cost (not rates) of providing CSXT rail service with the cost of providing each of the transportation alternatives that CSXT witness Heisler has proffered for 43 of the issue movements. The results of M&G's analysis are presented in Attachment No. 1 to the Exhibit in accordance with the four categories that Mr. Heisler used to describe each alternative. The cost for every one of those alternatives is at least double, and in some cases more than quadruple, the cost of providing rail service.

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[20] Id. at II-79-80

CSXT contends that M&G's attempt to compare costs (not rates) across modes in its Opening Exhibit II-B-23, which presumably also extends to Rebuttal Exhibit II-B-32, is flawed.[21] M&G witnesses Burris and Nolan respond to each of CSXT's criticisms at pages 4-11 of Rebuttal Exhibit II-B-32. At bottom, CSXT's critique amounts to an allegation that no valid long-run variable cost comparison can be performed between transportation modes. But, CSXT's argument ignores the fact that such analyses have been accepted in prior proceedings. See McCarty Farms at 831. Moreover, if CSXT were correct, it would render all of the precedent discussed in this subpart irrelevant because there would be no way to submit the requisite evidence.

Ultimately, even if Rebuttal Exhibit II-B-32 were not enough to persuade the Board that CSXT is pricing to an "outer limit" set by higher cost truck alternatives, the Board cannot ignore the real-world example of M&G's transportation of PET to {{ [redacted] }} Although CSXT has made this movement the poster child for its claim that rail-to-truck transloading at the destination is an effective competitive constraint, the facts truly make this lane the epitome of a monopolist pricing at its outer limit.

In order to switch this destination to a rail-truck transload that by-passed CSXT, M&G had to originate the PET at its Altamira, Mexico plant rather than Apple Grove, which also was captive to CSXT. Instead of a 975 mile single line direct rail movement from Apple Grove to {{ [redacted] }}, this became a 2560 mile four railroad movement {{ [redacted] }} from Altamira to {{ [redacted] }}, plus a 47 mile truck haul from {{ [redacted] }} The rate for the 975 mile CSXT direct movement exceeded the combined rates for the 2560 mile

[21] CSXT Reply at II-80-82.

four railroad movement plus 47 mile truck movement by {{ [redacted] }} per rail car.[22] This savings only amounted to a {{ [redacted] }} lower transportation cost for M&G. The very idea that comparable pricing with a route that is 2.7 times longer and has four more interchanges would be an effective competitive constraint upon CSXT's rates is farcical. If there ever was an example of CSXT pricing to an "outer limit" constraint, as opposed to an effective competitive constraint, this would be it. This example gives strong credence to the conclusions of Rebuttal Exhibit II-B-32.

(d) CSXT's rate increases for the issue traffic are indicative of its market dominance.

M&G also has demonstrated CSXT's market dominance based on its inability to divert the issue traffic from CSXT to alternative modes despite consecutive years of CSXT rate increases, even during a lengthy and severe economic recession.[23]

CSXT does not dispute the magnitude of its rate increases over these two years. Rather, it meekly counters that its rate increase in one of those years was in a contract to which M&G agreed.[24] But M&G has testified that it agreed to that contract because it had no other choice except to accept even higher tariff rates. A one year agreement bought M&G time to explore its commercial and regulatory options in greater detail.[25]

CSXT also argues that the magnitude of its 2009 rate increases reflect { [redacted] } in the contract that had just expired.[26] Although it is in the best position to do so, CSXT has not presented any evidence from its own records to show { [redacted] } Instead, CSXT refers to an e-mail from an M&G

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[22] {{ [redacted] }}

[23] M&G Op. Ev. at II-B-54.

[24] CSXT Reply at II-77.

[25] M&G Op. Ev. at I-3.

[26] CSXT Reply at II-77.

consultant, which states that, in his opinion {{ [redacted] }}[27]

Even accepting CSXT's assertion as justification for the 2009 contract rate increases, however, does not explain an equivalent round of rate increases the following year when M&G began paying tariff rates.[28] As shown in M&G Op. Ex. II-B-22, CSXT brought M&G's rates back up to the alleged "market" levels in a single increase. The cumulative CSXT rate increases resulting from both the 2009 contract and 2010 tariff rates exceeded { [redacted] } in 53 of the 69 case lanes. Therefore, simply bringing M&G's rates to "market" levels cannot account for such extreme changes.

Nevertheless, CSXT attempts to justify the additional substantial rate increases in 2010 on the basis that tariffs do not have volume commitments like contracts.[29] It simply is not credible, however, to attribute rate increases of { [redacted] } in just one year to the loss of a volume commitment. It is even less credible here because M&G's production facility at Apple Grove, which was designed around rail service, is captive to CSXT. {{ [redacted] }} Consequently, CSXT already was assured of continuing to receive the overwhelming majority of M&G's traffic from Apple Grove despite the absence of a volume commitment.

Finally, CSXT accuses M&G of deliberately not shifting traffic to trucks on the advice of counsel so as not to undermine its market dominance case to the Board.[30] This is just a refrain of

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[27] CSXT Reply at II-20 and Ex. II-B-9.

[28] See M&G Op. Ex. II-B-22.

[29] CSXT Reply at II-78.

[30] Id. at II-78-79.

CSXT's argument that M&G has "chosen" to be captive, which has been fully rebuffed in Part II-B-2.c. Moreover, it ignores the single example that CSXT plasters throughout its Reply Evidence of M&G's 2010 conversion of {{ [redacted] }} from rail to truck delivery.

(5) CSXT improperly disregards M&G customer requirements, PET degradation and contamination, and truck-loading limitations at Apple Grove.

As shown in the chart below, the transportation alternatives proposed by CSXT for the 43 contested lanes fall into one of four groups: (1) direct truck to customer ("Direct Truck"); (2) direct truck to transload facility near the interchange with the connecting rail carrier ("Truck Transload"); (3) a combination of truck to transload with continuing rail service to the interchange with the connecting rail carrier ("Truck/Rail Combo"); or (4) rail transportation from the interchange with the connecting carrier to a transload and truck to the destination ("Rail/Truck Combo"):

Direct Truck (Group 1)	**Truck Transload (Group 2)**	**Truck/Rail Combo (Group 3)**	**Rail/Truck Combo (Group 4)**
A-1, 4, 5, 8, 10, 11, 14, and 17 B-8, 10, 11, 14, 15, 18, 19, 20, 32, 34, 35, 39, and 41	B-8, 15, 18, 19, 24, 37, and 40	B-7, 9, 10, 16, 21, 22, 25, 26, 30, 32, 33, 34, and 36	B-1, 2, 3, 4, 5, 6, 48, 49, and 50

These four groups correspond with the groupings in CSXT Reply Exhibit II-B-3. Some lanes appear twice in the above chart because CSXT has asserted there are two possible alternatives for such lanes. Within each of these groups, CSXT has disregarded or simply ignored key issues such as customer requirements, PET degradation and contamination, and truck-loading limitations at Apple Grove. This subpart summarizes those issues for each group and cites to those portions of M&G's Rebuttal Evidence where each issue is addressed in greater detail.

(a) CSXT's proposal to truck direct to M&G's customers in Group 1 ignores customer requirements and Apple Grove's truck loading constraints.

CSXT has alleged that direct trucking to the M&G customer provides effective competition to CSXT rail service for all of the "Direct Truck" (Group 1) lanes.[31] This allegation fails on numerous fronts. First, as described in Part II-B-2.e., M&G's customers specifically require rail delivery for a multitude of reasons, such as use of rail cars for storage, and direct trucking would contravene these customer requirements. Second, all of the Group 1 lanes, except B-39 and B-41, originate at Apple Grove; therefore, direct trucking implicates the limitations on truck loading at Apple Grove, described in great detail in Part II-B-2.g. It would be prohibitively expensive to reconfigure Apple Grove to enable significantly increased truck loading. Lastly, Lanes B-39 and B-41 involve PET that was originally transported to the origin via CSXT. Therefore, an alternative for Lane B-39 or B-41 still would not enable M&G to avoid CSXT rail service.[32]

(b) CSXT's proposal to double-transload Group 2 imposes unacceptable product integrity risks and relies upon unacceptable transload facilities.

For all of the "Truck Transload" (Group 2) lanes, CSXT has proposed direct trucking to a transload facility on the connecting rail carrier at (or near) the interchange point for the relevant transportation.[33] All of these lanes originate at Apple Grove except B-37 and B-40, which originate at Belpre. These alternatives cannot provide effective competition to CSXT rail service because of the multiple transloads required for each lane.

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[31] The Group 1 Lanes include A-1, 4, 5, 8, 10, 11, 14 and 17; and Lanes B-8, 10, 11, 14, 15, 18, 19, 20, 32, 34, 35, 39 and 41.

[32] Trucking PET from Apple Grove to Belpre is not an option, because it would add another two transloads, meaning that the PET would have been transloaded a total of three times before delivery to the customer. This would be unacceptable from a product quality standpoint.

[33] The Group 2 lanes include B-8, 15, 18, 19, 24, 37 and 40.

As M&G has previously explained, all PET produced at Apple Grove is initially loaded into a rail car. Thus, a truck shipment from Apple Grove or Belpre, which CSXT proposes for all of these lanes, would require one transload at the origin and a second transload back to a rail car at the interchange point for continuing rail service.[34] As explained in Part II-B-2.f, this double transload would cause unacceptable PET degradation, not to mention increase the risk of contamination. For these reasons, CSXT's alternatives could not be used, and do not provide effective competition.

Moreover, neither of the facilities at which CSXT proposes to transload is covered, which means that truck-to rail transloading cannot occur during any precipitation. Unlike rail-to-truck transloading, truck-to-rail transloading cannot occur during precipitation because the top hatch of the rail must be opened, which permits moisture to enter the rail car. That is a significant and unacceptable potential for disruption of M&G's supply chain to its customers.

Additionally, Lanes B-37 and 40 originate PET at Belpre that was originally transported there via CSXT. Therefore, the alternatives for Lanes B-37 and 40 still would not enable M&G to avoid CSXT rail service.[35]

For Lanes B-8, 18, 19, and 37, which are a subset of Group 2, CSXT has proposed transloading trucks into rail cars at the Utility Supply Company in St. James, Maryland, which CSXT incorrectly refers to as Hagerstown. This location is unsuitable for numerous reasons.

First, {{ [redacted]

[34] This interchange point is where CSXT rail service ends, and Norfolk Southern service begins. For Lanes B-8, 18, 19, and 37, the interchange is at St. James, MD. For Lanes B-15, 24, and 40, the interchange is at Columbus, OH.

[35] Trucking PET from Apple Grove to Belpre is not an option, because it would add another two transloads, meaning that the PET would have been transloaded a total of four times before delivery to the customer. This would obviously be unacceptable from a product quality standpoint.

[redacted] }}

This fact alone renders CSXT's proposal for these lanes infeasible.

Second, the rail destination for all four issue movements is Hagerstown, not St. James. These are not the same location, as much as CSXT tries to obscure this fact. {{ [redacted] }}[36]

Third, as evidenced by its name, USC caters to electric utilities. According to its website, USC "provid[es] direct sales and distribution services of treated wood utility poles" and "was incorporated in the state of Maryland in 1992 for the purpose of providing warehousing and distribution services of pressure-treated wood utility poles." M&G Reb. Ex. II-B-31. There is no mention of any experience providing bulk transloading services, let alone having any knowledge or experience in the plastics business.

USC does not have many of the components that are necessary for a feasible PET transload facility. The site is not paved. It does not have a truck scale or a rail scale, which are essential in order to generate a weight ticket to invoice M&G's customers. There is no covered area for transloading from bulk trucks to railcars, which means that any such transloading could only occur when there is no precipitation. The USC facility is utterly inadequate for the tasks required to handle M&G's traffic.

[36] See M&G Reb. Ex. II-B-29.

(c) CSXT's alternatives for Group 3 impose unacceptable product integrity risks and ignore Apple Grove's transload capacity constraints.

For the thirteen "Truck/Rail Combo" (Group 3) lanes, CSXT has proposed that M&G truck to a bulk terminal, transload the trucks into rail cars, and ship the rail cars via an alternate carrier to the current interchange between CSXT and the connecting rail carrier.[37] All of these lanes, except B-36, originate at Apple Grove and terminate at an interchange with a connecting railroad in Chicago. For these twelve lanes, the alternative proposed by CSXT would require loading a truck at Apple Grove, transloading the trucks into rail cars at Lima, OH, and transporting the rail cars on the Chicago, Fort Wayne & Eastern Railroad ("CFER") to the interchange with M&G's connecting rail carrier at Chicago. These twelve alternatives are unacceptable for two main reasons: the limited ability of Apple Grove to load bulk trucks (see Part II-B-2.g.(1)) and the PET degradation and contamination issues that accompany a double-transload like this.[38] See Part II-B-2.f.

For Lane B-36, CSXT proposes the exact same arrangement, except that the origin is Belpre instead of Apple Grove. This alternative is unacceptable for the same reasons as the other twelve lanes. In addition, the loaded rail cars of PET that originate at Belpre must be delivered there by CSXT.[39] Therefore, an alternative for Lane B-36 still would not enable M&G to avoid CSXT rail service.

Finally, all thirteen Group 3 lanes require a truck-to-rail transload. As M&G explains in Part II-B-2.f., this type of transload is rare in the polymers industry and, despite the various

[37] Group 3 includes Lanes B-7, 9, 10, 16, 21, 22, 25, 26, 30, 32, 33, 34, and 36.

[38] As frequently stated elsewhere, loading a bulk truck at Apple Grove is actually a transload from a rail car, which renders any further transloading unacceptable.

[39] Trucking PET from Apple Grove to Belpre is not an option, because it would add another two transloads, meaning that the PET would have been transloaded a total of four times before delivery to the customer. This would obviously be unacceptable from a product quality standpoint.

transload examples cited by CSXT in its Reply Evidence, CSXT has not pointed to a single example of any truck-to-rail transloading that occur routinely in the industry. In fact, CSXT itself only advertises that it offers "rail-to-truck transload services"; CSXT does not claim to offer truck-to-rail.[40] TRANSFLO states on its website that (1) "shippers often rely on transloading – transferring products from rail to truck", and (2) it is "the largest rail-to-truck transloading network in North America."[41] Moreover, the proposed transload facility is not covered, which means that truck-to-rail transloading cannot occur during any precipitation.[42] That is a significant and unacceptable potential for frequent disruption of M&G's supply chain to its customers.

(d) Customer requirements preclude CSXT's Group 4 rail-to-truck transload alternatives.

For all of the "Rail/Truck Combo" (Group 4) lanes, CSXT has proposed that its rail service directly to the destination can be replaced by rail service from another railroad to a bulk terminal, followed by truck delivery to the destination.[43] For Lanes B-1 and B-48, that destination is Apple Grove. For Lane B-2, the destination is Belpre. For all other lanes, the destination is a customer facility.

Customers order rail cars for many reasons, such as the ability to store their PET in the rail car until ready to unload. Reliance on truck delivery to the customers in Lanes B-3, 4, 5, 6, 49, and 50 would be contrary to these customer requirements and, therefore, the CSXT-proposed

[40] {{[redacted]}}

[41] M&G Reb. Ex. II-B-14.

[42] Unlike rail-to-truck transloading, truck-to-rail transloading cannot occur during precipitation because the top hatch of the rail must be opened, which permits moisture to enter the rail car.

[43] Group 4 includes Lanes B-1, 2, 3, 4, 5, 6, 48, 49 and 50

alternatives do not provide effective competition. See Part II-B-2.e. (describing customer requirements).

For Lanes B-1, 2 and 48, neither Apple Grove nor Belpre has storage silos. Any PET delivered to either location would have to be transloaded into a rail car. The PET transported in Lane B-1, from Altamira to Apple Grove, is used for either recycling or packaging. When used for packaging, the PET is for sale to customers; hence, it cannot be trucked to Apple Grove (as CSXT proposes) because trucking to Apple Grove would entail two transloads (once at the transload location in Columbus, and again at Apple Grove into rail cars). This double transload proposed by CSXT is prohibited for the reasons described in Part II-B-2.f.

The PET transported in lane B-2, from Altamira to Belpre, is subsequently sold to customers via truck or rail delivery from Belpre. Therefore, this PET cannot be delivered to Belpre in trucks (as CSXT proposes), because trucking to Belpre would entail two transloads (once at the transload location in Columbus, and again at Belpre into rail cars for storage). Furthermore, additional transloading would be required if the PET is delivered to a customer from Belpre via truck, as CSXT has proposed for several case lanes that originate at Belpre.[44] The multiple transloading proposed by CSXT is unacceptable for the reasons described in Part II-B-2.f.

[44] For example, CSXT has proposed trucking alternatives from Belpre for Lanes A-11 and 14; and Lanes B-36, 37, 39, 40, and 41.

b. M&G Witness Granatelli confirms the Opening Evidence of M&G as to the prevalence of rail transportation across the polymer industry.

In this Part II-B-2.b., M&G submits testimony sponsored by Robert Granatelli to rebut CSXT's descriptions of the polymer industry and to confirm that the testimony of M&G Opening Evidence witnesses Andre Meyer and Melba Aguilar are representative of the polymer industry in general, and are not contrived for the purpose of this litigation. This testimony also is in rebuttal to testimony sponsored by CSXT witnesses Gordon R. Heisler, Ron Akard, and John Scheeter. This section provides a general overview of Mr. Granatelli's testimony, which also appears throughout this Rebuttal Evidence.

Mr. Granatelli has 32 years of experience with all modes of domestic and international transportation. For almost 20 years, he directed the transportation needs of one of the world's largest polymer producers, LyondellBasell Industries and its predecessor Basell ("LBI"), before retiring in 2008. During this time, he was responsible for the operational management and economics of all transportation modes, which entailed the management of over 5000 hopper cars and 20,000 rail shipments of polymer annually and the establishment and operation of intermodal transload facilities for polymer shipments.

(1) Trucks account for such a small portion of polymer shipments because the industry's supply chain is designed around rail transportation and the use of rail cars for storage.

CSXT's Reply Evidence is rife with both direct statements and inferences that M&G's captivity is of its own making. Although M&G has presented extensive evidence of its customers' rail service requirements, their product integrity concerns, and their increased handling costs for trucks, CSXT portrays those as overblown statements designed to create the appearance of captivity. Mr. Granatelli, however, confirms that these are not issues manufactured by M&G or even unique to M&G, but rather are common issues within the

polymer industry that demonstrate the market dominance of rail over the vast majority of polymer shipments.

According to Mr. Granatelli, bulk trucks play a minor role in the polymer supply chain. M&G's data showing just {{ [redacted] }} of its annual PET volumes have been delivered by truck over the past five years is completely in-line with Mr. Granatelli's experience at LBI and his observations of the polymer industry as a whole.[45]

Indeed, the entire polymer production process and distribution chain is designed around rail cars. A polymer plant may produce many different grades of product; these grades are not interchangeable. These grades are often refined further to meet the specifications of individual customers. Each grade is produced in a continuous production process called "blocks" or "campaigns." Because only a few grades are typically produced at any one time, each campaign must produce sufficient inventory to meet demand until the next campaign for that grade occurs. This requires an enormous amount of storage capacity. Rather than construct acres of massive storage silos (which are very expensive), the industry uses privately-owned rail cars for storage.

The polymer industry, in conjunction with railroads, has developed an optimal supply chain around rail cars that economically supports hundreds of grades (and even specifications within grades) that the industry produces. Both railroads and polymer producers have invested in massive rail car storage yards that hold tens of thousands of loaded hopper cars. Rail is the most efficient way to both store and transport polymers.

The purchasers of polymer resins also have designed their networks around rail transportation. They too can rely upon the rail car for storage without constructing fixed silos at their plants. Rail cars also minimize the handling of resin and provide a surge vessel from which

[45] The figure {{ [redacted] }} includes customers that do not have rail access. When considering only customers that have a choice between truck and rail, the percentage drops to just {{ [redacted] }}. See M&G Op. Ev. at II-B-20.

production lines can be fed. In rail car deliveries, the actual polymer is handled only by the polymer supplier and the customer, which provides a greater assurance of product quality from the cradle to the end-user.

Despite the best supply chain plans by both the polymer producer and purchaser, upsets in production at their respective facilities are to be expected in the normal course of business. Disruptions to the supply chain can be caused by weather, transit delays, supplier production problems, and supplier inventory shortages to name but a few. The parameters of production at both the producer and purchaser plants are fine-tuned to very close tolerances. When this continuous process falls outside of those close tolerances, delays in production result, often at substantial cost, and the process has to be brought back into line, which can take days and sometimes weeks depending upon the scope of the disruption.

In order to avoid or mitigate the effects of such supply chain disruptions, polymer purchasers routinely retain hopper car inventory at or near their plants. A single hopper car contains enough polymer to support most medium to high output extrusion or molding lines for about 24 hours of production. In Mr. Granatelli's experience, customers desire to keep several weeks of inventory in their control to minimize the risk of a supply chain disruption. Customers who buy large quantities at a time in order to hedge against polymer price fluctuations also require rail cars to store those volumes. It is not unusual for a customer to retain a loaded rail car for thirty days or more.

A bulk truck supply chain does not permit the customer to retain this much inventory. Moreover, it increases the risk of supply disruptions because truck deliveries must be continuous and carefully timed with the customer's production schedules.[46] A rail car, by contrast, can sit

[46] Unlike rail cars, bulk trucks must be unloaded when they arrive at the customer sites; they cannot be used for storage like rail cars.

on a siding until needed, unloaded at the customer's convenience, and holds four times the volume of a bulk truck. According to Mr. Granatelli, all it takes is a single shut down caused by a missed truck delivery, for whatever reason, to send a former direct rail customer scurrying back to a direct rail supply chain.

Bulk trucks also add costs for both the polymer producer and purchaser. Mr. Granatelli has reviewed the additional activities associated with trucks that M&G described at pages II-B-43 to 46 of its Opening Evidence. The activities for rail and truck shipments that M&G outlines in Table 1 are a mirror image of his experience at LBI. Moreover, he also confirms the complications, previously described by M&G (Op. Ev. at II-B-45), that arise due to the far more frequent modifications and cancellations that occur with truck orders.

(2) Product integrity concerns require that all transloading be kept to a minimum.

Although CSXT attempts to minimize M&G's product integrity concerns, Mr. Granatelli confirms that those concerns are very real, very important, and strongly influence modal transportation decisions.

The single greatest tool for protecting product integrity is a clean hopper car. These cars are lined with an epoxy resin to create a hard, smooth surface that permits them to be water washed between loads to prevent contamination from previous loads of a different polymer type or grade or from the metal and metal oxides from which the car is constructed. Notably, hopper cars used for grain shipments do not contain this lining, which is indicative of the fact that more measures are taken to protect the integrity of polymers than to protect our food supply.

The second significant method to protect polymer product integrity is to handle the product as few times as possible between production and consumption. The clean hopper car once again is ideal because it serves as a mobile storage vessel that is sealed immediately upon

loading the polymer at the point of production and is not opened again until the purchaser is ready to consume the polymer.

Mr. Granatelli states that transloading is in direct conflict with these precautions. Every transload exposes the polymer to heat, high velocity, and contaminants, such as dirt, foreign matter, and hose material, during the transfer process. For example, heat can change the properties of polymer; velocity creates the friction that causes the dusts, fines and streamers that clog customer's equipment; and just a single piece of foreign matter can cause very expensive downtime and damage to a customer's processing equipment.

Nevertheless, Mr. Granatelli notes that a certain amount of transloading is unavoidable. Because some customers do not have access to rail, the only way to serve them is to transload polymer from rail to truck. Also, sometimes the faster transit time associated with trucks is necessary to prevent a customer from running out of polymer. To address these situations, the industry has developed "best practices" to mitigate the transfer risks. But Mr. Granatelli notes that "best practices" do not eliminate the problems with transloading; they merely bring them within acceptable tolerances. Dusts, fines and streamers still are created during the transload process, but to a lesser degree. Because the quantity accumulates with subsequent handling, the industry makes every possible effort to limit transloading to just once per shipment. In two decades of responsibility for the transportation of polymers by all modes of transportation, Mr. Granatelli cannot recall ever transloading a single shipment more than once.

Mr. Granatelli also notes that, when transloading of polymers does occur, it almost always is from rail to truck. In his experience, transloading from trucks back into rail cars rarely ever occurs, and when it does, it usually is an act of desperation to prevent the customer from

running out of polymer. In those situations, the risks associated with a second transload are typically out-weighed by the cost of a certain shut-down.

Furthermore, Mr. Granatelli identifies several practical problems with truck-to-rail transloading. First, clean empty rail cars must be pre-positioned and waiting at a bulk terminal to receive the trucks. Not only is there a transportation charge associated with that, but the polymer producer must stage the empty rail cars before it even receives a customer order so that a rail car is waiting for the trucks when they arrive. This is an inefficient practice that requires more rail cars and incurs storage charges from the terminal.

Second, the trail of product information that must follow every load of resin (*e.g.* certificate of analysis, billing, inventory) becomes complex. In a truck-to-rail transload scenario, the customer would place an order for a rail car of polymer. All of the necessary documentation is prepared for that rail car. When the rail car contents are transloaded into four bulk trucks at the production facility, the documentation has to be reissued for each truck, and then re-issued again when the trucks are transferred back into a rail car at an intermediate bulk terminal. Moreover, although a practical rule of thumb is four trucks per rail car, the actual figure is somewhere between 4 and 4.5 trucks. Thus, either a portion of the contents must be left behind in the first rail car, in which case the customer does not truly receive a full rail car, or a light-loaded fifth truck must be employed to haul the remaining polymer between the two rail cars. This process is unsustainable on a routine basis.

Mr. Granatelli recalls that a Fina polymer plant (now TOTAL Petrochemicals USA) in Bayport, Texas, attempted to use a truck-to-rail transload over 20 years ago in order to truck around the Southern Pacific to reach Burlington Northern, after SP had proposed significant rate increases. That experiment ran into all of the above issues and was abandoned after just two

weeks. If truck-to-rail transloads were practical, TOTAL and other polymer producers at Bayport would not have needed to pursue the more costly San Jacinto build-out project to BNSF at Bayport from 2000 to 2004.[47] Mr. Granatelli was heavily involved in that process on behalf of LBI, which owned one of the Bayport plants. The fact that these polymer producers spent the time, effort and money on that project serves to highlight the impracticality of truck-to-rail transloading. If such transloading were truly the practical and lower cost alternative that CSXT contends, it would not have made any sense for those polymer producers to spend millions of dollars over several years attempting to construct a new rail line.

(3) The testimony of CSXT Witness Heisler is not credible.

CSXT has predicated much of its evidence upon the testimony of Gordon R. Heisler, who also submitted a Verified Statement in support of CSXT's "Motion for Expedited Determination of Jurisdiction Over Challenged Rates," filed January 27, 2011. Although CSXT has touted Mr. Heisler's experience in the polymer industry with Sunoco, that experience is not as extensive as CSXT would have the Board believe. Sunoco was not in the polymer business for most of Mr. Heisler's tenure. Sunoco bought into the polymer industry in November 2000 with the purchase of Aristech Chemical Corporation followed by additional acquisitions over the next few years.[48] Mr. Heisler retired just over four years later, in June 2005.[49] Thus, Mr. Heisler's experience in the polymer industry was very short-lived.

Moreover, Mr. Heisler appears to be taking very different positions now, as a consultant, than he did as an employee of Sunoco. In a September 2004 interview, he noted that, between

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[47] See, e.g., STB Docket No. 34079, San Jacinto Rail Limited Construction Exemption and The Burlington Northern and Santa Fe Railway Company Operation Exemption – Build-out to the Bayport Loop near Houston, Harris County, TX.

[48] See M&G Reb. Ex. II-B-1.

[49] See M&G Reb. Ex. II-B-2.

Sunoco's four polypropylene plants, the company shipped "in excess of 12,000 carloads of plastics a year" and that "[v]irtually all of our polymer product is shipped by rail in hopper cars."[50] There is no indication of the robust truck competition that Mr. Heisler now touts is available to M&G. Indeed, Sunoco's dependency upon rail seems very similar to M&G's, and according to Mr. Granatelli, that of LyondellBasell.

Mr. Heisler also has a history of advocating for rail regulatory reform at Sunoco because of railroad monopoly power. M&G Rebuttal Exhibit II-B-4 is a Sunoco document, distributed by Mr. Heisler to Sunoco customers, that lobbies for rail reform legislation because "[t]he chemical industry is dependent on the railroads" and "[t]he railroads exercise monopoly power over the majority of our industry."

Mr. Granatelli, who was acquainted with Mr. Heisler through various industry organizations, recalls several conversations in which Mr. Heisler noted that "the bulk truck option" as an alternate supply chain was not economically or operationally feasible. In one specific instance, {{ [redacted] }} Apparently, trucking the short distance to CSXT was not an option for Sunoco, which of course presents the question why Mr. Heisler believes it is any more of an option for M&G.

[50] See M&G Reb. Ex. II-B-3.

c. M&G has not "chosen" to be captive.

At the heart of CSXT's Reply is the unbelievable proposition that M&G has "chosen" to be captive. CSXT Reply at I-2-3; II-36. The notion that M&G is "intentionally refusing to pursue viable modal options for transporting the issue traffic," is absurd on its face. Id. at I-3. Moreover, it is contrary to the facts.

(1) M&G went to extraordinary lengths to avoid filing this rate case.

CSXT would have this Board believe that M&G chose to gamble over $20 million on an uncertain outcome in this case instead of pursuing competitive alternatives with the certainty of lower transportation rates that CSXT contends are available to M&G. CSXT contends that M&G could obtain similar or lower rates from modal alternatives in 43 of the 69 case lanes.[51] Moreover, CSXT contends that this is a conservative analysis based upon "the lanes most susceptible to cost-competitive truck and rail-truck transportation," and upon M&G's current contract rates instead of lower rates that M&G allegedly could obtain with volume commitments.[52]

The Board has recognized that complainants in SAC cases typically incur approximately $5 million in litigation costs.[53] That cost estimate, which was based upon unit train coal cases between just a few origins and a single destination and where market dominance is seldom a contested issue, is understated for cases such as this one, where there are 69 origin-destination pairs and market dominance is hotly contested. Moreover, as M&G testified in the recent hearings in Ex Parte No. 705, Competition in the Railroad Industry, the greatest cost of a rate case is the opportunity cost imposed by having to pay inflated tariff rates for the 2-3 year

[51] See CSXT Reply at II-36-45 and Ex. II-B-3.

[52] Id. at I-4.

[53] Simplified Standards for Rail Rate Cases, STB Ex Parte No. 646 (Sub-No. 1), at 30-31 (served Sept. 5, 2007).

duration of a SAC case.[54] This opportunity cost measures only the difference between the tariff rate and CSXT's best contract offer that M&G rejected as unreasonable, not M&G's expectation of a reasonable rate. Therefore, M&G has projected that its total costs associated with this rate case will approach $20 million.[55]

For M&G to voluntarily incur these costs in lieu of pursuing the competitive alternatives that CSXT asserts are available to M&G would be irrational.[56] CSXT's only attempt to explain M&G's motivation is to assert that {{ [redacted] }}[57] However, in that very same paragraph, CSXT undermines its own claim when it states that "transportation costs are only a tiny fraction of [M&G's] total cost of sales."[58] Therefore, according to CSXT's own logic, any advantage that M&G may achieve over its competitors by obtaining reasonable rail rates would be negligible at best.

M&G filed this rate case only as a last resort. It explored the feasibility of alternative options and determined that they were not economically or practically viable. It deferred the filing of this rate case for nearly six months after CSXT placed M&G on tariff rates in order to continue contract negotiations. M&G's actions, far from showing a complainant that has chosen to be captive, reflect an intense desire to avoid filing a rate case by all means possible.

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[54] Comments of M&G Polymers USA, LLC, at 9-10 (filed April 12, 2011).

[55] Id.

[56] The fact is that M&G has not shied away from using alternative modes when presented with the opportunity to do so. As CSXT itself has noted, M&G has pursued a transload alternative at {{ [redacted] }} It is important to note, however, that M&G was able to persuade {{ [redacted] }} to accept truck deliveries not on the basis of lower rates, but because of CSXT's chronic service problems that continuously threatened to shut down the facility and resulted in significant demurrage costs for the customer. See Part II-B-2.e.(1)(f), infra. In other words, the rail service was so poor that rail was no longer a viable competitive option. Even so, it took M&G three years to persuade {{ [redacted] }} to accept trucks. {{ [redacted] }}

[57] CSXT Reply at I-12.

[58] Id.

(2) The Alternative Logistics Plan was M&G's last attempt to find some leverage in competitive transportation options before deciding to pursue regulatory relief.

CSXT's principal attempt to prove that M&G has deliberately chosen not to use competitive alternatives is the "Alternative Logistics Plan" ("ALP") {{ [redacted] }}[59] CSXT wrongly claims that M&G chose not to pursue this plan because it would adversely impact M&G's ability to pursue regulatory options. CSXT has this backwards. M&G chose to pursue its regulatory options because the ALP was not viable.

{{ [redacted] }} Neither option was viable for the very same reasons in M&G's Opening Evidence that show CSXT's market dominance.

First, most M&G customers would not be willing to accept truck deliveries. {{ [redacted]

[59] See CSXT Reply Exs. II-B-7 and 8. Although in slightly different formats, both documents present the same information. Because Ex. II-B-8 is more comprehensive, the remainder of this discussion will refer to that document as the ALP.

[redacted] }}[60]

Second, the infrastructure costs to reconfigure Apple Grove for truck shipments under either proposal would be significant. Although CSXT disparages M&G's evidence of those costs, CSXT Reply Exhibit II-B-12 (M&G-HC-013461), which is a contemporary M&G document to the ALP, shows that M&G considered such costs to be real and significant.

Third, M&G's product integrity concerns ultimately rendered the transload option untenable because that option required at least two transloads for each shipment from Apple Grove: the first transload at the plant from rail cars into trucks, and the second transload at the bulk terminal from trucks back into rail cars. Because all trucks at Apple Grove are transloaded from rail cars, a second transload back into rail cars at a bulk terminal rendered that option untenable. In order to avoid multiple transloading of a single shipment, M&G would have to expend approximately {{ [redacted] }} to reconfigure its plant for direct loading of trucks.[61]

Fourth, there was no evidence that M&G could obtain the rate reductions that the ALP assumed. {{ [redacted] }}[62] In response to CSXT's Reply Evidence, M&G has asked its primary truck carrier, Bulkmatic Transport, whether it would offer discounted rates for a minimum volume commitment. {{ [redacted]

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[60] See CSXT Reply Ex. II-B-10 (M&G-HC-012865) (ellipses in original).

[61] See M&G Op. Ev. at II-B-34-37.

[62] See CSXT Reply Ex. II-B-10 (M&G-HC-012865).

[63] [redacted]

[redacted] }} M&G Witness Granatelli also notes that, because truck transportation is a high variable cost operation, with fuel and labor comprising the largest factors, higher volumes (with or without a minimum commitment) are not going to result in much lower rates. These facts confirm that M&G could not have obtained the rate reductions assumed in the ALP. Without a proven ability to obtain the assumed rate levels, the ALP was little more than an academic exercise. The Board has previously disregarded an alleged competitive option when the second railroad did not provide rate quotations; in particular, the Board stated:

> With no assurance of rate reductions sufficient to reduce its overall transportation cost, TMPA abandoned further consideration of the project. Under these circumstances, we cannot conclude that the build-out option is financially feasible or provides sufficient competitive pressure to effectively discipline BNSF's rate.

Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Railway Company, 6 STB 573, 584 (2003).

{{ [redacted]

64 [redacted]
65

[redacted] }}[66] This of course assumes that none of the preceding issues applied that would have foreclosed the ALP options.

CSXT claims that the ALP must have been viable based upon e-mails from M&G's Global Supply Chain Officer, Mario Barbieri, to the CEO, Marco Ghisolfi, less than 24 hours after being presented with the ALP.[67] {{ [redacted] }} That is what M&G did, and that is the significance of the ALP.

CSXT's insistence that the ALP must have been viable if it was presented to M&G's CEO also is misplaced. As CEO, Mr. Ghisolfi wanted to be absolutely sure that the company had explored all commercial options before committing upwards of $20 million towards regulatory relief.

[66] This figure is from the last line of the M&G Aggregate Savings column on page 18. {{ [redacted] }}

[67] CSXT Reply at II-23-24 and Ex. II-B-6.

Finally, the absence of extensive documents concerning M&G's rejection of the ALP does not by any measure prove that the ALP was in fact viable, despite CSXT's attempts to infer otherwise. M&G is a family-owned and operated company; it is not publicly held. M&G's officers are members of the family and are answerable only to other family members. They are not required to document matters for public shareholders or for government agencies such as the Securities and Exchange Commission. Decision-making is a much more stream-lined process than for large publicly-held corporations like CSXT. For example, just as M&G did not need to "paper" its decision to reject the ALP, there are no similar studies or analyses underlying M&G's recent decision to construct a new, state-of-the-art PET production facility in Corpus Christi, Texas, which is a far greater commitment of company resources than the ALP ever would have been.[68] M&G simply does not operate that way.

[68] See Reb. Ex. II-B-6.

d. CSXT misrepresents the extent to which direct truck and transload alternatives constitute effective competition.

CSXT attempts to show that trucks constitute effective competition to rail for the transportation of PET based upon M&G documents and from the experience of CSXT and its TRANSFLO intermodal subsidiary. Both sets of evidence are distorted and incomplete. Moreover, CSXT inappropriately attempts to extrapolate from the fact that trucks are used in very specific situations to argue that they can be used effectively in all situations.

(1) CSXT overstates the role of trucks and transloading in the transportation of PET.

When discussing PET truck and transload volumes, CSXT loosely tosses around absolute numbers as if they represented significant amounts when in fact those numbers represent very small portions of overall PET shipments. Truck shipments, in fact, account for only a small portion of PET shipments because rail has inherently significant advantages over trucks in most transportation scenarios. Thus, when CSXT contends that trucks are effective competition because M&G ships so many trucks annually, it is ignoring the glaring fact that those shipments are minor compared to the total amount of PET that is shipped by rail, and except in very limited circumstances, trucks primarily play a back-up role to rail.

For example, CSXT touts the fact that M&G used trucks, either directly or in a transload combination, for at least {{ [redacted] }}[69] shipments of PET over the past five years, of which {{ [redacted] }} were over the case lanes, as if that constituted an enormous number of trucks.[70] To place these figures in perspective, that is less than {{ [redacted] }} of all M&G PET delivered by rail and bulk truck in the United States and Canada during that time period. Using CSXT's

[69] This number is slightly overstated. The actual number of bulk trucks was {{ [redacted] }}. CSXT appears to have included imported PET that was in containers that were delivered by flat trucks. This is not comparable to the specialized trucks used for bulk transport of domestic PET shipments.

[70] CSXT Reply at II-14.

calculation, the average number of truck shipments across all of the case lanes was just {{ [redacted] }} trucks per year, or an average of just {{ [redacted] }} trucks annually in each of the 69 case lanes. This is hardly a staggering number.

Similarly, CSXT declares that CSX TRANSFLO facilities transload over { [redacted] } tons of PET annually, as if that were an enormous volume.[71] In perspective, that is the equivalent of just 650 rail cars annually. M&G alone, among all North American producers, shipped from {{ [redacted] }} rail cars of PET in each of the last five years. If anything the TRANSFLO volumes illustrate just how little PET is actually transloaded.

M&G's data shows that truck shipments accounted for just {{ [redacted] }} of M&G's total rail and truck volumes in the U.S. and Canada in each of the past five years.[72] Depending upon the year, anywhere from one-half to two-thirds of those truck shipments went to destinations that did not have access to rail service, and thus had to receive trucks.[73] For example, although CSXT exclaims that, in 2010 alone, M&G shipped {{ [redacted] }} of its total volume of PET by truck,[74] only {{ [redacted] }} went to destinations with access to rail service, which means that the remaining {{[redacted]}} had to move by truck or not at all.[75] Because a large portion of that {{ [redacted] }} constituted emergency or expedited shipments to rail customers, rail effectively was not an option for those shipments either. This leaves just a very small portion of customers with rail access who receive regular truck shipments.

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[71] Id. at II-30.

[72] M&G Op. Ex. II-B-3.

[73] M&G Op. Ex. II-B-4 shows that only {{ [redacted] }} of total M&G shipments of PET were delivered by truck to destinations that had rail service in each of the past five years.

[74] CSXT Reply at II-14.

[75] Compare M&G Op. Ex. II-B-3 (which is the source for {{[redacted]}}) with Op. Ex. II-B-4 (which is the source for {{[redacted]}}).

CSXT also misrepresents the amount of transloading that regularly occurs for imported PET shipments. At pages II-30-31 of its Reply, CSXT claims that the 800 million pounds of PET that was imported into the United States in 2010 was transloaded at the origin into bulk bags and containers and then again at the U.S. port into trucks or rail cars. At the origins, no transloading need occur at all, because many producers, such as M&G's Brazil plant, have the ability to load PET directly into bulk bags or containers. At the U.S. port, the PET may be handled in three different ways. First, the bulk bags or containers may be loaded directly onto trucks or rail cars for delivery to the customer, in which case the PET is not transloaded at all. Second, PET may be transloaded from a bulk bag, by hoisting the bag above the truck or rail car and dropping the contents in by gravity, which is the same process by which PET is loaded directly into rail cars at a production facility. Gravity drops do not cause the dust, fines and streamers that threaten product integrity when pneumatic vacuums are used.[76] Third, PET may be transloaded from a bulk container by pneumatic vacuum into a truck or rail car. This is the only transfer that is akin to transloading between trucks and rail cars. Therefore, it is a gross misrepresentation for CSXT to state that all imported PET is transloaded from containers and bulk bags and to equate such transloading with the pneumatic vacuum transloading that raises product integrity concerns.

Succinctly stated, CSXT does its best to make a mountain out of a mole hill. The role played by trucks in the transportation of PET is typically in an area where rail cannot compete and vice versa. The potential areas of overlap are small. In the grand scheme of things, trucks are a niche player in the transportation of PET.

[76] See Part II-B-2.f.

(2) Direct truck shipments are predominantly over short distances.

CSXT attempts to extrapolate from the fact that M&G directly trucks to some customers from Apple Grove that M&G can truck to most customers.[77] Truck shipments, however, occur predominantly over shorter distances.

For example, over the past five years {{ [redacted] }} of M&G's truck shipments were below 200 miles; {{ [redacted] }} were between 200 and 500 miles; and just {{ [redacted] }} exceeded 500 miles.[78] When this data is broken out by rail-served and non-rail destinations, {{[redacted]}} of truck shipments to non-rail destinations were less than 200 miles, {{[redacted]}} were between 200 and 500 miles, and just {{[redacted]}} exceeded 500 miles.[79] For rail served destinations, {{[redacted]}} of truck shipments were below 200 miles, {{[redacted]}} were between 200 and 500 miles, and {{[redacted]}} exceeded 500 miles.[80] This data demonstrates that trucks typically do not deliver PET over long distances. Moreover, the fact that a significantly greater percentage of truck shipments are over the shortest distance range when truck is the only option is consistent with M&G's claim that trucks are not a primary mode of transportation except at short distances. In addition, the fact that rail-served customers have a higher percentage of longer distance truck movements than truck-only customers is consistent with M&G's claim that truck shipments to rail-served customers primarily are in support, not in lieu, of rail service, such as when exigent circumstances exist. These relationships reflect the fact that rail transportation dominates longer hauls supported by occasional trucks, and trucks dominate shorter hauls. Cf. Amstar Corporation v. The Alabama Great Southern Railroad, et al., ICC Docket No. 38239S, slip op. at 8 (served

[77] As noted in the M&G Op. Ev. at II-B-6, because M&G cannot load trucks directly from its production silos at Apple Grove, all PET is first loaded into rail cars. Thus, all direct truck shipments from Apple Grove begin as a rail-to-truck transload.

[78] M&G Reb. Ex. II-B-7.

[79] Id.

[80] Id.

Dec. 2, 1987) ("Amstar-AGS") ("motor carriers generally are used for greater distances only in extraordinary circumstances, i.e., to serve customers of small volumes, those not located on rail sidings, and those with emergency needs").

At shorter distances, PET customers may be more willing to accept truck deliveries because storage is less of a concern. As noted in Part II-B-2.e.(1)(c) and by M&G Witness Granatelli, PET purchasers rely heavily upon rail cars for storage of their PET inventory. At closer distances, however, a customer can rely upon its PET supplier for inventory, because there is often only a short time between placing an order and receiving a truck delivery. Moreover, it is much easier to coordinate the time of truck delivery with the customer's need for PET in its production process so that trucks arrive just-in-time and only as needed. This dance is much more difficult to coordinate at longer distances, with greater risk of a plant shut down due to inventory depletion.

The only PET customers who may be able to accept trucks routinely at longer distances are those that purchase in small volumes, because they are more likely to have sufficient on-site storage. Also, customers who order in less than rail car quantities, or who are testing PET from a new supplier, account for many truck shipments.

Finally, as discussed in Part II-B-2.g., M&G has a very limited capacity for loading trucks at Apple Grove that cannot be easily or cost-effectively expanded.[81] This capacity is currently used to serve M&G's customers without rail access and to send expedited truck shipments when necessary to rail-served customers. If M&G were to switch existing rail-served customers to trucks, it would have to displace current truck traffic.

[81] See also, M&G Op. Ev. at II-B-33-50

CSXT is well aware of these facts and exploits its market power based on that knowledge. For example, {{ [redacted] }}

In addition, CSXT is well aware that truck competition from Apple Grove is insignificant. In a June 2009 e-mail exchange, which is just six months before M&G began paying tariff rates, {{ [redacted] }}

See M&G Reb. Ex. II-B-9 (CSX-M&G-HC-030917).

(3) Transloading is primarily used to serve truck-only customers at longer distances.

CSXT's case for truck competition depends upon transloading at Apple Grove for some movements, at an intermediate point for some movements, and near customer destinations for other movements. The suggested transloading, however, goes well beyond the pale of typical PET transloading, which is predominantly used to serve truck-only customers at longer distances.

Rail-to-Truck at Origin. The transloading from rail to truck that occurs at Apple Grove is necessary just to engage in direct truck shipments, because all trucks must be loaded from rail cars. This is the equivalent of directly trucking from Apple Grove, which is discussed in the preceding section on direct truck movements.

Truck-to-Rail at Intermediate Point. However, for some case lanes, CSXT also advocates further transloading, by trucking from Apple Grove to a bulk terminal and transferring PET back into rail cars. This type of transload simply is not done as a primary form of transportation anywhere in the polymer industry. The double-handling alone precludes this option because of the product integrity concerns discussed in Part II-B-2.f. In addition, unlike transfers from rail-to-truck, which take place via a short hose connection from the bottom of the rail car to the truck, truck-to-rail transfers require longer hoses that connect to the top of the rail car, more hose curvature, and longer transfer times. This consumes more time and generates more of the friction and heat that contribute to the product integrity issues. It is notable that CSXT's Reply Evidence does not include a single example of a PET supplier who engages in this form of double transloading as a means to obtain a competitive alternative to rail service. Nor does CSXT present any examples that such transloading regularly occurs at its TRANSFLO bulk terminals. Transloading of PET, when it does occur, is almost always from rail to truck. Truck-to-rail transloading is an option for unusual, one-off situations when the alternative of a plant shut-down is the lesser of two evils.

Rail-to-Truck Near Destination. Finally, CSXT proposes transloading from rail to truck at bulk terminals near the destination for truck delivery to the customer. Although this is the most common form of PET transloading, CSXT overstates the role of rail-to-truck transloading at the destination. The primary objective of such transloading is to extend a PET supplier's sales to customers at greater distances who do not have access to rail. This option is seldom used to truck to a rail-served destination.

CSXT has misrepresented M&G's use of bulk terminals to transload PET near a destination to constitute the pursuit of "truck transportation in lieu of rail transportation."[82] The two examples that CSXT provides are at { [redacted] } and {{ [redacted] }}

The M&G transload at { [redacted] } is not an alternative in lieu of rail transportation. M&G uses a TRANSFLO facility at { [redacted] } primarily to serve customers who do not have rail access, not as an alternative to rail service. In fact, because both Apple Grove and this TRANSFLO facility are CSXT-served, the TRANSFLO facility does not provide M&G with an alternative to CSXT rail service.

The {{ [redacted] }} transload was not driven by price, but by consistently poor CSXT service that required M&G to take extraordinary measures to prevent its customer from shutting down due to lack of inventory. The details of this situation are set forth in Part II-B-2.e.(1)(f), infra. Suffice it to say here that the rate differential between the 975 mile CSXT-direct option from Apple Grove and the 2600 mile transload alternative from Altamira, Mexico, involving four railroads, a bulk terminal, and a motor carrier, was less than {{ [redacted] }}. The customer did not agree to accept trucks because of price, but because it was faced with the choice of accepting trucks or accepting constant shutdown threats. The very idea that comparable pricing between a direct route and a route that is 2.7 times longer and has four more interchanges would be an effective competitive constraint upon CSXT's rates is ludicrous.

(4) CSXT's own experience with trucks illustrates the limited role of trucks.

CSXT points to a few examples where trucks or transloading are used and proclaims that such options must be effective for all PET traffic. There is no attempt by CSXT to explore the facts behind those options; indeed, in some instances, CSXT appears to deliberately obscure

[82] CSXT Reply at II-28, 32.

them. For the vast majority of examples, CSXT relies solely upon evidence of a customer threat to use trucks, without any indication as to whether that threat was credible, how CSXT reacted to the threat, or whether the traffic ultimately shifted to trucks. As discussed in the preceding sections, such competition occurs primarily within a narrow subset of conditions. The examples in CSXT's Reply Evidence are consistent with this fact.

For example, at page II-31, CSXT cites to the {{ [redacted] }} as an example of a PET producer who ships up to {{ [redacted] }} trucks per year to a customer in {{ [redacted] }}. That customer, however, is only 67 miles away, which illustrates M&G's point that trucks dominate on short distance movements.[83] At that short a distance, a PET purchaser does not need rail cars for storage because it can usually get same day service from its supplier. CSXT also does not state whether the customer who receives these trucks has access to rail service, and therefore has chosen trucks over rail.

On Page II-32, CSXT refers to a plastic resin transload for {{ [redacted] }} This clearly was a non-rail customer who did not have the option to receive direct rail shipments. The fact that CSXT was able to win this transload business from another transload via NS reveals absolutely nothing about the competitiveness of truck against rail; just one transload option versus another.

At pages II-32-33, CSXT presents transloading examples for products that have no similarity to PET. Styrene is a liquid, as opposed to PET, which is a pellet. Sulfur and phosphoric acid do not have the same product integrity concerns as PET. Furthermore, the transload example presented by CSXT involves a loaded back-haul, which significantly improves the efficiency of trucking, unlike polymer service which has close to a 100% empty

[83] {{ [redacted] }}

return. Soda ash transfers occur in an "open" system, unlike PET, which requires a "closed" system to protect product integrity. Simply put, these examples are irrelevant. See Southwest R.R. Car Parts Co. v. Missouri Pac. R.R. Co., STB Docket No. 40073, slip op. at 3 (served Feb. 20, 1998) ("We base our analysis on the specific market(s) involved, and not broad-brush generalities about competitive conditions in unspecified markets.").

The only potentially apposite example of trucking to a rail served customer that CSXT presents on page II-32 is the case of {{ [redacted] }}. Although this is the only potentially pertinent example in a long list of irrelevant examples, it is the one about which CSXT provides the least information. For example, we don't know the volumes, when the shift occurred, and whether the customer returned to rail. Therefore, it is impossible to draw any conclusions from this.

On page II-33, CSXT misrepresents the situation involving a PET shipper who CSXT claims {{ [redacted] }} Furthermore, in another e-

mail exchange, {{ [redacted] }} M&G Reb. Ex. II-B-11 (CSX-M&G-HC-030973).

At pages II-33-34, CSXT identifies {{ [redacted] }}as a customer who extensively uses trucks to ship plastic resin. {{ [redacted] }} This is very similar to M&G's proportion of truck shipments. {{ [redacted] }}

Finally, CSXT presents three exhibits as examples that { [redacted] } CSXT Reply at II-34. While these examples appear to contain customer threats to use truck options, they do not say anything about the credibility of those threats or CSXT's response. For example, {{ [redacted] }} CSXT Reply Exhibit II-B-25 is a letter from a CSXT customer, but CSXT has not presented any evidence as to how it responded to that letter or whether it lost the business. Similarly, {{ [redacted] }}

CSXT's supposed real-world examples simply do not support its claims of extensive truck competition. Most are simply inapposite or misrepresented by CSXT. Although others appear to demonstrate customer threats, they do not demonstrate whether those threats were credible, whether CSXT reduced rates in response to those threats, or whether the customers actually shifted their traffic to trucks. The Board recognizes that "[s]tatements made...in rate negotiations can only be regarded as posturing in aid of [the shipper's] negotiation position." FMC, 4 STB at 718. Other examples contain too little information to determine whether the situation is relevant to the issue movements. Finally, many examples merely reflect the narrow circumstances to which M&G has indicated that truck transportation is limited.

e. Customer rail requirements are strong evidence of CSXT's market dominance.

In its Opening Evidence, at pages II-B-20 to 26, M&G presented extensive evidence that CSXT is market dominant because its customers overwhelmingly require M&G to deliver their PET by rail. CSXT has challenged both the legal proposition that customer requirements are evidence of market dominance and the sufficiency of M&G's evidence of such requirements.[84] The Board should reject both contentions.

(1) M&G has presented evidence sufficient to establish its customers' rail delivery requirements.

M&G presented multiple forms of evidence to establish its customers' rail service requirements. This evidence included historical traffic data showing that M&G's customers overwhelmingly have chosen rail over truck shipments, customer contracts that require rail delivery, the pervasive industry practice that relies upon rail cars for storage, a need for rail when transporting high volumes of PET, and the inability to use trucks for consignment purchases.

(a) Historic traffic data is highly relevant evidence of market dominance.

As evidence of its customers' overwhelming preference for rail delivery, M&G submitted five years of historical data on truck and rail deliveries to its customers. M&G submitted this data both in the aggregate for all M&G customers in the United States and Canada and separately for each case lane and case destination.[85] Among all M&G customers that had the option of receiving their PET by truck or by rail, this evidence showed that, in any single year, as few as {{ ■ }} and no more than {{ ■ }} of all PET delivered by M&G was by truck.[86] Moreover,

[84] See, CSXT Reply at I-6-9 and II-45-53.

[85] See M&G Op. Exs. II-B-3, 4, 5 and 6.

[86] M&G Op. Ex. II-B-4.

for each case destination, M&G showed that truck shipments were less than or equal to 10% of total volume received from M&G, except for {{ [redacted] }}, which only received 15%.[87]

Although CSXT accepts the company-wide percentages presented by M&G, CSXT accuses M&G of "manipulating" this data in individual case lanes "to make it appear that it ships by truck less than it actually does."[88] M&G concedes that there was an error in the pivot table that was the basis for its Op. Ex. II-B-6, and that this error caused M&G to understate the truck shipments to some case destinations. However, this error also caused M&G to understate the rail shipments to some case destinations. Although it was M&G's intent to reflect all bulk truck and rail deliveries to each case destination, the spreadsheet pivot table that was created from M&G Opening MD Electronic Work Paper "Rail and Truck Volumes" only captured bulk trucks and rail cars between the case origins and destinations. M&G has corrected that error in Reb. Ex. II-B-12.

This correction does not significantly alter the findings from M&G's Opening Evidence. Rebuttal Exhibit II-B-12 shows that, over the 5-year period from 2006-2010, all but three case destinations received 10% or less of their total PET volume from M&G via trucks. The three exceptions were {{ [redacted] }} Ironically, the one lane that had exceeded 10% trucks in the erroneous pivot table, {{ [redacted] }}, has dropped to just 10% due to understated rail car shipments. Moreover, the corrected pivot table shows that trucks as a proportion of total PET

[87] M&G Op. Ex. II-B-6.

[88] CSXT Reply at II-16-17.

shipments declined or stayed the same for 34 case destinations. This was a mistake by M&G, not a manipulation.[89]

Although CSXT does not challenge M&G's company-wide shipment data, CSXT virtually ignores the small percentage of PET actually transported by trucks. Its primary response is to allege that:

> a complainant must do more to prove market dominance than simply allege that it or its customers have historically shipped most traffic by rail or prefer rail deliveries over truck deliveries. If that were enough, complainants could readily manufacture "market dominance" for competitive traffic simply by asserting a subjective preference for rail.

CSXT Reply at I-9. This statement would require the Board to ignore its long-established "market dominance guidelines," which state that whether truck competition is effective "may be deduced from...(1) the amount of the product in question that is transported by motor carrier where rail alternatives are available...." Product & Geographic Competition, 2 I.C.C.2d 1, 21 (1985). M&G has presented precisely such evidence on both an aggregated basis for all of its PET shipments and for each case destination. Having submitted probative evidence of precisely the kind that the Board's rules encourage complainants to submit, neither CSXT nor the Board may refute that evidence with the bald statement that it is not absolutely conclusive on the issue. APS, 742 F. 2d at 650 (applying this rationale to overturn ICC's rejection of similar market share evidence submitted by complainant).

Moreover, M&G clearly has not "manufactured" market dominance in this proceeding. In order for M&G to have "manufactured" market dominance, the Board would have to ignore the fact that M&G's customers, not M&G, determine the mode of delivery, and conclude that

[89] The corrections have not changed the fact that only {{[redacted]}} of total M&G shipments of PET were delivered by truck to destinations that had rail service in each of the past five years. M&G Op. Ex. II-B-4.

M&G plotted over five years ago to modify its shipping patterns just so it could allege market dominance in this rate case. The first point is an indisputable fact, and the second is simply not credible.

CSXT also attempts to undermine the significance of M&G's historical traffic data by arguing that, instead of reflecting a customer preference for rail, the data reflects the customer's preference for lower rates. This contention is based on the fact that {{ [redacted] }}[90] The truth, however, is that {{ [redacted] }} Moreover, {{ [redacted] }} reflect a long-standing truism that both M&G and its customers have always understood: because truck transportation costs more, the customer should pay more. CSXT's rail rates to M&G, however, have risen so fast and so much that CSXT has literally turned this truism on its head for many of the issue movements.[91] Regardless, M&G's other evidence as to why customers prefer rail (*e.g.* explicit contract requirements, storage needs) belie CSXT's perversion of this historical data.

Finally, despite the clear significance of M&G's historical traffic data established by the "market dominance guidelines," CSXT contends that such data cannot be indicative of market dominance because of subsequent agency decisions that found a lack of market dominance despite insignificant truck volumes.[92] Every single case cited by CSXT, however, is distinguishable on its facts.

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[90] CSXT Reply at II-47, 49-50.

[91] See M&G Op. Ex. II-B-7 to see the magnitude of CSXT's rate increases in since just 2008.

[92] Id. at I-2, notes 3 and 4; II-10-11.

CSXT cites Amstar-ATSF, ICC Docket No. 37478 (served Dec. 8, 1987), for the proposition that effective competition can exist even where up to 98.5% of the issue traffic was transported by rail. CSXT has misread the ICC's decision. There were dozens of lanes at issue in Amstar-ATSF, and effective competition was found for only two of the lanes. See slip op. at 1, 4-5.[93] The 98.5% figure applied to all lanes at issue in the case, not just the two lanes where market dominance was lacking. Id. at 6 ("During the complaint period, 98.5 percent of the corn syrup that Amstar shipped to the destinations at issue moved by rail."). Moreover, the ICC explicitly noted that the large rail market share did in fact suggest a lack of intermodal competition, but concluded that it was not totally persuasive, because it was "based solely on Amstar's shipments, which might simply reflect Amstar's own preferences." Id. Here, M&G has demonstrated that the choice of rail or truck is made by its customers, not by M&G. Therefore, M&G's traffic data is not the product of M&G's preferences, but of its many customers. Furthermore, M&G also has presented this evidence for all of its customers in the U.S. and Canada, not just the case lane customers. Lastly, Mr. Granatelli confirms that rail cars are the preferred mode of delivery across the polymer industry, which has designed its supply chain around rail transportation and invested billions of dollars in infrastructure to develop that supply chain.

CSXT cites Aluminum Association, Inc. v. Akron, Canton & Youngstown Railroad Company, 367 ICC 475, 483-84 (1983), because the ICC found trucks to be effective competition even though two-thirds of the recent traffic moved via rail. CSXT has again misread the opinion. The ICC was addressing nationwide transportation of aluminum, not just the issue lanes, when it stated that private trucking accounted for one-third of traffic in 1977. Id. at 483.

[93] The ICC was unable to determine the exact number of lanes at issue due to the confusing and contradictory evidence submitted in the case. However, there were approximately 35-37 customer destinations served from the Dimmitt, Texas origin, and there were an additional 5 or 6 Amstar facility destinations served. See slip op. at 4-5.

Moreover, the ICC also found that "regulated motor carriers" accounted for an additional 20 percent in 1977. Thus, the ICC actually found that "the railroad's share [of the national primary aluminum market] decreased to just over two-fifths of the total traffic by 1977." Id. CSXT also omits the ICC's rationale for finding effective truck competition despite rail's large market share. Most notably, the ICC was persuaded by evidence that, from 1972-1977, the railroad share of traffic had decreased by over 20%. Id. The ICC concluded that this increase in market share by motor carriers reflected a "national trend away from rail to motor carriers for aluminum shipments." Id. There is no such evidence in this proceeding of a "national trend" away from rail to motor carriage for PET shipments.

For similar reasons, CSXT's reliance upon Consolidated Papers, Inc. v. Chicago and North Western Transportation Company, 7 I.C.C.2d 330, 337-38 (1991), is misplaced. The ICC found trucking to be effective competition for movements to the complainants' paper mills from Michigan and Minnesota for two main reasons, neither of which exist in the M&G case. First, the rail share was only 42% from Michigan and had decreased from 100% to 73% in just two years from Minnesota. Id. Second, one of the defendant railroads had lowered its rail rates in the area due to truck competition. Id. There is no evidence of a decline in the rail share of M&G's traffic or that CSXT has lowered its rates on any case lane in response to truck competition.

Moreover, in that very same decision, the ICC held that a 12% truck market share was "not large enough to be significant" for a case lane because there was no evidence that such market share affected the railroad's pricing. Id. at 341. M&G's evidence shows that truck has a 10% or less market share in all but three case lanes, and even those three are below 15%. As in

Consolidated Papers, CSXT has not demonstrated that this market share has affected CSXT's pricing. Indeed, CSXT's rates have risen much faster than truck rates over the past few years.

CSXT cites Platnick Brothers, Inc. v. Norfolk & Western Railway Company, 367 ICC 782, 786 (1983), for the proposition that trucks can be effective competition even if not used widely in the past over the issue route. The ICC reached this conclusion, however, on the basis of evidence that the consignees could and did accept substantial volumes of truck shipments from origins not covered by the complaint. Id. at 786-787. No such evidence has been presented by CSXT in this proceeding. Moreover, M&G has fully explained why the small proportion of trucks that it has shipped over some of the case lanes do not constitute effective competition.

In summary, the overwhelming predominance of rail over truck shipments in the case lanes and across all M&G traffic, generally, constitutes compelling evidence from which CSXT's market dominance "may be deduced." Product & Geographic Competition at 21. Precedent in which the agency did not find market dominance despite large shares of rail transportation were based upon facts that are not present in this proceeding.

(b) Customer contracts establish CSXT's market dominance.

M&G also presented evidence of its customers' rail requirements beyond just historical traffic data. For example, M&G presented contracts with customers that explicitly require rail deliveries. CSXT's response to those contracts is both scatter-shot and meager.[94]

First, CSXT questions whether certain contracts are legitimate because they are unsigned.[95] But, as CSXT has acknowledged, M&G testified that the parties are operating pursuant to those agreements. CSXT simply contends that M&G is lying. A contract need not be signed to be enforceable. Restatement, 2nd, Contracts, §§ 18 and 19; American Jurisprudence

[94] M&G Op. Evid. at II-B-21.

[95] CSXT Reply at II-50.

2d, Contracts, §§ 168 and 171; Lee & Lee International, Inc. v. Lee, 261 F.Supp.2d 665, 672 (N.D. Tex. 2003); Register.com, Inc. v. Verio, Inc., 356 F.3d 393, 427 (2nd Cir. 2004) (internal citation omitted). Indeed, it is quite common even in the rail industry for parties to function for some time pursuant to an unsigned agreement while they negotiate additional details. Furthermore, some railroads intentionally provide service pursuant to "signature-less" contracts. See STB Ex Parte No. 676, Rail Transportation Contracts Under 49 U.S.C. 10709, slip op. at 4 (served Jan. 6, 2009).

Second, CSXT contends that M&G exaggerates the rail requirements in these contracts because some of them also contain provisions for truck deliveries.[96] But, M&G testified, at page II-B-22 of its Opening Evidence, that contract references to bulk trucks are attributed to two factors. They reflect the occasional truck shipments that are required on an expedited basis to prevent the customer's plant from shutting down. In addition, because some contract customers operate plants at multiple locations, not all of which are rail-served, the truck references apply to the non-rail-served locations. CSXT has made no attempt to refute that evidence.

Third, CSXT suggests that, because some of M&G's contract customers have received truck deliveries in some of the case lanes, these contracts truly do not require rail.[97] Although CSXT refers to these truck volumes as "significant," M&G's Reb. Exhibit II-B-12 shows that all but three case destinations received just 0-10% of their PET purchases from M&G by truck. This is far from constituting a "significant" volume and is entirely consistent with the occasional truck shipments that are needed to keep plants from shutting down due to a lack of PET. The fact that customers with contract requirements for rail delivery receive occasional truck

[96] CSXT Reply at II-50.

[97] CSXT Reply at II-50.

shipments does not nullify the rail requirement or absolve M&G from complying with that requirement as the primary mode of transportation.

Finally, CSXT blithely contends that M&G can simply renegotiate the terms of its contracts with customers as they expire to remove the rail requirements.[98] Curiously, CSXT makes this assertion in the same paragraph where it notes that "a sales contract reflects a mutual agreement – not a one-way 'requirement.'" Therefore, it is not clear how CSXT expects M&G to unilaterally do this. M&G operates in a highly competitive market for PET where, if a customer cannot secure its preferred delivery mode from M&G, there is another supplier waiting in the wings to replace M&G. Perhaps CSXT does not understand this principle because it has never faced this degree of competition. It is as simple a matter that, if M&G's customer wants rail delivery, M&G will provide rail delivery or risk losing the business.

In E.I. du Pont de Nemours and Company v. CSX Transp., Inc., STB Docket No. 42101, slip op. at 6 (served June 30, 2008) ("DuPont/Nitrobenzene"), the Board unequivocally held that a contractual requirement to deliver product "by rail makes a switch to trucks highly infeasible from an economic standpoint due to the risk of losing [the] customer or incurring breach-of-contract liability."[99] That infeasibility was highly relevant to the Board's finding of market dominance. M&G has established that many of its customers too have rail requirements in their contracts with M&G. Thus, M&G has presented highly compelling evidence of CSXT's market dominance that CSXT has failed to rebut.

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[98] Id. at II-51.

[99] While CSXT attempts to distinguish M&G's situation from this decision by alleging that M&G could renegotiate its contracts, CSXT Reply at II-51, there was no evidence that DuPont could not have done the same or that this would have made any difference in the Board's decision.

(c) M&G has presented ample evidence that its customers need rail cars for storage.

M&G has identified its customers' need to use rail cars for storage as a major reason why those customers overwhelmingly choose rail over truck.[100] CSXT contends that M&G has not carried its burden because it has not identified any customers who lack silo space for storage or shown that this factor prevents trucks from being an effective constraint on CSXT's rates.[101] While CSXT acknowledges that some customers "might want to use railcars for storage," it downplays the pervasiveness of this factor.

This agency has long recognized that storage is a major reason why shippers lease or own large private rail fleets. In Shippers Committee, OT-5 v. The Ann Arbor R.R. Co., 5 I.C.C.2d 856, 857 (1989), the ICC noted over 20 years ago that almost half of covered hopper cars—in which PET is shipped—were privately owned and that this number was increasing. The ICC recognized that this control provides shippers several advantages:

> They can direct that their cars can be used for temporary or long-term storage. The shippers can use these cars to store their product near their customers, and consignees can hold cars at destination when they cannot unload them promptly without paying the demurrage that would accrue on rail-owned cars.

Id. at 858-59. These are the very same advantages that M&G and its customers obtain from M&G's private covered hoppers. In fact, all PET hopper cars are privately owned precisely so that they can be used for storage at both the production origin and the customer destination without incurring railroad demurrage charges. The fact that M&G's customers need rail cars for storage is well-documented by this fact that the ICC noted over two decades ago. It is not the speculative and isolated possibility that CSXT suggests.

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[100] M&G Op. Ev. at II-B-23-25

[101] CSXT Reply at II-51-52.

M&G witness Granatelli, who recently retired from a major plastics producer, LyondellBasell, after 20 years handling logistics matters, validates the credibility of M&G's opening evidence testimony that the desire, indeed the necessity, of using rail cars for storage is pervasive throughout the polymer industry. It is not limited to a few isolated customers. Indeed, the rarity is the customer who can receive most of its polymer purchases by truck. Those customers either have invested the capital required to construct large numbers of storage silos in which to unload truck shipments upon delivery, or they are located within a short distance of their suppliers, which enables them to avoid the necessity of keeping a large inventory on-site and instead allows them to rely upon "just-in-time" truck deliveries on short notice.

Although CSXT faults M&G for not providing evidence of the on-site storage capacity at each destination, PET purchasers are highly unlikely to share their on-site storage capacity with their suppliers, because that is commercially sensitive information. Customers often purchase different grades of polymer from different suppliers, they must have separate storage silos for each product type and/or grade and will not want to share how much storage capacity they have committed to any single product, grade, or supplier. Moreover, silo capacity is a fluid concept. Not all silos at a facility are necessarily linked to all production areas, meaning that a silo could be empty but not useable for newly-delivered product. A customer may have multiple silos, but none (or only a small portion) that are dedicated to PET from M&G. Indeed, even if there is silo storage dedicated to M&G's PET, that dedicated storage fluctuates based on products being manufactured at the facility, the other polymers being stored, and the production rate. Finally, the mere existence of silos does not mean that such silos are accessible to trucks.[102] In short, it

[102] CSXT has suggested that M&G can simply transload from trucks back into rail cars at customer facilities to solve the need for storage. CSXT Reply at II-52 (n. 54) ("bulk trucks could blow PET into an M&G railcar on the customer's property"). However, the rail storage areas at customer facilities are not necessarily accessible to trucks

would be unreasonable to expect M&G to be able to submit specific evidence regarding the amount of silo storage at each customer location.

M&G, however, has presented other data to demonstrate that its customers do in fact depend upon M&G rail cars to store their PET upon delivery. Specifically, M&G presented evidence of the average number of days that the customers at each case destination held loaded rail cars of M&G's PET in each year from 2006 through 2010.[103] The fact that these customers did not unload the PET for days and weeks at a time indicates that they were using the rail cars for storage. Otherwise, the rail cars would have been unloaded into storage silos or directly into the production process upon delivery, but they were not. When CSXT claims that M&G has not presented any evidence that its customers use rail cars for storage, that simply is not true. Furthermore, CSXT's failure to even acknowledge this evidence of customer hold days means that CSXT has not refuted it.

(d) CSXT misrepresents "consignment" as merely a "billing arrangement."

In its Opening Evidence, at II-B-25 to 26, M&G demonstrated that customers who purchase on consignment must receive delivery in rail cars. CSXT demonstrates a fundamental misunderstanding of this evidence when it describes consignment as "simply a billing arrangement."[104]

Although consignment means that M&G does not invoice its customer until the customer "taps" (*i.e.* unloads) the rail car, it also means that title to the PET and risk of loss remain with M&G until that occurs. This is unlike a typical transaction where both title and risk transfer to

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for such transloading to occur. Moreover, as discussed in Part II-B-2.d.(3) and II-B-2.f., such truck-to-rail transloading is seldom done for product integrity reasons.

[103] M&G Op. Ev. at II-B-23-24 and Ex. II-B-7.

[104] CSXT Reply at II-52.

the customer upon shipment of the rail car. CSXT overlooks these critical elements of consignment. Trucks are not amenable to consignment sales because they must be unloaded immediately upon delivery. When that occurs, the PET is intermingled with other PET and there is no way to determine when title and risk pass from M&G to the customer; nor is there any way for M&G to reclaim unused PET.

CSXT's assertion that M&G could ship bulk trucks on consignment to pre-positioned empty rail cars is unrealistic. As discussed in much greater detail in Part II-B-2.f.(2), this would require a double-transload of the PET—once at Apple Grove from a rail car into multiple trucks, and again at the destination from the trucks back into a rail car—which simply is not acceptable for product integrity reasons.

Finally, CSXT points to M&G's ability to convert {{ [redacted] }} from rail to trucks as an example of a consignment customer. Whenever a customer purchases trucks, even if that customer is eligible for consignment, the truck purchase is not a consignment purchase. Moreover, {{ [redacted] }} Therefore, consignment did not pose an obstacle to the conversion of this customer to trucks due to specific facts.

(e) CSXT overstates what constitutes a "high volume" lane for PET shipments.

In its Opening Evidence, at page II-B-25, M&G also asserted that high volume customers have an especially strong need for rail car deliveries, and identified 100 rail cars annually as the threshold for determining whether a case destination should be considered high volume. CSXT questions this threshold and suggests that a high volume destination would be one that receives

closer to 200 trucks per day.[105] CSXT has misconstrued M&G's reasons for contending that high volume customers have a strong need for rail service.

First, M&G's argument is closely linked to a customer's need to use rail cars for storage. The greater the volumes received by a customer annually, the more likely the customer is to need rail cars for storage, because the cost to construct large capacity silo storage is so great.[106]

Second, trucks entail more labor for M&G's customers than rail cars. CSXT is simply wrong when it contends otherwise.[107] M&G witness Granatelli confirms M&G's opening evidence testimony that processing an equivalent volume of PET in trucks requires four times the work of a rail car. That includes four times as many hook ups to unload trucks, orders to place, shipments to track, and invoices to pay. Each truck also must be weighed twice, when empty and loaded, in contrast to a rail car, which is weighed during the loading process.

CSXT's contrary argument is primarily based on the allegation that drivers, not customers, unload the trucks. But this ignores the fact that the customer must accompany the driver at all times to direct him to the correct silo, monitor the transfer, and simply supervise the driver while on the customer's premises. No company would permit a driver to roam its manufacturing facility unsupervised. Also, because trucks must be unloaded immediately upon arrival, the customer must keep a receiver on stand-by for the truck's arrival. Rail cars do not entail any of these requirements. Furthermore, although CSXT intimates that unloading a rail car requires four hours of the customer's time, this ignores the fact that rail car unloading is a more

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[105] CSXT Reply at II-53. CSXT cites West Texas Utility Co. v. Burlington N. R.R. Co., 1 STB 638, 652 (1996), as the basis for 200 trucks per day. While that was the number of trucks required to handle the rail coal volumes in that case, nothing in that decision suggests that this was a minimum, or even a ballpark, number. Also, the issues affecting the trucking of coal and plastics are sufficiently different to evaluate truck transportation of each commodity on its own facts. Contamination risks, handling concerns, and storage issues are just a few of the areas where transportation of PET and transportation of coal are wildly divergent.

[106] See M&G Op. Ev. at II-B-34-37.

[107] CSXT Reply at II-52.

highly automated process that requires very little supervision and can be performed at the customer's convenience.

CSXT's examples of a few M&G customers who do accept high truck volumes do not refute the above facts. Although CSXT presents its Reply Exs. II-B-30 and 31 as separate examples, they are in fact the same customer facility, {{ [redacted] }}[108] Unlike the case destinations, the {{ [redacted] }} plant was designed and built to receive trucks as the primary mode of delivery. Moreover, plants that rely heavily on truck deliveries over rail tend to purchase from nearby suppliers, so that they are never far from their inventory. {{ [redacted] }}

CSXT's second example is the {{ [redacted] }} The unique circumstances surrounding this customer destination are addressed in the next section.

(f) CSXT overstates the significance of M&G's recent conversion of a single customer from rail to truck.

According to CSXT, M&G's argument that its customers require rail service "collapses" in the face of evidence that {{ [redacted] }}[109] The customer to which CSXT refers is {{ [redacted] }}[110] However, M&G's ability to convert one case customer to

[108] Id. at 53.

[109] Id. at I-7; II-28-30.

[110] {{ [redacted] }} See M&G Op. Ex. II-B-1.

trucks is indicative only of that customer's particular circumstances. If anything, those circumstances reinforce M&G's argument that CSXT is pricing to an "outer limit" constraint, as opposed to an effective competitive constraint, and in this case overshot even that mark.[111]

The {{ [redacted] }} facility switched to trucks out of necessity, not because of CSXT's rates, but because CSXT's rail service was so consistently poor that the customer faced a constant risk of shut-downs and was incurring substantial demurrage costs. The issues included late deliveries, bunching of cars, and very steep demurrage charges. These problems were causing M&G to ship emergency truck shipments from as far away as Apple Grove in order to avoid customer shut downs, even when the rail cars were just a single switch away from the customer in CSXT's nearby yard. On occasion, M&G had to pay for special switches {{ [redacted] }} due to delays in transit or CSXT service curtailments. Rebuttal Exhibit II-B-13 documents these service issues from 2008 until the decision to use trucks in 2010. It is no surprise that, when faced with a choice between the hassle of truck deliveries and the constant shortage of PET due to rail service problems, the customer chose the former.

{{ [redacted] }}

[111] See M&G Op. Ev. at II-B-53-55, and Part II-B-2.a.(4).

If anything, this example illustrates just how absurdly high CSXT's rates have become. The rate for the 975 mile CSXT direct movement exceeded the combined rates for the 2560 mile four railroad movement plus 47 mile truck movement by {{ [redacted] }} per rail car.[112] This savings only amounted to a {{ [redacted] }} lower transportation cost for M&G. The very idea that comparable pricing with a route that is 2.7 times longer and has four more interchanges would be an effective competitive constraint upon CSXT's rates is ludicrous. If there ever was an example of CSXT pricing to an "outer limit" constraint, as opposed to an effective competitive constraint, this would be it.

(2) CSXT incorrectly assumes that transportation price is the primary driver of the choice of mode.

CSXT accuses M&G of ignoring the fact that every mode of transportation has both strengths and weaknesses.[113] But in truth, the demand of M&G's customers for rail service is based precisely upon the relative strengths and weaknesses of rail and truck. Except in the very limited circumstances discussed in Part II-B-2.d, trucks are seldom competitive with rail transportation. Each serves different areas of the PET transportation market with very little overlap.

CSXT incorrectly implies that rail and truck are essentially equal alternatives, where rail is "an attractive option for some of M&G's customers under some conditions," while truck is more attractive under other conditions.[114] In truth, however, rail is the most attractive option for most of M&G's customers under most conditions. Rail has far greater advantages over trucks that cause PET purchasers overwhelmingly to opt for rail transportation whenever it is an option.

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[112] {{ [redacted] }}.

[113] CSXT Reply at I-8.

[114] Id.

As CSXT itself acknowledges, the principal advantage of truck over rail is speed.[115] The faster transit times for trucks is advantageous primarily in just two situations. A customer that is low on PET inventory will need a fast delivery of additional PET to avoid a plant shut-down, in which case rail is not even considered. Also, customers who are within a short distance of their PET supplier may rely upon trucks, instead of rail, as their primary mode of delivery because the faster transit times coupled with the short distances minimizes their need to maintain substantial PET inventory on-site. Trucks also have the advantage of being able to go places where rail cannot; therefore, trucks are always used to serve those destinations. Except perhaps on some short distance movements of PET, truck and rail operate in different spheres, a fact that is reflected in the low percentage of truck shipments relative to rail shipments of PET.

The principal advantage of rail transportation is that rail cars can be used by the customer to store its inventory of PET at the destination. The customer does not have to construct and maintain costly storage silos at its facility for each grade of PET that it purchases. This is a distinct advantage over truck because trucks cannot be used for storage. In addition, rail cars can hold four times the volume of a truck, which minimizes handling and administrative costs. Also, rail car deliveries do not have to be scheduled, like truck deliveries, and the unloading of rail cars is more automated. Finally, the product integrity is much more secure in a rail car, because the quality of the PET is certified by the supplier upon loading the rail car, which is sealed and remains sealed until the customer is ready to unload. In contrast, all truck shipments are transloaded, during which there is the risk of both contamination from outside particles and product degradation from the transload process itself. Since even one contamination event can

[115] Id.

easily cause damages exceeding $100,000, many customers greatly prefer rail cars simply to avoid that risk.

The advantages of trucks prevail only in limited situations, whereas the rail advantages are quite pervasive. Notably, the primary advantages of rail transportation are attributable to the use of private rail cars, which is a service that M&G provides at its expense, not CSXT. Therefore, those advantages cannot explain rail rates that are above or similar to truck rates. Another advantage of rail that CSXT itself touts in televised commercials is the greater fuel efficiency of rail transportation. But that efficiency should produce lower rail rates than truck rates.

Thus, CSXT creates a red-herring when it argues that "M&G has presented no evidence that customers insist upon rail deliveries over truck deliveries regardless of the price."[116] In fact, M&G has provided extensive evidence of multiple reasons in addition to price that are very important to its customers. CSXT is the one who is blinded to those facts by attempting to make this market dominance inquiry all about price.

Unfortunately for CSXT, a comparable transportation price is not the dispositive factor in a market dominance, because:

> even a monopolist finds that there is a profit-maximizing price beyond which it cannot raise prices without adversely affecting its bottom line. A carrier possessing market power might set its rates so high that it would begin to lose business to a higher-cost alternative (such as a trucking company).

DuPont (Plastics), STB Docket No. 42099, slip op. at 7-8. See also, APS, 742 F. 2d at 651 ("At some point the availability of an alternative such as the horse and buggy or even people carrying oil in buckets theoretically prevents railroads from raising their rates beyond an outer bound.").

[116] Id. at II-48 (underline in original).

The question is whether alternative modes "constrain [CSXT] from charging rates far in excess of the just and reasonable rates that Congress thought the existence of competitive pressures would ensure." Id.

In order to address this question, it is necessary to consider all of the relative advantages and disadvantages of alternative modes. CSXT wrongly accuses M&G of taking a static view toward customer preferences and assuming that a customer's selection of a transportation mode is entirely independent of and unaffected by the cost of that mode.[117] But M&G's evidence is far from static; it considers both the costs of other modes and the relative advantages of those modes. CSXT considers only the former, which leads it to the unrealistic and over-simplistic conclusion that M&G's customers would "change their preferences in an instant if they could receive product by truck cheaper than they can receive it by rail."[118]

[117] CSXT Reply at I-6, 17; II-46-49.

[118] Id. at II-46.

f. M&G's product integrity concerns restrict transportation options.

In its Opening Evidence, at pages II-B-27 to 32, M&G described the product integrity concerns that are associated with the transloading of PET. In order to mitigate those concerns, transloading is kept to a minimum whenever possible, and never routinely exceeds a single transload per shipment. Because all direct truck shipments of PET begin with a transload from rail to truck at the origin, no further transloading, such as transloading back into rail cars at an intermediate bulk terminal, is permitted. Consequently, most transloading of PET occurs from rail to truck at bulk terminals near the destination.

Despite this evidence, CSXT has proposed double transloading transportation alternatives for 19 of the issue movements.[119] Although CSXT acknowledges the product integrity issues associated with transloading, it asserts that: (1) M&G's refusal to double-transload PET shipments is a "made-for-litigation" claim, (2) M&G regularly engages in double-transloading, and (3) M&G can effectively mitigate the product integrity issues through a variety of "best practices." In fact, M&G's refusal to double-transload is an industry practice, M&G does not routinely double-transload, and M&G already follows industry best practices, of which Rule #1 is to minimize the handling of PET. Moreover, although CSXT's witnesses claim that a second transload is acceptable, they say nothing about third and fourth transloads, which necessarily would occur under CSXT's alternate transportation proposals for several issue movements.

(1) CSXT acknowledges that PET degradation is an issue.

CSXT recognizes that product degradation is "a fact of life in the plastic polymers industry" that cannot be entirely eliminated, only "mitigated." CSXT Reply at II-58. In the words of CSXT, it is "impossible" to entirely eliminate the PET degradation that results from

[119] Lanes B-7, 8, 9, 10, 15, 16, 18, 19, 21, 22, 24, 25, 26, 30, 32, 33, 34, 37, and 40. CSXT Reply at II-41 to 44.

transloading. Id. at II-59. CSXT also noted that the polymer industry has developed various mechanisms and/or equipment in an attempt to combat the inevitable product degradation that occurs during transloading. Id. Thus, CSXT and its experts largely agree with the fundamental propositions set forth in M&G's Opening Evidence: that degraded PET is a problem, and that degradation occurs when PET is transferred or transloaded. Consequently, M&G and CSXT also necessarily agree that the degree of PET degradation increases with each transload event. The key difference between M&G and CSXT is about use of a second transload. CSXT believes a second transload "does not significantly increase the risk of PET degradation." Id. at II-61.

As an initial matter, CSXT's position does not withstand scrutiny. If, as CSXT admits, PET degradation is a "fact of life" that is "impossible" to eliminate, then CSXT must also agree that two transloads create double the degradation of one transload. Thus, it cannot be the case that the "risk" does not increase; degradation itself (not just "risk") most certainly does increase, and is twice as severe if comparing one transload to two transloads.

M&G has many years of experience producing and shipping PET, dealing with customer concerns and complaints, working with motor carriers and railroads, sampling for quality, and, basically, addressing the "fact of life" that is PET degradation. This experience has shown that more than one transload creates excessive degradation problems. Furthermore, in the over 20 years that M&G witness Granatelli has worked in the polymers industry, he cannot recall a single shipment that was transloaded more than once. This is not to say that double-transloading "never" occurs, but it is a rare exception due to unique circumstances.

CSXT has not cited to any polymer business that regularly double-transloads or engages in truck-to-rail transloading, despite obviously scouring the marketplace for any examples that it could find where transloading occurs. CSXT Reply at II-31 to II-34. Similarly, although CSXT

provided information about the amount of PET transloading that occurs at CSXT TRANSFLO facilities in the U.S., it did not mention whether and to what extent any of those TRANSFLO shipments involved truck to rail transloading, which is always a double-transload. See CSXT Reply workpaper "TRANSFLO PET Tonnage". In fact, the TRANSFLO web site specifically references rail-to-truck transloading among its services without any mention of truck-to-rail transloading, which is evidence that this is not a routine service.[120]

Although CSXT acknowledges the impact of transloading on product integrity, it inconsistently and incorrectly asserts that "almost no evidence" has been provided to show that truck loading causes more product quality concerns than rail car loading. CSXT Reply at II-57. In fact, M&G explained precisely how fines, dust, and streamers are created when PET pellets abrade each other and the sides of the conveyance tube and bulk truck trailer under the pressure of a vacuum transfer. M&G Op. Ev. at II-B-27 to 28. This explanation was supported by the NEU study, which described in great detail the fines and dust created by vacuum conveyance of PET, such as during the transload process. See M&G Op. Ex. II-B-24. Moreover, as described in its Opening Evidence, M&G spent a considerable sum of money {[redacted]} to remove dust and fines from PET during the rail car loading process and explained that such technology is not available for transloading. M&G Op. Ev. at II-B-29 to 31. Therefore, CSXT's claim that there is no evidence to show that truck loading causes more product quality concerns than rail car loading is inexplicable.

It is notable that CSXT's own experts have not disputed the need or value of the {[redacted]}. CSXT's experts also agree that transloading is a concern, otherwise their opinion would have been that an unlimited number of transloads is possible with no

[120] M&G Reb. Ex. II-B-14.

problems. Instead, CSXT's witnesses posit that M&G can probably engage in a second transload (a finding with which M&G, its expert Mr. Granatelli, and the polymer industry disagree).

(2) Double-transloading is contrary to industry best practices.

CSXT's characterization of M&G's double-transload concerns as a "made for litigation" argument simply does not stand-up to the fact that M&G's concern is a polymer industry concern. CSXT's proposals for double-transloading and truck to rail transloading would put M&G at odds with the rest of the plastic resin industry.

According to the Resin Handling Guide published by the Transportation & Logistics Committee of the American Chemical Council and American Plastics Council:

> Contact of the plastic resin with the walls of hose or piping is inevitable. The consequences of this contact are all negative and everything possible should be done to minimize this contact."[121]

The pellets abrade one another and the walls of any tube or container whenever they are conveyed or transferred, thus creating dust and streamers.[122] Each transfer of PET also creates the possibility that other types of contamination could occur, such as from dirt, organic material, moisture, small pieces of metal, gasket material, or sealant/caulking.[123] The Resin Handling Guide confirms that "[c]ontamination of plastic resin can cause significant costs in defective final product or serious equipment damage to processing equipment for plastic resin."[124]

Additionally, each handling event creates the risk of spilling PET, which implicates environmental issues. "[T]he Environmental Protection Agency (EPA) Storm Water Regulations classify plastic pellets as 'significant materials', making the exposure of even a single pellet in

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[121] M&G Reb. Ex. II-B-15 at 11; see also M&G Reb.Ex. II-B-16 at 25, which is the OCS Pellet Handling Manual ("Plastic dust creation can be minimized but not eliminated entirely.").

[122] M&G Reb. Ex. II-B-15 at 9-10 and 18-21.

[123] Id. at 8 and 14.

[124] Id. at 4.

storm water run-off without a permit subject to regulatory action."[125] The American Chemistry Council ("ACC") and the Society of the Plastics Industry ("SPI") publish a Pellet Handling Manual as part of Operation Clean Sweep ("OCS"), which is a plastics industry initiative to eliminate the release of plastic pellets into the environment.[126] The Pellet Handling Manual includes a Resin Handling Flow Chart which shows the many steps that can occur in resin transportation and handling, all of which can result in a release or spill.[127] Notably, the Resin Handling Flow Chart does not show any double-transloads, nor does it show any truck-to-rail transloads. Instead, it shows that all resin is loaded into rail cars, trucks, or packages. It also shows that rail cars can be transloaded into trucks. But no other transloads prior to unloading are mentioned.

The Resin Handling Guide similarly includes detailed descriptions of pellet transportation, but does not mention either double-transloading or truck-to-rail transloading. Instead, the Resin Handling Guide provides the following overview of plastic resin transportation:

> Approximately 90% of the plastic resins produced in North America leave the producing plants in covered hopper cars. Many of these railroad cars travel directly to customers who remove the plastic resins from the hopper cars and process the resins into final products. The remainder of the hopper cars go to transfer stations where material is removed from the hopper cars to bulk trucks or to packaging lines where the resin is placed in bags or bulk cartons.

M&G Reb. Ex. II-B-15 at 4.

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[125] Id. at 3.

[126] Spilled plastic pellets eventually make their way into waterways, lakes, and oceans where they are ingested by fish, birds, turtles, and other wildlife. "When these pellets are eaten by wildlife they cannot be passed through their digestive tracts, leading to malnutrition and starvation." M&G Reb. Ex. II-B-16 at 4.

[127] Id. at 14.

M&G witness Granatelli agrees that CSXT's emphasis on both transloading and double-transloading deviates from best practices in the polymer industry (such as handling the PET as few times as possible, making use of the special epoxy-lined covered hopper rail cars used in the polymer industry, and limiting the number of different substances/surfaces that the PET contacts). Covered railroad hopper cars are ideal for polymer transportation because they enable loading directly into the top of the hopper car via gravity from the production facility with little or no handling, and because they are lined with a hard, smooth epoxy material. Transloading exposes PET to heat, velocity, and potential contaminants such as dirt, metal fragments, gaskets, hose materials, and moisture. Transloading enables creation of fines, dust, and streamers.[128]

Mr. Granatelli explains that polymers are produced in "runs" or "campaigns", and each run or campaign is analyzed by a producer such as M&G. The results of this analysis are forwarded to the customer so that the customer can calibrate its own process properly. Transloading introduces another variable into this careful calibration. Moreover, transloading creates the possibility that different runs or campaigns are mixed together.

Mr. Granatelli notes that tracking of product quality is also compromised by transloading. When rail cars are used and properly sealed, the only parties that have access to the PET are the producer and the customer. Any quality issues can be addressed solely between them. Conversely, when transloading occurs, third parties such as truck drivers and bulk terminal employees become involved in the process, and disrupt the "cradle-to-end user" product integrity chain.

Whenever product contamination occurs with a transloaded shipment, it is often difficult to conclusively determine whether the PET producer, transporter, or consumer is responsible.

[128]Fines, dust, and streamers clog the filters at customer facilities and cause problems in the production of plastics from the PET. M&G Op. Ev. at II-B-28. In addition, fines, dust, and streamers represent financial loss in the form of lost product.

{[redacted]} Double transloading would only make this process more difficult. Conversely, contamination liability is much easier to determine when the PET is not handled during transportation at all. More to the point, however, contamination is much less likely to occur at all. M&G Rebuttal Exhibit II-B-17 is a collection of e-mails that document a multitude of product contamination incidents associated with transloading, and the cost, aggravation, and effort that M&G must expend to handle claims by its customers.

The danger of contamination is all the more pressing with PET used for food-grade applications such as beverage containers and food packaging, and all the M&G customers in the case lanes {{[redacted]}} use M&G's PET for such food-grade applications. M&G's customers are so concerned about contamination that they will reject (and have in the past rejected) a full rail car if the seals are broken or the paperwork does not match.[129]

In short, M&G's practice of not double-transloading PET shipments was not created for this litigation. Rather, M&G is following the best practices of the polymer industry. Those practices have been developed by industry associations based upon the experiences of their members, like M&G. Those practices are reasonable and the failure to follow them would be frowned upon by M&G's customers, and ultimately would cost M&G their business.

[129] Risk is composed of both the possibility of an event occurring and the magnitude of the damage if it does occur. Even if the possibility of a contamination event is relatively small, the magnitude of the damage to a customer facility if contamination does occur means that customers must be hyper-vigilant about the potential for contamination.

(3) M&G does not double transload in the ordinary course of business.

CSXT falsely claims that "M&G regularly considers and proposes 'double transload' options when it thinks they would be cost-effective."[130] However, documents produced in discovery show this is not true.

In one case, a bulk driver accidentally transloaded PET at a bulk terminal from the wrong compartment of a rail car; he then immediately re-transloaded the PET back into the rail car from his truck. When learning of this event, M&G stated that the motor carrier "has bought...[this] compartment[ ] from M&G" and "[w]e need to know which compartment...[it was] so that M&G...can delete...[it] from inventory." See M&G Reb. Ex. II-B-33. Thus, when a double-transload actually did occur, M&G deleted the PET from its inventory.

Nonetheless, CSXT presents several examples that it contends show that "M&G regularly considers and proposes 'double transload' options." CSXT Reply at II-54. As described below, CSXT has misinterpreted the various documents cited in its Reply Evidence.

First, CSXT cites to a single M&G e-mail that it mischaracterizes as a proposal to stage an empty rail car at a customer facility and to refill that rail car with bulk trucks of PET via a truck-to-rail transload. See CSXT Reply II-54-55 and Reply Ex. II-B-33. In fact, {{ [redacted] }}. Trial runs often involve the customer buying smaller truckload quantities of PET. {{ [redacted] }}

[130] CSXT Reply at II-54.

[redacted]}}

Second, CSXT refers to shipments of PET in containers to {{[redacted]}} CSXT Reply at II-55 and Reply Ex. II-B-34. This situation did not involve transloading from trucks to a rail car, but transloading from containers transported on a truck chassis to a rail car. See Reply Ex. II-B-34 at M&G-HC-007410 {{[redacted]}}. Moreover, this was not a double-transload, because the one and only transload occurred at the destination from the containers into empty rail cars. {{[redacted]}} To avoid a plant shut-down, M&G arranged for trucks carrying the containers to deliver PET to the facility by unloading from the container into empty rail cars. {{[redacted]}} Therefore, transloading from the containers to the rail cars was the one and only transload event.

Third, CSXT refers to trucks shipments of PET from Belpre to Apple Grove that would require a transload at both the origin and destination. CSXT Reply at II-55-56 and Reply Ex. II-B-35. Although these shipments were double-transloaded, they were product returns to Apple Grove for recycling. When PET is to be recycled, product degradation from double-transloading is not a concern because all of the resin will be depolymerized anyway. See, e.g., M&G Op. Ev.

at II-B-11 (describing some shipments from Altamira to Apple Grove for purposes of recycling). The situation is very different for PET that is sold to a customer.

Fourth, CSXT misrepresents as a double transload the process that occurs when a truck is found to be overweight or underweight after transloading PET from a rail car at Apple Grove.[131] When a truck is underweight, it returns to the same railcar to load more PET. That is not a second transload of the same PET; it is the first transload of the PET that is being added to the truck. When a truck is overweight, it unloads the excess PET into a different rail car for scrap PET, which is recycled. As noted above, PET can be double-transloaded if it will be recycled rather than shipped to a customer.

Fifth, CSXT claims that M&G's double-transload concerns are "ridiculous" because all current truck shipments are double-transloaded today when the trucks are unloaded into the customers' silos. CSXT Reply at II-57. CSXT is missing an obvious point: every shipment, whether via rail or truck, must be unloaded at some point; there is no ability for M&G to avoid unloading. When M&G stated that it only engages in one transload per shipment, it was referring to discretionary transfers of product from one mode of transportation to another mode.[132] M&G limits its discretionary transfers to one per shipment. M&G cannot avoid unloading, and, therefore, unloading is not a discretionary transfer.

Sixth, CSXT erroneously equates transloading a truck into a rail car to unloading a rail car into a customer facility. CSXT Reply at II-57. This ignores an obvious fact: when a truck transloads into a rail car, an unloading process from the rail car to the customer facility must still occur. In contrast, unloading from a truck to a silo means that the transportation process is

[131] CSXT Reply at II-56.

[132] This is the customary definition of "transloading." As a matter of simple semantics, the process by which a truck disgorges its PET into a customer's silo or facility is unloading, not transloading.

complete. If M&G were to transload PET from a truck to a rail car at the customer facility, it would clearly add a second transload event to the entire transportation process. The chart below provides a simple visual explanation comparing the three possible transportation methods, with the number of transloads listed at the bottom of each column:

Rail	**Truck**	**CSXT's proposed transfer from trucks into rail cars at customer**
Load rail car at Apple Grove	Load rail car at Apple Grove	Load rail car at Apple Grove
Unload into silo or production process at customer facility	Transload into truck at Apple Grove	Transload into truck at Apple Grove
	Unload from truck into silo or production process at customer facility	Transload from truck into rail car at customer facility
		Unload from rail car into silo or production process at customer facility
No transloading	One transload	Two transloads

Seventh, CSXT somehow equates transloading with M&G's multi-step logistics chain to import PET from its Brazil plant into the United States. CSXT claims that the transportation of a container full of PET, from truck chassis in Brazil to ocean vessel to truck chassis in the U.S. is akin to double-transloading. CSXT Reply at II-56. This could not be further from the truth. Shipping a container full of PET from Brazil to the U.S. does not involve any transloading – the PET stays in the container for the entire journey, from the moment of loading at the manufacturing facility until the container is unloaded at the customer's facility.[133] If transloading does occur, it is a single transload upon arrival in the U.S. from the container into a

[133] {{ [redacted] }}

truck or rail car. Placing a container onto a ship, or removing a container from a ship, is not at all like transloading, which involves transferring the PET using air pressure in a pipe between a rail car and a truck. PET degradation occurs during the air pressure-induced transfer of PET pellets from a rail car to a truck; PET degradation does not occur when a loaded container is lifted by a crane from a truck chassis to a container ship.

The eighth and last example of alleged double-transloading involved M&G's customer, {{[redacted]}}. CSXT Reply at II-B-55 and Reply Exs. II-B-16 and II-B-32. This situation resulted from an extremely unique set of circumstances. {{[redacted]}}

As described above, CSXT has not pointed to a single incident where M&G engaged in double-transloading of PET to a customer. M&G does not double-transload as a regular course of business, just as the polymer industry at large does not do so. Despite the thousands of pages of documents and e-mails produced to CSXT in discovery, {{[redacted]}} far from demonstrates that M&G routinely engages in double-transloading or truck-to-rail transloading. The Board and ICC have long recognized that transportation occurring pursuant to rare, extenuating circumstances can and should be disregarded in the market dominance evaluation. DuPont (Plastics), slip op. at 7 (market dominance existed where complainant used trucks only "infrequently...when CSXT cannot deliver the product in as timely a fashion as the customer demands"); Amstar-AGS., ICC Docket No. 38239S, slip op. at 13 (served Dec. 2, 1987) (truck shipments totaling 7.9% of volume in one year diregarded because customer "had run low on inventory...and required sugar immediately" and because "occasional shipments by truck in the face of emergency situations do not demonstrate feasible competition"); McGraw Edison Company v. The Alton and Southern Railway Company, et al., 2 I.C.C.2d 102, 108 (1986) (no effective intermodal competition found where previous truck shipments were "nonrepresentative" because "they were unique or emergency shipments (e.g. to avert a plant shutdown)."); The Dayton Power & Light Company v. Louisville and Nashville Railroad Company, 1 I.C.C.2d 375, 382 (n. 28) (1985) (market dominance exists despite previous truck shipments because trucks were used when "bad weather restricted barge access to the plant"); Allied Chemical Corporation, et al. v. Ann Arbor Railroad System, et al., 1 I.C.C.2d 492, 507

(1985) (ICC finds that intermodal competition was insufficient to show lack of market dominance because "the use of motor carriage is usually only a stop gap or emergency measure").

These decisions disprove CSXT's overblown distortion of the {{[redacted]}}. Moreover, they also show the extreme relevance of the ample documentation included by M&G in its Opening Evidence regarding the exigent circumstances surrounding the emergency trucks shipped on some case lanes. The Board should take note of the exigent circumstances when evaluating the market dominance of CSXT, despite CSXT's incorrect assertion that {{[redacted]}} See, e.g., CSXT Reply Ex. II-B-2 at 4.

(4) The "mitigation" proposed by CSXT would not eliminate PET degradation or permit double transloading.

While CSXT agrees it is "impossible" to eliminate PET degradation, CSXT nonetheless argues that "mitigation" measures would allow double-transloading without concern. CSXT Reply at II-59-62. CSXT claims that M&G could double-transload "if M&G follows the best practices...of establishing reasonable pressure guidelines, mitigating heat, and ensuring straight and smooth connections." Id. at II-61. But M&G is already taking these steps today to the extent possible.[134] More importantly, CSXT's claimed reliance on "best practices" ignores the elephant in the room – CSXT itself proposes that M&G violate the most crucial "best practices" of the industry by replacing rail service with transloading and double-transloading in 43 lanes. These best practices are: limit handling of the PET, make use of the special epoxy-lined rail cars used in the polymers industry, and reduce the number of different substances that the PET

[134] M&G witness Granatelli agrees that the measures mentioned by CSXT are already being taken today by the polymer industry, where appropriate.

touches. It is no accident that 90% of polymer industry transportation leaves the production plant by rail. M&G Reb. Ex. II-B-15 at 4.

The mitigation steps taken by M&G allow the first transload in addition to other product handling, such as unloading. As described above, M&G installed {[redacted]} to ensure that the PET being loaded at Apple Grove begins its transportation journey without fines, dust, and streamers.[135]

As a general rule, M&G directs that transloading should occur at no more than {{[redacted]}} pounds per square inch ("psi"). In specific situations, M&G has even lower maximum pressure levels to meet the needs of its customers. M&G Op. Ex. II-B-26.

By enabling bulk trucks to park immediately adjacent to rail cars during the transload process, M&G also ensures that a minimum length of piping is used. "Distance is critical in the pneumatic transfer of plastic resins. Where possible the distances over which the resin is transferred should be minimized." M&G Reb. Ex. II-B-15 at 11. "Straight and smooth connections" are utilized whenever possible at Apple Grove, but significant curvature in the transload pipe is inevitable due to the space limitations at Apple Grove.[136]

CSXT claims that air coolers would alleviate PET degradation, but this is only partially true. Reply at II-61. Some bulk trucks operating from Apple Grove already use these air coolers, but air coolers can only reduce the streamer formation and do not impact the fines generation. Hot air in the PET conveyance process heats up the inside of the metal piping which creates an environment more conducive to streamer formation. As the pellets move along the pipe wall, the pellets are more likely to "skid" along the pipe leaving a thin film behind. As this

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[135] {[redacted]}

[136] See, e.g., CSXT Reply workpapers, folder "II-B", folder "Apple Grove, WV Plant", still photo IMG_707 (showing 90 degree angle in the connection between the rail car and truck).

thin film detaches from the pipe wall, streamers (sometimes called "angel hair") are formed. See M&G Op. Ev. at II-B-27 to 28. This is very similar to hot tires leaving skid marks on the road – where the friction between the road and tire (or pellet and pipe) is more likely to leave a residual behind when the contacting surfaces are hot. Again, this does not eliminate the formation of streamers, but only reduces it. Even if an air cooler is used, fines and dust are still generated at the same rate because cooling the air obviously does not reduce either the mechanical collisions between the PET pellets and each other, or the mechanical collisions between the PET pellets and the inside of the conveyance pipe. Consequently, air coolers would not permit M&G to engage in double-transloads.

CSXT also claims that "Master Vacs...would address most of the issues that cause pellets to degrade during transfers." CSXT Reply at II-61. CSXT claims that the Master Vacs operate at low speed and ambient temperature. As an initial matter, CSXT's assertion that the pellets are "discharged by gravity into the truck or rail car" does not withstand scrutiny. The force of gravity resists transloading because the PET must be moved upwards, away from the ground, in both rail-to-truck transloading and truck-to-rail transloading.[137]

{{ [redacted]

[137] See, e.g., CSXT Reply workpapers, folder "II-B", folder "Apple Grove, WV Plant", still photo IMG_707 (showing transload from rail car to truck); CSXT Reply Ex. II-B-1 (video, between 5:25 and 6:00, showing transload from truck to top hatch of rail car).

[redacted]}} Furthermore, the Master Vac would block the path of trucks at rail car positions behind the MasterVac, which would require every truck to wait for the trucks in front of them to complete transloading before they themselves can depart. This would add to the many obstacles that M&G has already identified regarding loading more trucks at Apple Grove in Part II-B-2.g.(1).

Since the Master Vac is not part of the bulk truck, there would be a problem of cross-contamination between various grades of PET. M&G Reb. Ex. II-B-15 at 9 ("If multiple grades of resin are being handled, consideration should be given to cleaning of the system between grades of plastic resin."). {{[redacted]}} There would be insufficient time to fully wash and dry the Master Vac between each bulk truck loading event, especially given the dramatically increased bulk truck loading envisioned by CSXT. The only solution would be to acquire at least one Master Vac unit for each of the {{[redacted]}} PET grades produced at Apple Grove, and dedicate it to a specific grade of PET.

Even that many Master Vacs would not permit two or more trucks to transload the same grade of PET simultaneously. Loading 14 bulk trucks in a 3-hour period at Apple Grove, as CSXT has proposed, would require M&G to have at least one Master Vac for each transload spot at a cost of approximately $40,000 each. The initial investment in the Master Vac machines would be followed by other increased costs. These machines would have to be maintained and cleaned on a regular basis. Filters would have to be cleaned and/or replaced. Additional

employees would be needed to drive the Master Vac trucks around Apple Grove and clean/maintain the Master Vac machines.

CSXT has also claimed that curved aluminum pipes called "candy canes" can be used to create transload piping with a more gentle curvature. CSXT Reply at II-61. However, these candy cane devices would only be useful for truck-to-rail car transfers, which as described in the preceding sections, are not routinely performed.

Finally, CSXT cryptically asserts that a "major plastic pellet producer" has created a device that uses "optimum pressure" in transloading, thus leading to a "reduction" in fines, streamers, and dust. CSXT Reply at II-61-62. Notwithstanding the fact that there is no evidence that the "reduction" in degradation claimed by CSXT would be sufficient to allow double-transloading, CSXT has provided no identifying information about this process, or whether it is commercially available. The Board should disregard CSXT's fleeting reference to this unidentified "device."

Despite setting forth "best practices" that M&G should follow, CSXT's own double transload plan violates these practices, and otherwise creates additional degradation and contamination issues.[138] CSXT's double-transloading plan relies upon a truck-to-rail transload either at a terminal or at the customer facility. However, this truck-to-rail transload involves:

- Use of a long hose. See CSXT Reply Ex. II-B-1 (video, between 5:25 and 6:00, showing transload from truck to top hatch of rail car). "Distance is critical in the pneumatic transfer of plastic resins. Where possible the distances over which the resin is transferred should be minimized." M&G Reb. Ex. II-B-15 at 11.
- Hose has numerous turns in it. See CSXT Reply Ex. II-B-1 (video, between 5:25 and 6:00, showing transload from truck to top hatch of rail car). "One of the key elements in PET quality control is therefore that transfer hoses be connected in a straight line between the car and truck." CSXT Reply at II-60.

[138] As mentioned earlier, CSXT's plan also violates the most fundamental best practices: limit PET handling.

- Transload requires opening top hatch of rail car for extended period of time, thereby creating the opportunity for contaminants such as dirt and moisture to enter.
- Contamination risk. Assembling the various pipe pieces while laying them on the ground. See Reply Ex. II-B-1 (video, between 5:25 and 5:32).

(5) For shipments to some customers, CSXT's own evidence would require up to three and four transloads.

CSXT has emphasized the opinion of its expert witnesses that M&G should be able to add "one more transload", for a total of two, without implicating PET degradation concerns. CSXT Reply at II-61. M&G rejects those claims for the reasons stated in the preceding subparts. In addition, the transportation alternatives proposed by CSXT for many lanes in its Reply Evidence would require more than two transloads. In fact, there are 11 lanes where PET would be transloaded more than twice under CSXT's plan, as shown below.

Lane	Origin-Destination	Description of transloads under CSXT plan
A-1	Apple Grove-Belpre (CSXT proposes direct truck)	Belpre is not an end-user location. Therefore, all PET in Lane A-1 is eventually transported, either via rail or truck, to a customer. If by truck, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car for storage at Belpre 3-transload into truck at Belpre for shipment to customer
A-8	Apple Grove-Parkersburg (CSXT proposes direct truck)	Parkersburg is a rail yard used as overflow storage for Apple Grove operations. Some rail cars are transported back to Apple Grove (in Lane A-17) when needed (for a truck shipment or packaging). In conjunction with Lane A-17, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car at Parkersburg for storage 3-transload into truck at Parkersburg for shipment to Apple Grove or shipment to customer
A-14	Belpre-Devon (CSXT proposes direct truck)	All PET in Lane A-14 was originally transported from Apple Grove in Lane A-1. Thus, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car for storage at Belpre 3-transload into truck at Belpre for shipment to Devon
A-17	Parkersburg-Apple Grove (CSXT proposes direct truck)	Parkersburg is a rail yard used as overflow storage for Apple Grove operations. Most rail cars originated at Apple Grove in Lane A-8. In conjunction with Lane A-8, total PET transloads would be:

		1-transload into truck at Apple Grove 2-transload into rail car at Parkersburg for storage 3-transload into truck at Parkersburg for shipment to Apple Grove or shipment to customer
B-7	Apple Grove-Aguila (CSXT proposes truck to Lima, then rail service)	Aguila is a SIT yard that M&G uses for transloading into trucks for a Phoenix-area customer. Thus, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car at Lima 3-transload into truck at Aguila for shipment to customer
B-30	Apple Grove-Sweetwater (CSXT proposes truck to Lima, then rail service)	Sweetwater is a SIT yard. M&G sometimes transloads from rail cars to trucks at Sweetwater. In conjunction with such a transload, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car at Lima 3-transload into truck at Sweetw'r for shipment to customer
B-36	Belpre-Aguila (CSXT proposes truck to Lima, then rail service)	All PET in Lane B-36 was originally transported from Apple Grove in Lane A-1. Thus, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car for storage at Belpre 3-transload into truck at Belpre for shipment to Lima 4-transload into rail car at Lima
B-37	Belpre-Allentown (CSXT proposes trucking to St James (Hagerstown), then rail service)	All PET in Lane B-37 was originally transported from Apple Grove in Lane A-1. Thus, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car for storage at Belpre 3-transload into truck at Belpre for shipment to Hagerstown 4-transload into rail car at Hagerstown
B-39	Belpre-Franklin (CSXT proposes direct truck)	All PET in Lane B-39 was originally transported from Apple Grove in Lane A-1. Thus, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car for storage at Belpre 3-transload into truck at Belpre for shipment to Franklin
B-40	Belpre-Fremont (CSXT proposes truck to Columbus, then rail service)	All PET in Lane B-40 was originally transported from Apple Grove in Lane A-1. Thus, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car for storage at Belpre 3-transload into truck at Belpre for shipment to Columbus 4-transload into rail car at Columbus
B-41	Belpre-Hazleton (CSXT proposes direct truck)	All PET in Lane B-41 was originally transported from Apple Grove in Lane A-1. Thus, total PET transloads would be: 1-transload into truck at Apple Grove 2-transload into rail car for storage at Belpre 3-transload into truck at Belpre for shipment to Hazleton

Due to this internal inconsistency, the Board should reject CSXT's assertion regarding effective competition in the above-listed lanes.

g. CSXT's assessment of Apple Grove's truck loading capacity is over-simplistic and unsupported by real-world facts.

In its Opening Evidence at pages II-B-37 to 42, M&G demonstrated both that its existing transloading tracks at Apple Grove lack sufficient capacity to load many more trucks and that the cost of expanding that capacity would be approximately {{ [redacted] }}.[139] CSXT, however, incredulously contends that M&G could load {{ [redacted] }} more trucks without spending a single cent on additional infrastructure.[140] Moreover, CSXT contends that it could increase Apple Grove's truck loading capacity for significantly less than M&G's estimate.[141] Finally, CSXT challenges both the need for, and costs of, M&G's transload capacity expansion estimates.[142] The fundamental flaws in CSXT's evidence lie in its highly simplistic and formulaic approach that ignores the real world constraints at Apple Grove, which M&G fully described in its opening evidence. M&G's real-world experience shows the fallacy of CSXT's reductive view.

(1) CSXT overstates the current truck loading capacity of Apple Grove.

CSXT's claim that Apple Grove currently has the capacity to load {{ [redacted] }} more trucks today simply is not credible. CSXT's claim is predicated upon allegations that M&G currently has the ability to load { [redacted] } trucks per 12-hour day, Monday through Friday. CSXT's estimate, which is elegant and simplistic in its logic, completely collapses under the spotlight of real world conditions and CSXT's own experience. Indeed the simplicity of CSXT's estimate is its very undoing.

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[139] M&G Op. Ev. at II-B-38-46. M&G also presented evidence of the cost to convert Apple Grove to directly load trucks from storage silos rather than from rail cars. Id. at II-B-34-37 and 43-46. CSXT has not advocated for this infrastructure modification, and therefore, does not challenge that evidence. CSXT Reply at II-62, n. 60.

[140] CSXT Reply at II-62-65.

[141] Id., Ex. II-B-36, pp. 1-5.

[142] Id., pp. 6-15.

(a) CSXT's assumptions are too aggressive.

CSXT's estimate is strictly formulaic. Furthermore, it includes aggressive assumptions that grossly overstate M&G's true transload capacity at Apple Grove.

First, CSXT begins with the { [redacted] } spots that Apple Grove currently has for transloading.[143] In order to reach this number, however, CSXT includes { [redacted] }.[144] Consequently, CSXT begins with an inflated figure.

Second, CSXT assumes that M&G would only load from half of the { [redacted] } transload spots at once (i.e. { [redacted] } rail cars).[145] Although CSXT describes this assumption as "conservative," { [redacted] } rail cars truly would be the maximum number of cars from which M&G physically could transload at once. When transloading a bulk truck parallel to a rail car, the space needed for the truck necessarily overlaps not just one rail car, but a second adjacent rail car as well due to the activities of the driver at the rear of the bulk truck.[146] This precludes any transloading of the adjacent cars, which is why transloading can physically occur simultaneously at no more than half of the { [redacted] } car spots, which means that { [redacted] } trucks is a maximum number. Furthermore, in order for this maximum number to be feasible, all of the trucks must begin transloading at approximately the same time[147] and must have access to a rail car that contains the correct PET grade for loading. If either of these factors is off—which will be the case far more often than not—even the simultaneous loading of { [redacted] } trucks is too aggressive.

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143 CSXT Reply at II-63-64

144 M&G Op. Ev. at II-B-10.

145 CSXT Reply at II-63-64.

146 See, e.g., CSXT Reply workpapers, folder "II-B", folder "Apple Grove, WV Plant", still photo IMG_707.

147 As M&G demonstrates below, the proposal that {[redacted]} trucks begin transloading simultaneously is entirely unworkable given Apple Grove's current configuration.

Third, CSXT assumes that each truck will require three hours to transload.[148] Although CSXT describes this figure as "conservative," it is a reasonable average based upon M&G's real-world experience at Apple Grove. This figure is predicated upon certain assumptions, however, that will not exist for every truck. For example, it assumes that a truck can load entirely from a single rail car compartment. Each rail car has four compartments. Because a rail car holds enough PET to fill between four and five trucks, the need to load from a second compartment will be fairly commonplace. This figure also assumes that the truck does not have to return to the rail car to add product after weighing because it was light loaded.[149] It is more difficult to gauge the accurate weight of a truck when not loading from a level paved area,[150] which CSXT claims is an unnecessary expense.[151] Therefore, it is not uncommon for a truck to be light-loaded. Indeed, the truck in the video that is CSXT Reply Exhibit II-B-1 was light-loaded and had to return to the rail car for additional PET; but CSXT conveniently failed to include that video footage in the edited final version, which would contravene its attempt to portray a smooth and trouble-free transload process.

Fourth, CSXT assumes that M&G would load trucks 12 hours per day, Monday-Friday.[152] This may be reasonable over the course of an entire year, but not for each day. In the Summer, when daylight hours are longer, M&G may load for more than 12 hours; but conversely, during shorter Winter days, M&G would load fewer than 12 hours. Moreover, M&G is likely to have fewer load days in the Winter and Spring due to weather problems associated with snow and floods in the mountainous region around Apple Grove. M&G's customers,

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[148] Id. at II-63.

[149] Or removed PET if overloaded.

[150] M&G Op. Ev. at II-B-40, note 24 and Op. Ex. II-B-16.

[151] CSXT Reply Ex. II-B-36 at 12-13.

[152] Id. at II-64.

however, do not necessarily order fewer trucks in the Winter and more in the Summer. Nor can truck-dependent customers tolerate supply interruptions that a rail customer with PET inventory in rail cars can sustain.

Based upon these assumptions, CSXT formulaically concludes that Apple Grove can transload { [redacted] } trucks per day. Specifically, CSXT divides the 12 hour day by 3 hours per transload to conclude that 4 trucks can be loaded each day at each transload spot. CSXT then multiplies those 4 trucks by { [redacted] } spots to reach { [redacted] } trucks per day. Although the math becomes a little fuzzy at this point, CSXT extrapolates this daily truck number to conclude that M&G could load {{[redacted]}} additional trucks annually, for a total annual capacity of {{[redacted]}} trucks.[153]

Underlying CSXT's estimate is the most unreaslistic assumption of all: that M&G could orchestrate a continuous parade of { [redacted] } trucks every day that arrive without interruption at precise intervals, and perform their tasks in a precise amount of time. In order for this to work, {[redacted]} trucks must arrive simultaneously every three hours; each truck must have access to a rail car that contains the correct grade of PET; no truck can block the access of another truck to an adjacent rail car; and each truck must complete its transload within three hours so as not to delay the next round of {[redacted]} trucks. Of course, this plan falls apart right away because {[redacted]} trucks cannot simultaneously arrive and check in at Apple Grove's guardhouse; nor can they all be weighed simultaneously on Apple Grove's only truck scale, once for their empty weight and again for their loaded weight. Therefore, the trucks must arrive at staggered intervals. But, once you start doing that, M&G is not really processing {[redacted]} trucks in three hours anymore. Assuming that the three hour period is divided into {[redacted]} equal portions, each truck would arrive

[153] This annual figure is the product of {[redacted]} trucks per day and CSXT's assumption of 250 load days per year. See CSXT Reply Ex. II-B-36, p. 2, n. 4.

a little less than {[redacted]} minutes apart. That means the last { [redacted] } trucks do not arrive until the third hour. Indeed, the only truck that actually completes the entire process within the first three hours is the first truck.

As the second round of {[redacted]} trucks begin to arrive, the only open slot for the first truck is the rail car that the first truck in the prior round has just vacated. But, if that rail car does not contain the correct grade of PET, that truck has to wait until the first such rail car is available. These delays cascade like a snowball through the third and fourth rounds. At the end of the day, M&G has not loaded anywhere close to {[redacted]} trucks.

These basic assumptions produce an unrealistically aggressive estimate of Apple Grove's transloading capacity. However, an equal contributor to CSXT's overstatement of that capacity is caused by CSXT's unstated assumption that all of the real-world constraints within the Apple Grove plant have absolutely zero impact upon transloading. It is to those factors that we now turn.

(b) CSXT assumes away all of the real-world transload capacity constraints at Apple Grove.

CSXT's formulaic estimate of Apple Grove's transloading capacity ignores all of the real-world facts about Apple Grove that M&G laid out at pages II-B-4 to 10 of its Opening Evidence. Although those facts undermine the very foundation of its capacity estimate, CSXT makes no attempt to address them at all.

First, CSXT fails to account for the glaring fact that its mainline splits the Apple Grove plant, including the plant's rail capacity, down the middle. Instead, CSXT assumes that M&G can operate freely and unimpeded between the rail facilities on both sides of the plant. In reality, CSXT's mainline has the following consequences for transloading:

- M&G may not switch cars from one side of the CSXT mainline to the other on its own; CSXT must perform those switches, for a fee, and at its convenience.[154]
- Because nearly { [redacted] } of Apple Grove's rail car storage track is on the east side and { [redacted] } of its transload capacity is on the west side, significant switching across the CSXT mainline would be necessary to transload the volume of PET contemplated by CSXT.[155] In addition to the operating obstacles this fact creates for transloading, it leaves M&G dependent upon CSXT for the execution of the alleged transload alternative to CSXT.
- Because nearly { [redacted] } of Apple Grove's rail car storage track is on the east side, { [redacted] } of its PET production is loaded into rail cars on the west side,[156] and { [redacted] } of its transload capacity is on the west side, there is insufficient storage track on the west side to hold sufficient rail cars of PET for transloading.
- Of the { [redacted] } transloading spots, { [redacted] } are on the west side and { [redacted] } are on the east side.[157] Because the plant entrance is on the east side, all trucks must cross over the CSXT mainline to access { [redacted] } of Apple Grove's transload capacity. The mainline is obstructed for several hours daily by CSXT's switching activities at the plant and occasionally by passing or stopped trains.[158] Furthermore, the only truck scale in the plant also is on the east side, which means that trucks cannot move between the west side transload tracks and scale when the mainline is blocked.
- Of the { [redacted] } grades of PET that M&G produces at Apple Grove, only two of them load on the west side, which is where { [redacted] } of the transload capacity is located.
- Of the { [redacted] } grades of PET that M&G produces at Apple Grove, { [redacted] } of them load into rail cars only on the east side, which has just { [redacted] } transload spots, or { [redacted] } if you include the surge capacity. Accepting that only half of these spots can be used for transloading simultaneously, there are only { [redacted] } spots for transloading these { [redacted] } grades of PET.

Second, CSXT ignores the fact that M&G produces { [redacted] } grades of PET at Apple Grove. CSXT's estimate of Apple Grove's transloading capacity implicitly assumes that the PET grades needed for each truck are in the appropriate rail car to permit simultaneous truck loadings at all times. CSXT does not account for the difficulty inherent in scheduling trucks to

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[154] M&G Op. Ev. at II-B-7.

[155] Id. at II-B-9.

[156] Id. at II-B-5.

[157] Id. at II-B-10.

[158] Id.; see also, M&G Bifurcation Reply at 18-19. See also M&G Reb. Ex. II-B-24.

arrive at times when the rail car with the PET grade that it needs to transload is not already being transloaded by another truck or is not blocked by a truck transloading an adjacent rail car. If two or three trucks need to transload the same PET grade at the same time, CSXT's plan implodes. Nor does CSXT account for the complexity of switching loaded cars to the transload tracks so as to ensure that each car is in a specific spot that will exactly correspond to the planned truck arrival times for the next day. In addition, CSXT assumes that each rail car will be completely emptied each day by four trucks, when the truck orders for each grade of PET are unlikely to be evenly divisible by four. That means additional rail car switching of the partially loaded rail cars to and from the transload tracks, despite CSXT's assumption that each rail car would only need to be switched once.[159] Each of these factors makes it virtually impossible that M&G could simultaneously transload {[redacted]} trucks as CSXT assumes.

This coordination becomes even trickier when, as CSXT contemplates, some of the trucks will be transloaded back into rail cars at a bulk terminal. In that situation, each truck must load PET from the same rail car in order to avoid mixing lots. To choreograph this all in the same day, each truck must arrive at precisely three hour intervals so as not to overlap with the truck in front of it. Moreover, because it will take 12 hours to load all four trucks, there is no way that all four trucks can arrive at the bulk terminal during regular operating hours on the same day.

Third, CSXT fails to account for the existence of only one truck scale at Apple Grove. CSXT's three hour transload estimate includes {{[redacted]}} for weighing. CSXT Reply Ex. II-B-36 at 3. Using CSXT's estimate of { [redacted] } trucks per day means that, at {{[redacted]}} per truck, it will take { [redacted] } hours to weigh every truck. Of course, that is {{[redacted]

[159] CSXT Reply Ex. II-B-36 at 11.

[redacted]}} and far more than the 12 hours that CSXT has assumed for all transloading activities. This example epitomizes the half-baked claims of CSXT.

There is no simple mathematical formula for determining Apple Grove's transloading capacity. But there is M&G's real world experience in the ordinary course of business. That real-world experience illustrates just how overstated CSXT's assessment of Apple Grove's transloading capacity truly is. CSXT completely ignored M&G's real-world evidence that its best loading day during a recent peak period was just {{ [redacted] }} trucks and the average of the heaviest load days during that period was {{ [redacted] }}.[160] This does not come anywhere close to CSXT's estimated capacity of { [redacted] } trucks per day over a 12-hour period. CSXT also ignores M&G's evidence that, in 2009, {{[redacted]}}.[161]

In apparent recognition of the deficiencies in its transload capacity estimate, CSXT grasps onto the example of the maximum number of trucks that M&G was recently able to load in a single day and extrapolates that M&G could at least load {{[redacted]}} more trucks using its existing capacity. The obvious flaw in that logic is that it treats a peak number as an average. Moreover, the single day peak was achieved in an extended {{[redacted]}}, not 12 hours.

(c) CSXT's own evidence exposes its wildly inflated transload capacity estimate for Apple Grove.

Confirmation that CSXT's truck loading estimate for Apple Grove is grossly inflated comes from CSXT's own Reply Evidence. CSXT has touted a 2009 joint-project with {[redacted]} to add 26,000 feet of new storage and transload track to an existing PET facility

[160] M&G Op. Ev. at II-B-37.

[161] Id. at II-B-37-38.

{[redacted]}.[162] The facility is now owned by {[redacted].}, a subsidiary of {[redacted]}.[163] The objective of this expansion was to "facilitate more efficient delivery and pick up of rail cars", to create "greater switching flexibility", and to "direct[ly] transfer...products from rail cars to trucks."[164] As described below, if one applies the same logic to the {[redacted]} facility that CSXT used to estimate the transloading capacity of Apple Grove, this would mean that {[redacted]} constructed transload tracks with the ability to transload noticeably more than the entire production capacity of the facility.

A key element of the {[redacted]} expansion project was the construction of {{[redacted]}}. CSXT Reply at II-31. The aerial photograph included in CSXT's work papers reveals that the {{[redacted]}}.[165]

According to CSXT, Apple Grove currently can load {{[redacted]}} trucks per year, with no additional infrastructure, from just {{[redacted]}} car spots.[166] This means that each transloading spot at Apple Grove can load {{[redacted]}} trucks per year.[167]

The {[redacted]} facility does not have many of the transloading constraints that Apple Grove faces. Its transload tracks are all in the same location and immediately accessible near the plant entrance; it has paved roads, paved transload areas, and a paved truck staging area; the facility is not split down the middle by CSXT's mainline such that some rail car loading, storage and transload facilities are on one side of the mainline and some are on the other; and its

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[162] {[redacted].}

[163] M&G Reb. Ex. II-B-20.

[164] M&G Reb. Ex. II-B-21

[165] {{[redacted]}}

[166] Reply Ex. II-B-36 at 2, n. 4. CSXT assumes that Apple Grove can load {[redacted]} trucks per day and that there are 250 loading days in a year.

[167] {{[redacted]}}

transload tracks are served off of a different lead from its other rail tracks. Aerial photos also appear to indicate two truck scales instead of just one for Apple Grove. Thus, the {[redacted]} facility in theory should be able to handle more trucks per car spot than Apple Grove. Nevertheless, for purposes of this illustration, M&G conservatively assumes that the {[redacted]} facility loads the same number of trucks per transload spot as Apple Grove.

Therefore, assuming that the {[redacted]} facility also can load {{[redacted]}} trucks annually from each of its {{[redacted]}} transload car spots, it should be able to load a total of {{[redacted]}} trucks per year. Based on an average bulk truck capacity of 47,500 pounds, or 23.75 tons, the {[redacted]} facility would have the capacity to transload {{[redacted]}} tons of PET per year. This translates to {{[redacted]}} metric tons.[168] The {[redacted]} facility, however, can only produce {[redacted]}[169] of PET per year and {[redacted]} per year, for a total capacity production of {[redacted]}}, or {[redacted]} metric tons per year.[170] Therefore, according to CSXT's wildly inflated transload capacity estimates for Apple Grove, the joint project between {[redacted]} and CSXT just constructed {{[redacted]}} even if 100 percent of the plant's production was shipped via truck.

If trucks are such an effective competitor to CSXT's rail transportation of PET, why would CSXT cooperate in a joint project that would enable its customer to handle {{[redacted]}} of its production capacity by truck? The obvious answer is two fold. First, the {{[redacted]}} do not in fact give it anywhere near the transload capacity indicated by CSXT's formulaic methodology. Second, CSXT knows that truck and rail do not compete for

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[168] {{[redacted]}}

[169] "KMT" means kilo metric ton, or thousand metric tons.

[170] See M&G Reb. Ex. II-B-22.

most of the same movements, because each has distinct advantages over the other in entirely different transportation circumstances.

(d) M&G has presented the only credible evidence of Apple Grove's transload capacity constraints.

Because CSXT has ignored, much less attempted to refute, M&G's evidence of the real-world constraints upon transloading at Apple Grove, the only evidence of record is that provided by M&G. As such, the Board should find for M&G on these issues. "As a general matter, whenever the party with the burden of proof makes a *prima facie* showing with respect to an element bearing on the issue at hand, the other side then must rebut that showing or suffer the consequence." McGraw Edison Co. v. The Alton and Southern Ry. Co., 2 I.C.C.2d 102, 106 (1986). See also, Climate Master Inc. and International Environmental, Inc. – Petition for Declaratory Order – Certain Rates and Practices of Trans Tech Solutions, Inc., F&M Bank, and Midland Transportation Company, STB Docket No. 42085, slip op. at 1-2 (served Sept. 28, 2004); Duke Energy Corporation v. Norfolk Southern Railway Company, 7 STB 89, 161 (2003); Union Pacific Railroad Company – Abandonment – In Carver and Scott Counties, MN, STB Docket No. AB-33 (Sub-No. 255), slip op. at 3 (served April 1, 2008). Cf. Arkansas Electric Cooperative Corporation – Petition for Declaratory Order, STB Docket No. 35305 (served March 3, 2011), slip op. at 3 ("we must resolve this controversy based upon the evidence available at this time").

(2) CSXT understates the capital and operating costs needed to increase truck loading at Apple Grove.

Because it contends that Apple Grove has ample capacity to load {{[redacted]}} additional trucks per year, CSXT rejects all of the infrastructure investments that M&G contends are needed to increase Apple Grove's transload capacity. Nevertheless, CSXT contends that M&G could expand Apple Grove's transload capacity for far less money than M&G has alleged.

CSXT's reply to M&G's cost estimates is in CSXT Reply Exhibit II-B-36. As demonstrated in the preceding sections, CSXT's assessment of Apple Grove's existing transloading capacity is wildly inflated and lacks any semblance of credibility. In this section, M&G responds to CSXT's criticism of M&G's evidence of the infrastructure and costs required to expand Apple Grove's transloading capacity.

(a) Apple Grove needs additional storage and transload tracks.

CSXT objects to M&G's statement that new transload and storage track, totaling 16,000 feet, are needed to enable truck loading of all Apple Grove-origin volumes. CSXT Reply Ex. II-B-36 at 6-8.[171] At pages II-B-8 to 10 of its Opening Evidence, M&G demonstrated that Apple Grove only has a fluid operating capacity of approximately {{[redacted]}} rail cars on the west side of the CSXT mainline and {{[redacted]}} cars on the east side, for a total of about {{[redacted]}} cars, excluding the transload tracks. Because this is insufficient capacity to meet all of Apple Grove's rail requirements for PET production, storage, and transloading, M&G currently leases 110 car spots at Parkersburg, WV, and Belpre, OH for the purpose of storing loaded rail cars of PET until sold. If M&G instead is to truck this PET from Apple Grove, it will need to increase both its storage and transload track capacity to accommodate those cars. CSXT challenges M&G's evidence on various grounds, all of which are unfounded.

(i) Additional storage tracks are needed at Apple Grove to replace Parkersburg and Belpre.

Additional storage and transload tracks are needed to replace Belpre and Parkersburg for two specific reasons.

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[171] CSXT has misinterpreted the M&G evidence; CSXT incorrectly believes M&G has proposed {{[redacted]}}. CSXT Reply Ex. II-B-36 at 6. In fact, M&G clearly stated that the new track was "both for transloading and to store rail cars." Op. Ev. at II-B-39.

First, Parkersburg is not a transload facility. Therefore, any cars stored at Parkersburg would be there only for storage. To transload from a rail car to a truck would require M&G to bring the car back to Apple Grove. Thus, M&G would incur a round-trip line-haul rate between Apple Grove and Parkersburg just to commence truck transportation from Apple Grove. This would clearly skew the allegedly lower cost economics of trucking.

Second, Belpre is primarily a storage facility. Although transloading to trucks does occur at Belpre, the amount is quite small compared to the amount transloaded at Apple Grove. Of the total trucks loaded at Apple Grove and Belpre in 2010, Belpre loaded only {{[redacted]}} of the total amount; the rest were transloaded at Apple Grove. See CSXT Reply workpaper "Apple Grove Truck Shipment Detail", sheet "Trucks by year". For 2009, the figure was also small – just {{[redacted]}}. {{[redacted]}} The reason for the great volume disparity is obvious – M&G can originate a truck much cheaper at Apple Grove than at Belpre, because all truck transportation originating at Belpre incurs the extra cost of a line-haul rail movement from Apple Grove to Belpre. Therefore, M&G does not transload trucks at Belpre unless Apple Grove lacks both the inventory and capacity to load a truck of the requested PET grade. M&G only uses Belpre for overflow truck transloading for this reason.

CSXT claims that M&G could maintain Belpre and Parkersburg, and just rely on a rate challenge to those lanes as sufficient to protect its interests. But, even a prescribed rail rate alters the economics of CSXT's truck alternative. In addition, because Parkersburg is not a transload facility, M&G would have to pay for a round-trip movement to bring the car back to Apple Grove for transloading. Nor is it economically viable for M&G to transload large numbers of trucks at Belpre. Moreover, CSXT also disputes its market dominance over the lanes between Apple Grove, Parkersburg, and Belpre (Lanes A-1, 8, 11 and 17).

The need for additional track at Apple Grove also results from the need to replace customer storage with PET on-site at Apple Grove. In other words, today's operations involve the vast majority of M&G's customers receiving rail cars, and using those rail cars for storage of PET at the customer facility. If M&G began shipping direct trucks to these customers, as CSXT proposes for many lanes, then the customers would not be able to have rail car storage at their facility. In effect, the customers' storage needs would be fulfilled by rail cars of PET at Apple Grove, and M&G would have to ship trucks to the customers from those rail cars.

The importance of the additional storage and transload tracks at Apple Grove is validated by CSXT's own Reply Evidence. As described in more detail in Part II-B-2.g.(1)(c), CSXT and {[redacted]} completed a joint project in 2009 at {[redacted]} PET production plant for the purpose of "increased efficiency and improved customer service." That project included 26,000 feet of new track that included {{[redacted]}} and expanded storage tracks for {[redacted]} rail cars.[172] The project also realigned the CSXT main line to eliminate interference between passing trains and switch activity in the plant, which is similar to interference caused by the CSXT mainline at Apple Grove. In total, there are strong similarities between {[redacted]} and Apple Grove that indicate the reasonableness of M&G's design for increasing truck loading capacity at Apple Grove. Indeed, M&G's proposal for only 16,000 feet of new storage and transload track is 38% less track than the 26,000 feet built at {[redacted]}. While CSXT did not provide complete information about the joint project, the discrepancies between CSXT's actions in {[redacted]} and its assertions regarding Apple Grove are hard to ignore. What may be most telling about the {[redacted]} project is what CSXT did not

[172] M&G Reb. Ex. II-B-21;{ [redacted] }.

disclose, such as the annual bulk truck loading capacity for the {{[redacted]}} and the cost of the project.

Finally, CSXT and M&G have used different track construction costs. To develop its cost for building {{[redacted]}} of new track at Apple Grove, CSXT relied upon a unit cost of {{[redacted]}}, reflecting low commodity prices in the midst of the 2008-2009 recession. CSXT Reply Ex. II-B-37 at 2. In contrast, M&G witness Rogers obtained current unit costs through consultation with the local office of the national engineering firm CDI. M&G Op. Ev. at II-B-38 (n. 23). For this reason, the Board should utilize M&G's unit cost of {{[redacted]}} of track. See MD Op. Ev. work paper "Exhibit II-B-14" at sheet "CDI Support Data."

(ii) M&G's rail yard capacity statements are consistent and supported.

CSXT inaccurately claims that M&G has made "inconsistent and arbitrary" statements about existing rail yard capacity at Apple Grove. CSXT is conflating two separate concepts: absolute or theoretical capacity and practical or fluid capacity. "There is a distinction between theoretical capacity and the capacity that railroads can practically use." See Laurits R. Christensen Associates, Inc., Supplemental Report to the U.S. Surface Transportation Board on Capacity and Infrastructure Investment: Final Report, at p. 2-4 (March 2009) ("Christensen Capacity Report"). As stated in a report for a state transportation agency:

> Static capacity is the ability of a yard to accommodate standing equipment, i.e., cars that are stored, awaiting movement, or awaiting processing. It is related only to infrastructure. Static capacity is a simple measurement of the length of railroad cars against the trackage available for them....The practical static capacity of a yard is considered to be between 60 and 80 percent of the theoretical static capacity. A yard must always have some open tracks available to receive, process, and dispatch cars.

HDR, Inc., Washington State Transportation Commission, Statewide Rail Capacity and System Needs Study, Task 3 – Rail Capacity Needs and Constraints, at p. 4 (July 2006) ("Washington Transportation Study") (attached as M&G Reb. Electronic Work Paper "Washington Transportation Study".).

When M&G stated in discovery that Apple Grove has capacity to hold about {{[redacted]}} cars, M&G was discussing the theoretical capacity. See CSXT Reply Ex. II-B-13 (p. 3 of Ex. 1). M&G reiterated this number in its Opening Evidence, where it stated that the gridlock capacity of Apple Grove, excluding the three transload tracks, is approximately {{[redacted]}} cars on the east side of the CSXT mainline and {{[redacted]}} cars on the west side of the mainline. M&G Op. Ev. at II-B-9. CSXT is attempting to create an inconsistency by ignoring the underlined phrase. When the three transload tracks are added, the gridlock figure rises from {{[redacted]}} to {{[redacted]}} cars. Id. at II-B-10 {{[redacted]}}.

The M&G e-mail that is CSXT Reply Ex. II-B-39 contains a statement that Apple Grove gridlock capacity is {{[redacted]}} cars. This figure is within 4% of the {{[redacted]}} figure included in M&G's Opening Evidence and, therefore, corroborates rather than disproves that evidence. It must also be stated that M&G does not know the exact gridlock figure for Apple Grove with certainty, because the dire consequences of gridlock mean that Apple Grove must never become gridlocked. Unlike gridlock at a railroad's yard, which would merely mean that shipments are delayed for a few days, gridlock at a manufacturing facility like Apple Grove would entail a shutdown of the production process at significant expense for several days or a week or more. Raw materials for producing PET are kept in rail cars at Apple Grove – if these rail cars cannot consistently be moved to allow unloading into the production process, then M&G would have to

shut down the facility, causing untold financial damage. M&G cannot let this happen. Therefore, M&G has not tested the exact gridlock limits.

The e-mail at CSXT Reply Ex. II-B-39 also stated that the "target" for the Apple Grove rail yard is {{[redacted]}} cars. CSXT believes this e-mail represents an "arbitrary and inconsistent" statement by M&G, but there is nothing arbitrary or inconsistent about M&G having a target or goal of {{[redacted]}} at Apple Grove. This figure represents the ideal situation, where all relevant factors fall perfectly into place.

Hence, M&G stated in its Opening Evidence that fluid capacity at Apple Grove normally involves rail cars occupying no more than 70% to 75% of the available car spots. This is standard in the industry. Christensen Associates cited to three separate sources that all found practical capacity to be between 60% and 75% of theoretical capacity. Christensen Capacity Report at 2-4 to 2-5. As stated above, the Washington Transportation Study similarly found the practical capacity of a rail yard to be between 60% and 80% of its theoretical capacity. Washington Transportation Study at 4. It is entirely reasonable for M&G to state that fluid capacity of Apple Grove under normal conditions is approximately 70% to 75% of theoretical gridlock capacity.

The normal fluid figure of 70% to 75% is {{[redacted]}} because of the ongoing needs of an active rail site like Apple Grove. M&G must move cars to and from various tracks, must prepare outbound strings, must take apart inbound deliveries, must extract cars buried near the ends of the storage tracks, and must leave track space free for loading newly produced PET. M&G must also keep some track spaces open for deliveries of empty PET cars, deliveries of PTA (purified terephthalic acid) cars, and deliveries of other raw materials. See M&G Op. Ev. at II-B-5-8, and Op. Ex. II-B-2 (referring to

PTA storage track). PTA is one of the key raw materials for PET production, and full rail cars of PTA are delivered daily by CSXT. M&G Op. Ev. at II-B-7-8. The exact number of PTA cars arriving daily varies, and sometimes PTA cars arrive bunched in large groups. M&G must kept some track spots free to handle these bunched PTA cars.

(b) CSXT's own evidence shows the need for additional truck scales.

Even though CSXT states that {[redacted]} trucks can be loaded per day at Apple Grove with no capital investment, CSXT's own evidence shows that more truck scales would be needed. Each truck must be weighed at least two times during the transload process: once to determine its empty weight and once to determine its loaded weight. CSXT assumes that the aggregate total time needed for both weighing events together is {{[redacted]}}. CSXT Reply Ex. II-B-36 at 3.[173] Therefore, it would take 14 trucks a total of {{[redacted]}} to use the scale. In other words, there is no way that a single scale could handle 14 trucks in a 3-hour period, as CSXT assumes. In fact, even two scales would be insufficient; they could only handle, at most, {{[redacted]}} per 3-hour period under CSXT's assumptions. Under CSXT's own plan, then, at least three truck scales would be needed.[174]

Three truck scales would not be enough, however, because a wide variety of trucks use the truck scales, not just bulk PET trucks. The types of trucks using the scale at Apple Grove include:

- {{[redacted]}}
- {{[redacted]}}

[173] {{[redacted]}}

[174] {{[redacted]}} The Board should reject CSXT's ill-conceived and infeasible plan.

- {{[redacted]}}
- {{[redacted]}}

All of these trucks would weigh at lease once and some twice, just like bulk PET trucks, once when full and once when empty.

Furthermore, some bulk trucks of PET would have to use the scales more than once to determine the "loaded" weight. M&G regularly experiences bulk trucks that are underweight or overweight. PET trucks reach their maximum weight before the entire internal volume is occupied, meaning that obtaining the proper weight is a challenge during the transload process. If underweight, the truck must return to the rail car and add more PET; if overweight, the truck must unload excess PET to be used for scrap or recycling. {{[redacted]}} M&G previously explained that a second trucking company has recently complained that the unpaved transloading areas at Apple Grove cause frequent overweight and underweight trucks. Op. Ev. at II-B-40 (n. 24).

For widespread implementation of truck loading at Apple Grove, the only sensible plan for truck scales is to locate them directly adjacent to the transload tracks so that truck weight can be monitored during the loading process. M&G witness Rogers has provided for {{[redacted]}} on each side of the CSXT mainline. M&G Op. Ev. at II-B-42. This is how high-capacity rail car loading is accomplished at polymer production facilities – the rail car is loaded while sitting on a scale. If M&G were to implement a high-capacity truck loading plan at Apple Grove, a similar method should be used to maximize efficiency.

Transloading while the trucks are on scales would also reduce the back-and-forth truck traffic needed when a truck is overweight or underweight. Driving from the west side transload tracks to the current single Apple Grove truck scale, which is near the entrance to the plant on

the east side, requires several minutes of driving time and crossing the CSXT mainline. This is a highly inefficient arrangement, and prone to blockages and delays when CSXT is performing switching at Apple Grove or otherwise has a train blocking the road crossing; these blockages can occur for up to several hours per day. Id. at II-B-10.[175] As M&G stated in its Opening, {{[redacted]}} would be needed to properly transform Apple Grove into a facility with a large capability to engage in transload truck loading. The need to position scales so that trucks can transload while parked directly on the scales would not only ensure efficient operations, it would also drastically reduce another cost that results from truck shipments – the lost product when a truck is found to be overweight and must off-load PET.[176]

Indeed, for all of CSXT's talk about "best practices," the plan for Apple Grove truck loading proposed by CSXT is ill-conceived and highly inefficient, thereby compounding the existing problems with transloading and trucking that M&G has already documented. CSXT ignores the driving back and forth from the west-side transload tracks, CSXT ignores the several hours each day the road crossing is closed due to CSXT rail operations, and CSXT ignores the regular overweight and underweight trucks. Mr. Heisler's proposal for a second truck scale is also poorly planned – he proposes to place it immediately adjacent to the existing truck scale. See CSXT Reply Ex. II-B-38. Thus, any trucks that load on the west side and are underweight would have to drive from the east side scale all the way back to the west side, crossing the CSXT mainline in the process, thereby adding untold time to the transload process. The Board should reject CSXT's inefficient hypothetical, with its reliance on inadequate facilities at Apple Grove.

[175] CSXT has not refuted the fact of these blocked crossings. M&G Reb. Ex. II-B-24 is an example of one such CSXT blockage in just the past week.

[176] When a truck is found to be overweight after transloading from a rail car, the removed PET is considered scrap because it has been transloaded twice. See M&G Reb. Ex. II-B-23.

In an attempt to support the lack of truck scales provided in its transload plan, CSXT cites to TRANSFLO facilities that routinely load over {{[redacted]}} trucks per day using only one scale, or {{[redacted]}} trucks in one day using two scales. CSXT Reply Ex. II-B-36 at 2-3 and 11-12. These figures lack any probity because there is no information regarding: (1) the commodity being transloaded; (2) the type of truck involved; (3) whether the truck volume was filled before the weight limit was reached; (4) whether both underweight trucks and overweight trucks regularly occurred; (5) how far the truck scales were located from the transload track; and (6) whether operations occurred at night. The Board should disregard CSXT's fleeting invocation of these two unspecified situations.

In addition to challenging the number of truck scales, CSXT critiques M&G's unit costs. CSXT uses a unit cost of {{[redacted]}} for the single truck scale that it says M&G could install at Apple Grove, but this cost is far too low and should be rejected by the Board. CSXT Reply Ex. II-B-36 at 2.[177] In support of this {{[redacted]}} figure, CSXT claims it is based on "inquiries with scale companies." Id. However, no documentation was provided in CSXT's workpapers regarding these inquiries, let alone the scale companies' responses. In contrast, M&G used the actual cost it incurred in 2008 to install a new truck scale, {{ [redacted] }}, as the unit cost for the truck scales needed. M&G Op. Ev. Work Papers "Exhibit II-B-10" at tab "Truck Scale." Given that M&G's cost is based on an actual expenditure at Apple Grove, the Board should use {{[redacted]}} as the unit cost of the truck scales needed.

As an attempt to justify its {{[redacted]}} unit cost, CSXT emphasizes a discovery response wherein M&G stated: {{[redacted]

[redacted]

[177] CSXT claims that the cost it proposed was {{[redacted]}}, but this figure includes design, contingencies, and other items that are added to any construction project. CSXT Reply Ex. II-B-37.

[redacted]}} CSXT Reply Ex. II-B-36 at 2 and 14-15. CSXT blithely ignores the rental scale costs, focusing only on the {{[redacted]}}. Id. at 15 (n. 21). However, if additional scales are needed to provide effective competition, then the costs must be included to ensure competition truly exists. M&G has attached, at Rebuttal Electronic Work Paper "Truck Scale Cost Support", additional support for the actual cost of {{[redacted]}}. See also M&G Op. Ev. at II-B-42. Moreover, the single Apple Grove scale obviously cannot meet the needs of all the truck traffic that CSXT envisions.

(c) Two new locomotives are needed.

Despite the dramatically increased transloading hypothesized by CSXT in its Reply Evidence, CSXT asserts that no additional locomotives would be needed. CSXT Reply Ex. II-B-36 at 11. In support of its view, CSXT claims that only one switch movement per day would be needed, but CSXT is plainly ignoring the mountain of work behind that one assertion. Moreover, CSXT also ignores the multitude of other tasks that occupy the attention of M&G's locomotives, such as:

- moving empty PET cars delivered by CSXT to storage
- moving empty PET cars from storage to production line
- moving loaded PET cars from production line to storage
- preparing outbound string of loaded PET cars for CSXT
- retrieving loaded or partially loaded PET cars from storage for placement on transload track
- pulling empty or partially loaded PET cars from transload track
- placing loaded or partially loaded PET cars near warehouse for creation of packaged PET
- moving loaded PTA cars delivered by CSXT to storage
- preparing outbound string of empty PTA cars for CSXT
- moving loaded cars of PTA and other raw materials from storage to production process
- moving other raw materials delivered by CSXT to storage
- moving empty raw materials cars to outbound string

- placing cars on utility tracks for outside maintenance crew[178]

In general, rail switching to the transload tracks is more complex and time-consuming than simply moving a loaded PET rail car to the outbound interchange tracks for CSXT to pick-up. But, the precariously balanced CSXT plan for transloading {[redacted]} trucks per day would add even greater complexity by requiring extremely precise placement of rail cars on the transload tracks. As described in Part II-B-2.g.(1)(a) and (b), it would not be sufficient to place the cars anywhere on the transload tracks; they would have to be placed in the one exact spot that matches up with the planned sequence of truck arrivals. This extravagant precision means that rail switching to the transload tracks would be much more difficult and time-consuming than it is for M&G today. Consequently, CSXT's transload plan requires more locomotives than M&G currently own.

M&G has three locomotives[179] currently, two on the east side of the CSXT mainline and one on the west side. M&G Op. Ev. at II-B-7. CSXT asserts no additional locomotives are needed because the transload plan would require switching "only once a day." CSXT Reply Ex. II-B-36 at 11 (n. 15). The assertion that only one switch is required is based on the assumption that the one daily switch involves replacing empty rail cars on the transload tracks with loaded rail cars. In reality, though, more than one switch per day would be required for numerous reasons. First, as described above, more than {{[redacted]}} transload spaces would be necessary. Second, CSXT's transload plan is impossibly precise in its expectation that customer orders would match up perfectly with both the grades of PET that may be in partially full cars on the

[178] Under CSXT's proposal for increasing truck loading at Apple Grove, M&G would also have to switch rail cars to and from the car wash facilities.

[179] These are more properly called switch engines rather than locomotives, but M&G will continue to use the term "locomotive" to match CSXT's terminology and avoid creating confusion.

transload tracks and also with the timing of bulk trucks. Third, CSXT ignores all the other uses (many of which are listed above) to which M&G must put its locomotives.

Even if only "one switch" per day were needed, CSXT has conveniently ignored the huge undertaking that it would be. It would involve (1) moving {{[redacted]}} rail cars off the transload tracks; (2) engaging in {{[redacted]}} separate activities to find and select the {{[redacted]}} exact rail cars, from individual scattered locations throughout Apple Grove, that are needed for the next day; (3) switching out those {{[redacted]}} rail cars from locations buried on storage tracks throughout Apple Grove; (4) placing the new {{[redacted]}} rail cars in the exact spots on the transload tracks needed to correspond with the truck arrival times scheduled for the next day; and (5) placing the {{[redacted]}} removed rail cars removed from the transload tracks in the correct places for storage.

CSXT also conveniently ignores the fact that locomotives need regular ongoing maintenance and, additionally, break down at unexpected times. In the Stand-Alone Cost phase of large rate cases, the Board routinely includes "random outages" when developing the stand-alone railroad operating plan. Western Fuels Association, Inc., and Basin Electric Power Cooperative v. BNSF Railway Company, STB Docket No. 42088, slip op. at 17 (served Sept. 10, 2007). To account for the inevitable "random outages" and locomotive maintenance that occur, one spare locomotive is needed for the west side of Apple Grove, and one for the east side.[180] In addition to meeting all the increased switching needs described above, the two locomotives that M&G included in its Opening Evidence are sufficient to act as spares or backup units during random outages.

The concept of random outages is all the more important with a truck-based supply chain. Right now, most of M&G's customers receive PET by rail, and use rail cars for storage.

[180] The CSXT mainline prevents movement of M&G locomotives between the two sides. M&G Op. Ev. at II-B-7. CSXT has not refuted this point.

Therefore, a delay of a few days in transporting a rail car (such as due to mechanical difficulty with an M&G locomotive) to a customer is generally inconsequential because the customer has PET stored on-site. In contrast, a random outage at Apple Grove (such as due to mechanical difficulty with an M&G locomotive) could cause a costly shut-down for a customer that receives its PET primarily by truck.

Two locomotives are also needed due to the extra storage and transload track that is required to load significantly more trucks at Apple Grove . See Part II-B-2.g.(2)(a). The greater the amount of track at Apple Grove, the more time needed to complete an average switching movement. It bears repeating that the current arrangement of Apple Grove involves dead-end or stub-end yard tracks, which is much more problematic for switching than if the tracks were accessible from both ends. M&G Op. Ev. Ex. II-B-2 (current Apple Grove diagram) and Op. Ev. Ex. II-B-16 (diagram of Apple Grove expansion to enable transloading increase). With stub-ended tracks, extricating a single rail car that might be buried deep within one of the storage tracks takes an inordinate amount of time compared to a track accessible at both ends. With an expansion of track, the locomotives would have longer operating distances. The Board should adopt M&G's evidence that two new locomotives would be needed at a total cost of {{[redacted]}}. CSXT has not challenged M&G's unit costs, which are based on actual prices recently paid by M&G.

(d) Two car wash facilities are needed.

CSXT claims that two car washing facilities would not be needed at Apple Grove under a transload scenario for two main reasons. CSXT Reply Ex. II-B-36 at 9-10. First, CSXT asserts that M&G would still have some customers who receive rail deliveries and, consequently, M&G could "rotate" its rail cars to ensure that all rail cars are shipped to customers regularly in order to allow car washing to occur on the empty return. Id. at 10. There is a fatal flaw with CSXT's

reasoning. M&G's complaint in this case included most Apple Grove rail traffic, and CSXT has disputed market dominance for the heaviest traffic lanes in its Reply. Therefore, the vast majority of traffic volume is covered in the 43 lanes where CSXT disputes market dominance. There simply is insufficient rail traffic in the remaining 26 lanes to enable "rotating" all of the rail cars that would be used for transloading 43 lanes worth of trucks at Apple Grove.

Second, CSXT states that M&G could continue to send its rail cars off-site to a car washing facility, just as it does today, without any additional cost. Id. at 9-10. But, there would in fact be additional costs. Currently, rail cars are sent for washing on the empty return from an M&G customer. The cars are dropped off at the car wash facility at {[redacted]} as a diversion at no charge to M&G. After washing, M&G pays CSXT a rate of {[redacted]} for movement of the cleaned cars to Apple Grove.[181] Under CSXT's plan, however, M&G would have to pay a round-trip rate to CSXT, {[redacted]}, to send cars to and from the car wash facility. M&G's ongoing costs would significantly increase without Apple Grove car wash facilities.

The unit costs included by M&G for the two rail car washing facilities, totaling {{[redacted]}}, are appropriate and have not been challenged by CSXT. M&G Op. Ev. at II-B-41. Two car wash facilities would be needed because the CSXT mainline splits the Apple Grove facility in half. Any switch of rail cars across the mainline must be performed by CSXT for a fee, a fact that CSXT has not refuted. M&G Op. Ev. at II-B-7. With only one car wash facility, M&G would have to rely on CSXT to provide switching movements across the mainline, which would not enable M&G to avoid CSXT rail service.

[181] {{[redacted]}}

(e) The lighting plan and costs included by M&G are necessary and reasonable.

CSXT claims that M&G has used an excessive cost for lighting and has, instead, proposed lighting at a cost of only {{[redacted]}}. CSXT Reply Ex. II-B-36 at 1 and 14. But CSXT incorrectly assumes that M&G's lighting proposal only covers the transload tracks. CSXT's plan for transloading 12 hours per day would obviously require night-time rail switching between the transload tracks and the storage tracks. Therefore, all storage tracks would need to be lighted. To meet this need, M&G's Opening Evidence included tall 115-foot towers that illuminate not just the transload tracks, but the storage tracks as well. M&G Op. Ev. at II-B-42 ("M&G has included {{[redacted]}} to construct lighting around both the transload and storage tracks").

CSXT is therefore incorrect in its assumption that M&G's proposal only covers lighting for the transload tracks. CSXT Reply Ex. II-B-36 at 14 { [redacted] }. The 115-foot towers included by M&G would each illuminate a much larger area than the 30-foot light poles proposed by CSXT. Lighting all storage tracks would be necessary for switching purposes, for safety reasons, and to ensure that the correct rail cars are switching to and from the transload tracks. Safety is a large issue because Apple Grove is a manufacturing facility that operates continuously. CSXT claims that 30-foot light poles are "generally...used" at transloading facilities (CSXT Reply Ex. II-B-36 at 14, n. 20), but Apple Grove is not a transloading facility; it is a manufacturing facility where transloading would only be incidental to the ongoing manufacturing of PET. CSXT's proposal for locomotive switching to regularly occur in the dark through a complex and continually operating manufacturing facility is a recipe for disaster. The Board should adopt {{[redacted]}}

as the necessary cost for lighting if M&G were to drastically increase truck loading at Apple Grove.

(f) M&G's costs for expanded roadway, truck staging, and paving are appropriate, and are the only intelligible evidence of record on these issues.

The Board should reject CSXT's evidence on the issues of roadway, truck staging, and paving because the evidence is internally inconsistent, making it impossible to determine CSXT's position on these issues. M&G has provided the only coherent evidence on this topic, and M&G has supported its evidence with reference to state regulations and trucking company concerns – neither of which have been challenged by CSXT.

Initially, CSXT appears to reject M&G's inclusion of a truck staging area to handle the dramatic increase in transloading to avoid CSXT rail service. CSXT states that, {{[redacted]}} CSXT Reply Ex. II-B-36 at 12. A few sentences later, though, CSXT seems to change course, and finds a truck staging area "necessary" and, consequently, {{[redacted]}} Id. at 12-13.[182] In support of its position, CSXT cites to its Reply Exhibit II-B-37 "and Guido workpapers." Id. at 13. However, there is no mention of {{[redacted]}} anywhere in either Reply Exhibit II-B-37 or the Guido workpapers. {{[redacted]}} also do not appear in the CSXT "Conceptual Track Plan" at Reply Exhibit II-B-38. In the end, it is entirely unclear whether CSXT believes a truck staging area would be necessary or not to handle a large-scale switch of Apple Grove rail traffic to trucks.

[182] CSXT may be endeavoring to make some distinction between truck parking and truck staging, but it has not explained what that distinction might be. M&G clearly included only one area for truck staging and parking – located in the far southeastern corner of the Apple Grove site. See M&G Op. Ev. Ex. II-B-15. It should be obvious that when a truck is "staged," it is parked and not moving.

Similar murkiness infects CSXT's position on construction of roadways to handle the increased truck traffic. As noted above, CSXT unequivocally states that {{ }} CSXT Reply Ex. II-B-36 at 12. Evaluation of CSXT Reply Exhibit II-B-37 presents a different story however. CSXT has included {{ }}. Confusion reigns in trying to decipher CSXT's position.

Finally, CSXT's roadway plan, as revealed in the "Conceptual Track Plan", would require expensive removal and/or demolition of propane tanks, diesel and gas fuel tanks, a carport, and a large metal superstructure. CSXT has not included costs for this removal and/or demolition, or even mentioned this need. The "Conceptual Track Plan" plainly shows {{ }} CSXT Reply Ex. II-B-38. M&G's Apple Grove diagram reveals that there are actually several structures in this area, propane tanks, gasoline storage tanks (these tanks also hold diesel), and a carport. M&G Op. Ev. at Ex. II-B-2. Photos taken by CSXT confirm the existence of these structures.[183] Hence, CSXT's position on roadways and truck staging is not

[183] See, e.g., CSXT Reply workpapers, folder "II-B", folder "Apple Grove, WV Plant", still photos IMG_607 (showing diesel tanks on the right), 608 (showing diesel and gas tanks on the right), 609 (showing propane, carport, and large metal frame structure on the right), and 610 (showing diesel tanks and carport on left).

only hopelessly confusing and self-contradictory, but CSXT has failed to consider the costs of removing the propane tanks, gas and diesel storage tanks, carport, and large metal superstructure.

The Board should accept M&G's evidence regarding the roads and truck staging area needed. M&G Op. Ev. at II-B-40 to 41. M&G has specified that these roads and the staging area, as well as the transload areas and the existing gravel roads leading to the western side of Apple Grove, should be paved due to the significant increase in heavy truck traffic under a transloading plan, which would total {{[redacted]}} additional trucks per year. See CSXT Reply at II-64. Despite this increase, CSXT believes no paving is necessary anywhere at Apple Grove. CSXT Reply Ex. II-B-36 at 12, and Reply Ex. II-B-37 at 1 (specifying a "crushed stone" road).

CSXT is incorrect in its short-sighted view that paving would not be needed. The roads at Apple Grove were not designed for frequent traffic with 80,000-pound trucks. The increase in truck traffic contemplated under a transload plan would cause several problems unless the roads, staging area, and transload areas were paved. First, 80,000-pound bulk trucks would quickly cause deterioration of a gravel road – ruts would develop, and a mud-pit would be created in the aftermath of heavy precipitation. Freeze-thaw cycles, in combination with heavy trucks, generally wreak havoc on unpaved roads. Second, dry weather would result in serious dust issues from the frequent passage of heavy bulk trucks. As M&G stated at page II-B-40 of its Opening Evidence, West Virginia state regulations require facilities such as Apple Grove to control particulate emissions from roads. CSXT has not refuted the applicability of these regulations. In fact, the state EPA regularly inspects Apple Grove for spilled pellets and airborne dust.

Dirty bulk trucks would also result from unpaved surfaces. As M&G has frequently emphasized, PET customers are very strict about contamination and potential contamination of

their product. The more dust and dirt on a bulk truck's surfaces, the more likely it is that PET contamination would result during transloading or unloading at the customer facility.

CSXT's own evidence shows that paving is standard practice in the industry, thus refuting its assertion that paving is completely unnecessary anywhere at Apple Grove. As described above, CSXT and {[redacted]} recently built {{[redacted]}} as part of a joint venture at a PET manufacturing facility in {[redacted]}. See Part II-B-2.g.(1)(c), supra. {{[redacted]}}

The video offered into evidence by CSXT includes not just footage from Apple Grove, but also footage from an unnamed transload location. This video clearly shows {{[redacted]}}[186] {{[redacted]}}[187] {{[redacted]}}

[184] [redacted]

[185] [redacted]

[186] {{[redacted]}}

[187] See Reply Ex. II-B-1 (video, between 5:25 and 5:32).

[redacted]

[redacted]}} Paving is clearly standard practice in the industry, and for good reason.

The Board should reject CSXT's confusing and contradictory evidence – it is impossible to determine what CSXT's position is, and the positions it does espouse are contradicted by subsequent statements and the {[redacted]} information. The Board should adopt the {{[redacted]}} cost used by M&G for the necessary roads, staging, and paving.[188]

(g) A larger guardhouse is needed.

In its Opening Evidence, at page II-B-42, M&G erroneously stated that its evidence was for "an additional guardhouse." In actuality, M&G's witness Rogers simply specified a larger replacement guardhouse at a cost of {{[redacted]}}. Thus, M&G's position is not that two guardhouses are needed; instead, the current guardhouse, having a footprint of only about 5 feet by 8 feet, is simply too small to handle the large increase in truck traffic that would occur under a transload plan. The small size of the current guardhouse is evident from photographs taken by CSXT.[189]

To support the cost of {{[redacted]}} for the replacement guardhouse, M&G witness Rogers relied upon an estimate prepared in 2003 by M&G and CDI Engineering when M&G was considering replacing its Apple Grove guardhouse.[190] M&G never implemented this plan.

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[188] If the Board does not accept M&G's inclusion of {{[redacted]}} new truck scales, which would allow the scales to be installed adjacent to the transload tracks so that trucks can transload while monitoring the weight, then paving of the transload areas would be needed for another reason. Uneven transload areas make it difficult for trucks to load to the proper weight, thus creating numerous over-weight and under-weight trucks. See M&G Op. Ev. at II-B-40 (n. 24).

[189] See, e.g., Reply workpapers, folder "II-B", folder "Apple Grove, WV Plant", still photo IMG_605.

[190] See M&G Opening Evidence, MD Electronic Work Paper, "Exhibit II-B-14" at sheet "Guardhouse".

However, it is obvious from the work papers that the guardhouse was much larger than Apple Grove's current small structure. The proposed guardhouse would be 23' by 20'6" by 10'4".[191]

In addition to bulk trucks for PET, the guardhouse must check-in and screen a wide range of vehicle traffic, including:

- package trucks for packaged PET traffic
- truck deliveries of some minor raw materials
- truck deliveries of equipment
- outside contractors
- UPS, FedEx, and similar delivery services
- trucks for overseas PET shipments
- vendors
- visitors and other non-employees

Occasionally, barge delivery of ethylene glycol[192] is disrupted due to river levels (either too high or too low), problems at the river locks, or other issues. {{[redacted]}} Finally, since Apple Grove has an Ohio River dock that it uses to receive these deliveries of ethylene glycol by barge, the guardhouse must also enforce U.S. Coast Guard security regulations, including rules that relate to MARSEC – the maritime security warning system.

A significant increase in truck traffic would necessitate a larger guardhouse because of the additional paperwork, personnel, and processing that would be needed. There is barely enough room for just one person in the existing 5' x 8' structure. In order to efficiently process {[redacted]} additional trucks daily, plus all of the other vehicle traffic that enters and exists Apple Grove, M&G would require multiple guards per shift. It is unreasonable to expect two guards to cram into the current 5' x 8' room along with a desk, computer and cabinets. Therefore, a

[191] Id.

[192] Ethylene glycol is also known as monoethylene glycol, or "MEG".

replacement guardhouse would be needed, and the Board should adopt M&G's cost of {{[redacted]}} for such guardhouse.

(h) The Board should adopt M&G's fencing cost.

M&G and CSXT included different costs for fencing in their capital investment estimates, but these differences appear entirely related to the parties' differences on the issue of additional track needed. The track added by M&G's plan requires building and/or relocating a large area of fencing at the extreme northwestern corner of the Apple Grove site, as well as a similar but smaller fence at the southeastern corner. M&G Op. Ev. at Ex. II-B-15. On the other hand, CSXT's new fence only extends a short distance around the two new transload tracks that CSXT proposes. CSXT Reply Ex. II-B-38. As M&G demonstrated above, the Board should adopt M&G's plan for the new track needed, and, consequently, the Board should also adopt M&G's fence cost of {{[redacted]}}. M&G Op. Ev. at II-B-42.

(i) M&G's operating costs would increase if truck transloading increased.

In its Opening Evidence at pages II-B-43 to 46, M&G showed that its operating costs correlate with bulk truck traffic, such that an increase in bulk truck traffic would also increase M&G's operating costs. CSXT purports to disagree, and claims that M&G would incur no additional operating costs whatsoever. CSXT Reply at II-65 to 67. The Board should reject CSXT's head-in-the-sand view that nothing would change if M&G fundamentally transforms the way it does business. Moreover, CSXT's own evidence confirms the inevitability of many of these increased operating costs.

CSXT proposes that transloading at Apple Grove could occur 12 hours each weekday. CSXT Reply Ex. II-B-36 at 2 (n. 4). Therefore, apparently, CSXT is assuming that rail car switching can occur at night, but this night-time rail switching inevitably requires additional

costs that CSXT has both omitted and criticized M&G for including. In other words, CSXT's own plan confirms the legitimacy of many of M&G's costs.

First, night-time rail switching would require M&G to hire six (6) new employees, at a total cost of {{ }} per person, to switch rail cars to and from the transload tracks. M&G Op. Ev. at II-B-45. The {{ }} represents the average cost to M&G for wages, benefits, taxes, etc. for an hourly employee. See M&G Reb. Ex. II-B-25. These new employees would be in addition to M&G's current rail switch crews, who would still be needed to provide all the regular switching activities at Apple Grove (M&G Op. Ev. at II-B-7 to 10). M&G currently has {{ }}. CSXT has proposed transloading 12 hours per day, which would require rail switching at night. {{ }}; hence, M&G would need six new employees for rail switching.

Similarly, CSXT's evidence shows the need for additional M&G employees to assist with and supervise the actual transload process. M&G must ensure that truck drivers attach to the correct rail car compartment, and M&G assists when necessary with the transload operation.[193] CSXT's own evidence reveals this to be the actual procedure.[194] Again, the employee cost of {{ }} each represents the average cost incurred by M&G, inclusive of salary and all benefits, for hourly employees. See M&G Reb. Ex. II-B-25.

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[193] Truck drivers sometimes transload from the wrong rail car, or from the wrong compartment in the correct rail car. Similarly, sometimes truck drivers unload into the incorrect silo at a customer location. Direction and supervision of the bulk truck transload and unload process is necessary for both M&G and its customers. See, e.g., M&G Reb. Ex. 33 (truck transloads from wrong rail car at a bulk terminal).

[194] See, e.g., CSXT Reply workpapers, folder "II-B", folder "Apple Grove, WV Plant", still photos IMG_627 to 629, 634, and 636-640. See also CSXT Reply Ex. II-B-1 (video, between 2:30 and 2:40).

As part of its Opening Evidence, M&G provided a list of tasks associated with truck shipments compared with rail shipments. M&G Op. Ev. at II-B-44. CSXT claims that the Board can discount or disregard eleven of the employee functions because they are "performed entirely or primarily by the motor carrier." CSXT Reply at II-65 to 66. As an initial matter, M&G provided the list of tasks to demonstrate that trucking is more complex, with more possibilities for the process to get delayed or hindered. Moreover, CSXT is incorrect that 11 of the tasks can be disregarded. Step #8 (verify driver and truck compliance) is entirely M&G's responsibility.[195] Step #17 (check-out process) occurs jointly between the truck driver and M&G. Step Nos. 9 (empty weigh), 10 (proceed to designated rail car compartment), and 12–16 (involving full weight, over/under-weight, heels, etc.) all require M&G to participate and direct the truck driver. Step Nos. 7 and 18 require communication and coordination among M&G, its customer, and the motor carrier to ensure the truck arrives when the customer can accept it. These two steps can consume significant M&G employee time. Some of the common recurring issues are {{

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

[195] This step is crucial. See, e.g., M&G Reb. Ex. II-B-34 {{[redacted]}}

- [redacted]
- [redacted]
- [redacted]

}}

See M&G Reb. Ex. II-B-35.

The list of tasks associated with truck shipments, as highlighted by the examples above, validate M&G's statement that two new customer service employees would be needed, one for processing freight payments, and another for Quality Assurance. CSXT asserts that M&G's evidence is "devoid" of a description of the duties of the extra personnel needed (CSXT Reply at II-66), but pages II-B-43 to 46 of M&G's Opening Evidence provide a detailed description of the duties. It is unclear what additional evidence CSXT contends is needed.

Finally, CSXT suggests that the extra operating costs demonstrated by M&G could be entirely avoided by contracting with a motor carrier to provide all these functions. CSXT Reply at II-66. CSXT's position does not withstand scrutiny because many of the steps listed at page II-B-44 can only be performed by M&G. Moreover, CSXT's unsupported suggestion amounts to meaningless conjecture: CSXT claims it is "common" for this to occur in the industry, that motor carriers "often" do not charge for this service, and that this service "typically" would be less costly. CSXT does not provide any examples, and its suggestion is too fraught with "maybes" to amount to anything.

(j) Increased transloading would not generate rail car savings.

CSXT asserts that M&G "potentially could reduce the number of rail cars it leases" under the CSXT proposal to dramatically increase transloading at Apple Grove. CSXT Reply Ex. II-B-36 at 5. The ambivalence of CSXT's assertion masks a simple fact – M&G definitely could not reduce the number of rail cars it leases.

For lanes where CSXT proposes direct truck service in place of CSXT rail service,[196] M&G still requires the rail cars to store PET until sold. CSXT also proposes that M&G solve the problem of insufficient storage capacity at customer facilities by simply transloading into M&G rail cars for storage at the customers' facilities. CSXT Reply at II-52 (n. 54) ("bulk trucks could blow PET into an M&G railcar on the customer's property"). As recognized by CSXT, M&G would have to provide rail cars to the customers for storage of PET delivered in trucks. Indeed, the only possible way that M&G could retain these customers' business, and prevent them from simply switching to another PET supplier (one who could meet the customers' needs by delivering PET in rail cars), is by providing, free of charge, a storage solution for the customers.[197] Therefore, M&G could not reduce its rail car usage and, in fact, might have to increase it. A single movement would use two rail cars: the car at Apple Grove out of which the bulk trucks would transload, and the car at the customer facility for storage. The offer of a free rail car for storage still might not be enough because some customers do not have truck access to their rail storage tracks; a transload back into a rail car might not even be possible.

For lanes where CSXT proposes that M&G provide a rail-to-truck transload movement in place of CSXT rail service,[198] the need for continuing lease of rail cars is obvious: most of the movement would still occur via rail service. Some movements in this group actually would require two "staged" rail cars.[199] For example, as an alternative to Lane B-1 (Altamira to Apple Grove), CSXT proposes rail service from Altamira to Columbus, transloading into a truck, truck

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[196] Lanes A-1, 4, 5, 8, 10, 11, 14, and 17; and Lanes B-8, 10, 11, 14, 15, 18, 19, 20, 32, 34, 35, 39 and 41. CSXT Reply Ex. II-B-3 ("Direct Truck Alternatives").

[197] Of course, transloading into a rail car at a customer facility would not be possible due to the PET degradation problem that would result from this double-transload movement. See Part II-B-2.f.

[198] Lanes B-1, 2, 3, 4, 5, 6, 48, 49, and 50. Reply at II-41 to II-45. CSXT Reply Ex. II-B-3 ("Transload Facility to Truck for Western Origin Movements").

[199] Lanes B-1, 2, and 48. Because Apple Grove and Belpre do not have storage silos, a truck shipment of PET received at those destinations would have to be transloaded into a rail car.

service to Apple Grove, and then transloading back into a second rail car at Apple Grove. CSXT Reply at II-44. Where M&G's current transportation uses one rail car, CSXT proposes that two separate rail cars be used.

For lanes where CSXT proposes truck-to-rail transloading,[200] M&G's need for rail cars could also increase. As stated by CSXT, "empty hopper cars staged at" a bulk terminal would receive transloaded PET from trucks. CSXT Reply at II-43. In other words, M&G would have to maintain "staged" fleets of rail cars at all of the various transload locations proposed by CSXT; these rail cars would be sitting, waiting for not just one, but four separate truck deliveries before the rail car could be transported to the destination.[201] Thus, a rail car would be required at both the origin and intermediate transload point.

As shown in his work papers, CSXT's witness Heisler {{[redacted]}}

(k) Truck capacity and driver constraints are real.

CSXT asserts that M&G's "own business decisions" have created the truck capacity problems that M&G described at pages II-B-46 to 50 of its Opening Evidence. CSXT Reply at II-67. Specifically, CSXT contends that the truck capacity issue arises because (1) M&G "calls

[200] Lanes B-7, 8, 9, 10, 15, 16, 18, 19, 21, 22, 24, 25, 26, 30, 32, 33, 34, 36, 37, and 40. CSXT Reply Ex. II-B-3 ("Truck to Transload Facility at Current Interchange Point" and "Truck to Lima Transload Facility for Rail Transportation to Chicago").

[201] M&G would also have to dedicate these staged rail cars to separate classes of PET to avoid cross-contamination from one grade to another. Hence, even larger numbers of rail cars would need to be staged at the transload sites. At some point, too, M&G would have to pay to send these cars to be washed.

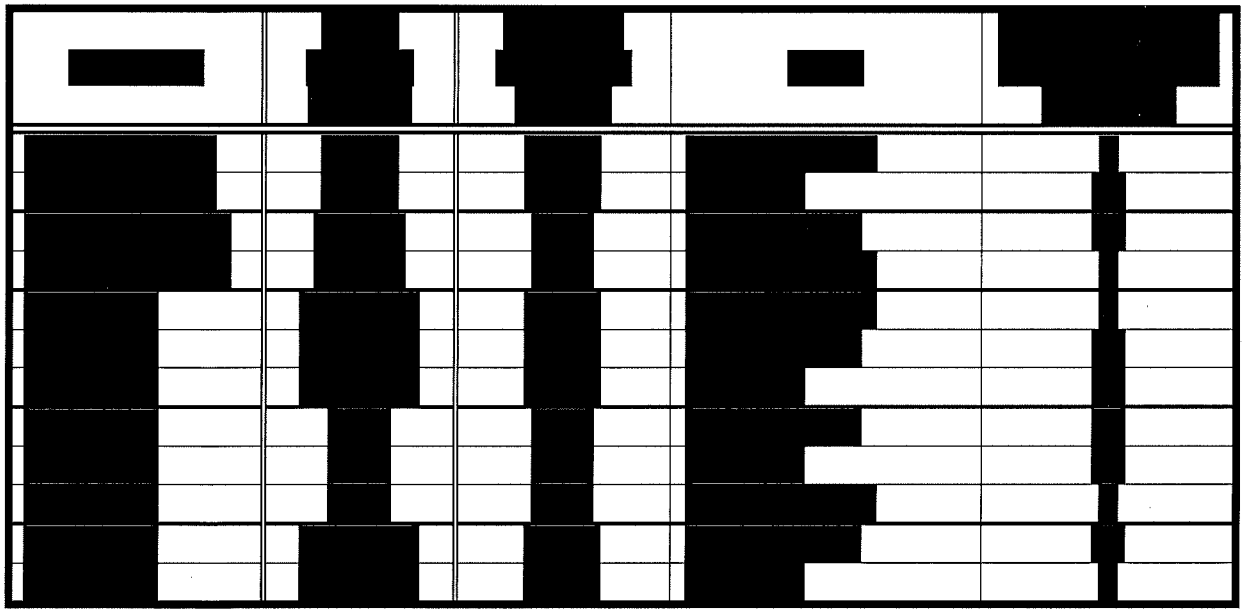
motor carriers for 'spot' service...on very short notice", (2) M&G has chosen to make "ad hoc requests for service", and (3) M&G gives motor carriers "almost no advance notice of its need for truck deliveries." Id. at II-67, 68 and 70. CSXT's contention is based on a faulty premise: it is not M&G's "choice" to give motor carriers "short notice" or make "ad hoc requests." M&G contacts motor carriers immediately upon receiving a customer order for a truck delivery. Any "short notice" is not due to M&G's action; it is based on the customers' requests. M&G Op. Ev. at II-B-45. M&G responds quickly to secure truck transportation when customers order trucks. To the extent any truck scheduling is on an "ad hoc" basis, it is only due to the constraints of the marketplace and the way the PET industry operates; it is not due to M&G's "business decision."

In its Opening Evidence, at II-B-45, M&G described in great detail the fact that customers precisely schedule truck shipments, and frequently revise or cancel such shipments, because customers have limited or no silo storage space. Thus, trucks must often be timed correctly in order to unload directly into the customer's production process. CSXT has not refuted this description and, indeed, this type of precise scheduling, not to mention frequent revisions, is one of the reasons that customers do not order trucks far in advance of when needed.

CSXT notes that {{ [redacted] }}

CSXT notes also that {{ [redacted]

[redacted]



[redacted] }}

[202] These rates are found in CSXT Reply Ex. II-B-42 at M&G-HC-008530.

[203] See M&G Reb. Electronic Work Paper "Truck rates current 12-6-10." M&G produced this spreadsheet to CSXT on a DVD labeled "M&G-HC-DVD-000012" {{ [redacted] }}

CSXT also claims that M&G could "likely" obtain lower trucking rates if it provided a volume commitment to trucking companies. CSXT Reply at II-67 to 68. {{[redacted]}} Obviously, a volume commitment is not the panacea that CSXT makes it out to be. Indeed, {{[redacted]}}

3. LANE SUMMARIES

Similar to Part II-B-4 of M&G's Opening Evidence, this subpart addresses each case lane individually by summarizing key facts, referencing the applicable factors discussed in Part II-B-2, and discussing matters specific to individual lanes. M&G has included the alternative(s) that CSXT asserts provide effective competition, as well as a response by M&G to CSXT's assertion. The footnotes in the sample chart provide the source of the data, and will not be repeated for each lane because the source is the same.

Lane #	Origin-Destination	CSXT tariff rate[1] and route	R/VC[2]
Alternative transportation proposed by CSXT[3]	**Rate asserted by CSXT for alternative[5]**	**Restatement by M&G of rate for alternative[6]**	**M&G description of feasibility of alternative[4]**

[1] This is the CSXT tariff and fuel surcharge as of 1Q2011 from M&G Reb. Ex. II-A-5.
[2] The R/VC calculations are from M&G Reb. Ex. II-A-5, which calculates the R/VC as of 1Q2011.
[3] See CSXT Reply Ex. II-B-2.
[4] See CSXT Reply Ex. II-B-2 and Ex. II-B-3.
[5] See M&G Reb. Ex. II-B-27.
[6] See M&G Rebuttal Part II-B-2.a.

Lane A-1: Apple Grove, WV to Belpre, OH

A-1	Apple Grove, WV to Belpre, OH	CSXT tariff $2616, route Apple Grove-Belpre	R/VC 314%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to bulk terminal in Belpre, OH.	{{[redacted]}}	{{[redacted]}}	Not effective competition because Belpre is not the ultimate destination. PET would have to be transloaded into rail cars at Belpre, creating an impermissible double-transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f. Other reasons apply, as described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. Transportation in this lane from Apple Grove to Belpre is for the purpose of storing loaded rail cars of PET, eventually followed by truck or rail shipment to M&G's customers.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's facility in Apple Grove, WV to the Bulkmatic Terminal in Belpre, OH.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. This movement precedes Lanes A-12 to A-16, and Lanes B-36 to B-46.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record. Therefore, the Board should also reject CSXT's alternatives for these lanes because, in combination with Lane A-1, the PET would be transloaded three or four times in Lanes A-12 to A-16 and B-36 to B-46, something even CSXT's own experts have not endorsed.
4. {[redacted]}	4. {[redacted]}	4. {[redacted]}

	[redacted] } *See supra* at II.B.2.g.i.	[redacted] }
5. Truck shipments to Belpre would require at least two transloads, once at Apple Grove and once at Belpre (for transfer into rail car for storage), and additional transloads would be needed for subsequent truck shipments to customers. Product quality concerns prevent any route that requires more than one transload. See Part II-B-3.a.(2).	5. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	5. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. The need for rail on this lane is consistent with {{ [redacted] }}.	6. **Truck volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	6. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
7. Truck and transload rates are not applicable because it would be irrational to ship trucks to a lease track and terminal which has no storage silos. Even if silos existed, truck transportation to Belpre would mean that the ultimate transportation to M&G's customers would require an excessive number of transloads from a product quality perspective. See Part II-B-3.a.(2). Additionally, any rail shipments to or from Belpre would still be captive to	7. **Transloads into railcars are not "irrational".** M&G currently completes {{ [redacted] }} transloads at Belpre and Apple Grove. It is not "irrational" to ship truckloads of PET to Belpre to be blown into railcars for storage. {{ [redacted] }} And whether or not any other rail shipments from Belpre would be "captive" to CSXT is irrelevant to whether	7. M&G witness Granatelli states that transloading from trucks into rail cars almost never occurs and is usually an act of desperation to prevent a customer from running out of polymer. See Part II-B-2.b.(2). {{ [redacted] }} See

CSXT.	CSXT has market dominance over this lane of traffic.	Part II-B-2.f. Product quality concerns are well-known in the industry. CSXT has not shown that any double-transloads occur anywhere in the polymer industry as a regular course of business. Publicly available information, including from CSXT itself, confirms that double transloads and truck-to-rail transloads are not even mentioned in industry descriptions. See Part II-B-2.d.
8. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a(4)(b).	8. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane A-4: Apple Grove, WV to Clifton Forge, VA

A-4	Apple Grove, WV to Clifton Forge, VA	CSXT tariff $3990, route Apple Grove-Clifton Forge	R/VC 324%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Clifton Forge, VA.	{{ }}	{{ }}	Not effective competition due to {{ }} alternative, limitations on truck loading at Apple Grove, {{ }} and other reasons. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { }.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove plant to the customer location in Clifton Forge, VA.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ }} *See supra* at § II.B.2.d.	3. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ }}. See Part II-B-2.e.(1)(f).
4. Direct Truck rate is {{ }}	4. **Cost of alternative**. Alternative	4. Although CSXT claims the rate is "cost-

M&G Opening	CSXT Reply	M&G Rebuttal
the through rail rate. See Part II-B-3.a.(4).	transportation via direct truck service to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	competitive", comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4). Moreover, the alternative proposed by CSXT has a rate {{ }} the CSXT tariff.
5. Transload rate does not apply because transloading would require at least three transloads (at Apple Grove to load the bulk truck and at the bulk terminals near the origin and destination), thus implicating product integrity concerns. See Part II-B-3.a.(2).	5. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ }} Moreover, standard quality control measures—{ }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	5. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	6. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	6. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
7. The need for rail on this lane is consistent with {{ }}.	7. **Truck Volumes**. {{ }} does not demonstrate CSXT's market dominance in light of M&G's	7. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given

M&G Opening	CSXT Reply	M&G Rebuttal
	extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b. Further, M&G would only have had to utilize {{ [redacted] }} trucks to satisfy the entire volume for this customer over the last 3 years.	that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
8. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	8. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane A-5: Apple Grove, WV to Devon, KY

A-5	Apple Grove, WV to Devon, KY	CSXT tariff rate $2856, route Apple Grove-Devon	R/VC 279%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Devon, KY.	{{ }}	{{ }}	Not effective competition because rate for alternative is {{ }} CSXT tariff. See Part II-B-2.a.(3). Additional reasons are described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { }.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to delivery location in Devon, KY.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. The destination city is sometimes identified as Florence, KY or Cincinnati, OH in M&G's traffic data.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. { }	4. { } *See supra* at II.B.2.g.i.	4. { }
5. {{ }}	5. {{ }	5. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{ }

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }}	[redacted] }}
6. {{ [redacted] }}	6. {{ [redacted] }} *See supra* at II.B.2.g.i.	6. {{ [redacted] }}
7. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	7. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	7. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).

M&G Opening	CSXT Reply	M&G Rebuttal
8. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	8. **Cost of alternative**. Alternative transportation via truck service to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	8. Although CSXT claims the rate is "cost-competitive", comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4). Moreover, the alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff.
9. Transload rate does not apply because transloading would require at least three transloads (at Apple Grove to load the bulk truck and at the bulk terminals near the origin and destination), thus implicating product integrity concerns. See Part II-B-3.a.(2).	9. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	9. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
10. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	10. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	10. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
11. The need for rail on this lane is consistent with {{ [redacted] }}.	11. **Truck Volumes**. {{ [redacted]	11. {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	[redacted] }}
12. {{ [redacted] }}	12. {{ [redacted] }}	12. CSXT is wrong; the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under exigent circumstances. See Part II-B-2.f.(3). {{ [redacted] .}}
13. Cumulative 2008-2010 CSXT rate increase: { [redacted] . } See Part II-B-3.a.(4)(b).	13. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	13. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane A-8: Apple Grove, WV to Parkersburg, WV

A-8	Apple Grove, WV to Parkersburg, WV	CSXT tariff $2615, route Apple Grove-Parkersburg	R/VC 316%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to CSXT rail yard in Parkersburg, WV.	{{[redacted]}}	{{[redacted]}}	Not effective competition because destination is a CSXT rail yard, not an end-user. Rail yard is not a transload site, trucking would impermissibly require double-transload due to need to transload into rail cars at Parkersburg, and site is uncovered, and other reasons. See below and Part II-B-2.a.

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from Apple Grove to Parkersburg for storage, eventually followed by rail shipment to M&G's customers.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's facility in Apple Grove, WV to the CSXT track in Parkersburg, WV.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Truck shipments to Parkersburg require the consent of CSXT, because Parkersburg is not a transload location and the track is owned by CSXT and leased to M&G for storage. Even if transloading were possible, at least two transloads would be required, once at Apple Grove and once at Parkersburg (for transfer into rail car for storage), and additional transloads would be needed for subsequent truck shipments to customers. Product quality concerns	3. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}} Moreover, standard quality control measures—{[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii. M&G has not produced any	3. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.

M&G Opening	CSXT Reply	M&G Rebuttal
prevent any route that requires more than one transload. See Part II-B-3.a.(2).	evidence that CSXT would not consent to truck transloading at Parkersburg.	
4. The need for rail on this lane is consistent with {{ [redacted] }}.	4. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	4. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
5. Truck and transload rates are not applicable because it would be irrational to ship trucks to a lease track. Even if truck transportation could occur, any rail shipments to or from Parkersburg would still be captive to CSXT and M&G would have to position empty rail cars at Parkersburg to receive the shipments.	5. **Transloads are not "irrational".** Transloading equipment is self-contained in the truck, making it easy to transload PET at the Parkersburg facility. M&G does not identify the conditions at Parkersburg that would raise safety concerns or quality risks. And whether or not any other rail shipments to or from Parkersburg would be "captive" to CSXT is irrelevant to whether CSXT has market dominance over this lane of traffic.	5. M&G witness Granatelli states that transloading from trucks into rail cars almost never occurs and is usually an act of desperation to prevent a customer from running out of polymer. See Part II-B-2.b.(2). {{ [redacted] }} See Part II-B-2.f. Product quality concerns are well-known in the industry. CSXT has not shown that any double-transloads occur anywhere in the polymer industry as a regular course of business. Publicly available information, including from CSXT itself, confirms that double transloads and truck-to-rail transloads are not even mentioned in industry descriptions. See Part II-B-2.d.
6. M&G cannot cost-effectively	6. **Plant reconfiguration.** M&G would	6. CSXT wildly inflates M&G's current

M&G Opening	CSXT Reply	M&G Rebuttal
reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
7. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	7. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	7. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane A-10: Apple Grove, WV to Rochester, NY

A-10	Apple Grove, WV to Rochester, NY	CSXT tariff $8780, route Apple Grove-Rochester	R/VC 458%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Rochester, NY.	{{ }}	{{ }}	Not effective competition due to limitations on truck loading at Apple Grove, {{ }} { }, and other reasons. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { }.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to delivery location in Rochester, NY.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. { }	3. { } *See supra* at II.B.2.g.i.	3. { }
4. {{ }}	4. {{ }}	4. {{ }}
5. {{	5. {{	5. {{

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}	[redacted] }} *See supra* at II.B.2.g.i.	[redacted] }}
6. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	6. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	6. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).
7. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	7. **Cost of alternative**. Alternative transportation via truck service to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	7. Although CSXT claims the rate is "cost-competitive", comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
8. Transload rate does not apply because transloading would require at least three transloads (at Apple Grove to load the bulk	8. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted]	8. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a

M&G Opening	CSXT Reply	M&G Rebuttal
truck and at the bulk terminals near the origin and destination), thus implicating product integrity concerns. See Part II-B-3.a.(2).	[redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
9. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	9. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	9. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
10. The need for rail on this lane is consistent with {{ [redacted] }}.	10. **Truck Volumes**. {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	10. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
11. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	11. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	11. CSXT's claim that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.a.(4)(d).

Lane A-11: Belpre, OH to Apple Grove, WV

A-11	Belpre, OH to Apple Grove, WV	CSXT tariff $3182, route Belpre-Apple Grove	R/VC 385%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from bulk terminal in Belpre, OH to M&G facility in Apple Grove, WV.	{{ [redacted] }}	{{ [redacted] }}	Not effective competition because would require double-transload (from rail cars at Belpre, and into rail cars at Apple Grove), thus preventing use of PET for packaging and sale to customers. Also, Apple Grove does not have a covered site for truck to rail transloads. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. Transportation in this lane from Belpre to Apple Grove consists of partially-filled rail cars and PET returned for recycling or packaging.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the Bulkmatic Terminal in Belpre, OH to M&G's facility in Apple Grove, WV.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Although the direct truck rate {{ [redacted] }}, CSXT has increased its rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	3. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	3. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
4. Any savings from truck shipments would be offset by the need to transport the empty rail car back to Apple Grove via CSXT, which effectively forecloses	4. **Cost savings**. M&G has the ability to truck both to and from Apple Grove, WV thereby eliminating the costs of transporting empty rail cars between the	4. Belpre is a rail yard where trucks can be transloaded from rail cars. Using trucks for transportation to and/or from Belpre would require transloading into and out of rail

M&G Opening	CSXT Reply	M&G Rebuttal
transloading as an option.	two facilities.	cars, thus creating multiple transloads and implicating product integrity concerns. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
5. M&G uses the rail cars to store the product at Apple Grove. See Part II-B-3.a.(1)(b).	5. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	5. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).
6. Even if truck transportation could occur, inbound rail shipments to Belpre remain captive to CSXT.	6. **Captive to CSXT.** Whether or not rail shipments to Belpre allegedly would be "captive" to CSXT is irrelevant to whether CSXT has market dominance over this lane of traffic.	6. Belpre is sole-served by CSXT, but is not an end-user location, therefore all rail cars at Belpre must be transported there by CSXT. Any PET trucked from Belpre must also absorb the price of CSXT rail transportation to Belpre. Furthermore, Belpre is uncovered, meaning that rail-to-truck transloads are impermissible. See Part II-B-2.f.
7. The need for rail on this lane is consistent with {{ [redacted] }}.	7. **Truck Volumes**. {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that	7. {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
	direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	[redacted] }}

Lane A-14: Belpre, OH to Devon, KY

A-14	Belpre, OH to Devon, KY	CSXT tariff $3930, route Belpre-Devon	R/VC 323%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from bulk terminal in Belpre, OH to customer in Devon, KY.	{{ [redacted] }}	{{ [redacted] }}	Not effective competition due to {{ [redacted] }} alternative, limitations on truck loading at Apple Grove,{{ [redacted] }} and other reasons. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] }.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the Bulkmatic Terminal in Belpre, OH to delivery location in Devon, KY.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. The destination city is sometimes called Florence, KY or Cincinnati, OH.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. { [redacted] }	4. { [redacted] } *See supra* at II.B.2.g.i.	4. { [redacted] }
5. {{ [redacted]	5. {{ [redacted]	5. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}	[redacted] }}	[redacted] }}
6. {{ [redacted] }}	6. {{ [redacted] }} *See supra* at II.B.2.g.i.	6. {{ [redacted] }}
7. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	7. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	7. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.e.(1)(f).
8. Direct Truck rate is {{[redacted]}} the through rail rate. See Part II-B-3.a.(4).	8. **Cost of alternative**. Alternative transportation via truck service to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	8. The alternative proposed by CSXT has a rate {{[redacted]}} the CSXT tariff. {{[redacted]}} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
9. Transload rate does not apply because transloading would require at least two transloads (once at Belpre to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	9. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}} Moreover, standard quality control measures—{[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	9. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
10. The need for rail on this lane is consistent with {{[redacted]}}.	10. **Truck Volumes**. {{[redacted]}} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that rail-truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	10. {{[redacted]}} the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under exigent circumstances. See Part II-B-2.f.(3). {{[redacted].}}
11. Even if trucks could be sent on this lane, CSXT must be used (for service from	11. **Staging of PET at Belpre**. As demonstrated above, Lane A-1 (Apple	11. Belpre is not an end-user location. Using the rail cars at Belpre as storage

M&G Opening	CSXT Reply	M&G Rebuttal
Apple Grove) to stage the PET at Belpre.	Grove to Belpre) could easily be converted to truck transportation. M&G could stage empty rail cars at Belpre which it could use for storage, thereby eliminating any need for rail transportation. Moreover, whether or not CSXT possesses market dominance over movements to Belpre is irrelevant to whether CSXT possesses market dominance over movements from Belpre.	units into which trucks would transload PET, and out of which trucks would transload PET, is contrary to standard industry practices, would impermissibly cause double, triple, and even quadruple transloads, and would create logistics planning nightmares. Moreover, Belpre is uncovered, meaning that truck-to-rail transloads could not occur. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
12. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	12. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	12. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane A-17: Parkersburg, WV to Apple Grove, WV

A-17	Parkersburg, WV to Apple Grove, WV	CSXT tariff $3181, route Parkersburg-Apple Grove	R/VC 385%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from CSXT rail yard in Parkersburg, WV to M&G facility in Apple Grove, WV.	{{[redacted]}}	{{[redacted]}}	Not effective competition because origin is a CSXT rail yard where PET is in rail cars. Rail yard is not a transload site, trucking would impermissibly require double-transload (from rail cars at Parkersburg and back into rail cars at Apple Grove), site is uncovered, and other reasons. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. Transportation in this lane from Parkersburg to Apple Grove consists of PET returned for recycling or packaging.	1. no response	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the CSXT track in Parkersburg, WV to M&G's facility in Apple Grove, WV.	2. no response	2. The Board should accept M&G's position as the only evidence of record.
3. Truck and transload rates are not applicable because it would be irrational to ship trucks from a lease track. Moreover, truck shipments from Parkersburg would require CSXT's consent because CSXT owns the track.	3. **Transloads are not "irrational"**. M&G has extensive experience with transloading PET. It is not "irrational" to ship truckloads of PET to Apple Grove, which is then blown into a railcar for storage. {{[redacted]}}	3. M&G witness Granatelli states that transloading from trucks into rail cars almost never occurs and is usually an act of desperation to prevent a customer from running out of polymer. See Part II-B-2.b.(2). {{[redacted]}} See Part II-B-2.f. Product quality concerns are well-known in the

M&G Opening	CSXT Reply	M&G Rebuttal
		industry. CSXT has not shown that any double-transloads occur anywhere in the polymer industry as a regular course of business. Publicly available information, including from CSXT itself, confirms that double transloads and truck-to-rail transloads are not even mentioned in industry descriptions. See Part II-B-2.d.
4. Any savings from truck shipments would be offset by the need to transport the empty rail car back to Apple Grove via CSXT, which effectively forecloses transloading as an option.	4. **Cost savings**. M&G has the ability to truck both to and from Parkersburg, WV thereby eliminating the costs of transporting empty rail cars back to Apple Grove.	4. Any alleged "cost savings" is meaningless because CSXT's proposal would require multiple transloads, thus impermissibly degrading the quality of the PET. See item #5 below.
5. M&G uses the rail cars to store the product at Apple Grove. See Part II-B-3.a.(1)(b).	5. **Storage**. M&G could easily store PET in rail cars at Apple Grove without using rail transportation. M&G has extensive experience with PET transloads at Apple Grove and offers no reason why it could not transload PET from a rail car to truck for transport. {{ [redacted] }}	5. Parkersburg is not an end-user location. In fact, it is not even a bulk terminal – it is only a rail yard. Using the rail cars at Parkersburg as storage units into which trucks would transload PET, and out of which trucks would transload PET, is contrary to standard industry practices, would impermissibly cause double, triple, and even quadruple transloads, and would create logistics planning nightmares. Moreover, Parkersburg is uncovered, thus preventing truck-to-rail transloads See Part II-B-2.b, II-B-2.d, and II-B-2.f. M&G has shown that CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. See Part II-B-2.f.(3).
6. Even if truck transportation could occur, inbound rail shipments to Parkersburg remain captive to CSXT.	6. **Captive to CSXT**. Whether or not any other rail shipments to Parkersburg would be "captive" to CSXT is irrelevant to	6. Parkersburg is sole-served by CSXT, but is not an end-user location, therefore all rail cars at Parkersburg must be transported there by CSXT.

M&G Opening	CSXT Reply	M&G Rebuttal
	whether CSXT has market dominance over this lane of traffic.	Any PET trucked from Parkersburg must also absorb the price of CSXT rail transportation to Belpre. {[redacted]} Furthermore, Parkersburg is not even a transload site; it is a rail yard. It is also uncovered, meaning that rail-to-truck transloads are impermissible. See Part II-B-2.f.
7. The need for rail on this lane is consistent with {{ [redacted] }}.	7. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	7. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
8. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	8. **Rate increase.** CSXT's rate increases {{[redacted]}} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-1: Altamira, MX to Apple Grove, WV

B-1	Altamira, MX to Apple Grove, WV	CSXT tariff $5757, route Chicago-Apple Grove	R/VC 382%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Rail transport by NS from Chicago to Columbus, OH, then transload to trucks for final journey to M&G facility in Apple Grove.	{{ [redacted] }}	{{ [redacted] }}	Not effective competition because would require double-transload (from rail cars at Columbus, and into rail cars at Apple Grove), thus preventing use of PET for packaging and sale to customers. Also, Apple Grove does not have a covered site for truck-to-rail transloads. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from M&G's Altamira facility to the Apple Grove facility for recycling or packaging.	no response	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at Chicago to M&G's facility in Apple Grove, WV.	no response	2. The Board should accept M&G's position as the only evidence of record.
3. Direct truck rates are not applicable because it is impossible to send a through truck of PET across the Mexico-U.S. border.	3. **Truck Border Crossings**. Whether trucks can cross the U.S.-Mexico border is irrelevant because CSXT is not proposing that M&G truck PET across the border—PET would move across the border in railcars, as it does today.	3. CSXT apparently agrees with M&G that it is not possible to truck PET across the Mexico-U.S. border.
4. The need for rail on this lane is consistent with {{ [redacted] }}.	4. **Truck Volumes**. {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at §	4. The use of trucks in the past in the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET.

M&G Opening	CSXT Reply	M&G Rebuttal
	II.B.2.b.	See Part II-B-2.b.(1) and II-B-2.d.
5. { [redacted] }	5. { [redacted] } *See supra* at II.B.2.g.i.	5. { [redacted] }
6. Transloading would be inefficient because it would require the rail car to return empty to Altamira from the bulk terminal when it otherwise could be loaded at Apple Grove. In order to do the same thing on a transload shipment, M&G would have to pay both Norfolk Southern and CSXT to deliver the empty car to Apple Grove, which would completely consume any savings from transloading.	6. **Inefficient use of railcars**. Railcars would not return empty to Altamira as materials coming from Apple Grove, WV to Altamira, MX could be transloaded at Lima, OH and returned by rail to Altamira.	6. CSXT's plan omits key points, such as the fact that movements in both directions would require double transloads. Also, M&G would have to wash rail cars between each load, a large expense, or stage large quantities of rail cars at Lima in order to ensure that a rail car that had previously carried the same class of PET was always available for traffic moving the opposite direction. It is CSXT's plan that is inefficient. See Part II-B-2.b and II-B-2.d.
7. M&G uses the rail cars to store the product at Apple Grove. See Part II-B-3.a.(1)(b).	7. **Storage**. M&G could easily store PET in rail cars at Apple Grove without using rail transportation. M&G has extensive experience with PET transloads at Apple Grove and offers no reason why it could not transload PET from a rail car to truck for transport. {{ [redacted] }}	7. Using trucks for delivery to Apple Grove would require a double transload, into the trucks at Columbus and then into rail cars at Apple Grove. For PET destined for packaging, such a double transload is impermissible due to product quality concerns. M&G has shown that CSXT has either misrepresented or misconstrued various M&G transactions over the past 5

M&G Opening	CSXT Reply	M&G Rebuttal
		years as conduct involving a double transload, when in fact only a single transload occurred. See Part II-B-2.f.(3).
8. Although the transload rate is {{ [redacted] }} the through rail rate, CSXT has increased its rates by { [redacted] } from 2008-2010, without a loss of rail traffic to this alternative. See Part II-B-3.a.(4)(b).	8. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-2: Altamira, MX to Belpre, OH

B-2	Altamira, MX to Belpre, OH	CSXT tariff $5698, route Chicago-Belpre	R/VC 336%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Rail transport by NS from Chicago to Columbus, OH bulk terminal, then transload to trucks for final journey to bulk terminal in Belpre.	{{ [redacted] }}	{{ [redacted] }}	Not effective competition because would require double-transload (from rail cars at Columbus, and into rail cars at Belpre), thus sale of PET to customers. Belpre is not the site of an end-user. Also, Belpre does not have a covered site for truck to rail transloads. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from M&G's Altamira facility to Belpre for storage and/or transload to truck.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at Chicago to the Bulkmatic Terminal in Belpre, OH.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Direct truck rates are not applicable because it is impossible to send a through truck of PET across the Mexico-U.S. border. Additionally, it would be irrational to send trucks to a lease track and transload terminal which has no storage silos. Even if silos existed, truck transportation to Belpre would mean that the ultimate transportation to M&G's customers would require an excessive number of transloads from a product quality perspective. See Part II-B-3.a.(2).	3. **Transloads into railcars are not "irrational".** M&G currently completes {{ [redacted] }} transloads at Belpre. It is not "irrational" to ship truckloads of PET to Belpre to be blown into railcars for storage. {{ [redacted] }} Moreover, whether trucks can cross the U.S.-Mexico border is irrelevant because CSXT is not proposing that M&G truck PET across the border—PET would move across the border in railcars, as it does today.	3. M&G witness Granatelli states that transloading from trucks into rail cars almost never occurs and is usually an act of desperation to prevent a customer from running out of polymer. See Part II-B-2.b.(2). {{ [redacted] }} See Part II-B-2.f. Product quality concerns are well-known in the industry. CSXT has not

M&G Opening	CSXT Reply	M&G Rebuttal
		shown that any double-transloads occur anywhere in the polymer industry as a regular course of business. Publicly available information, including from CSXT itself, confirms that double transloads and truck-to-rail transloads are not even mentioned in industry descriptions. See Part II-B-2.d. CSXT apparently agrees with M&G that it is not possible to truck PET across the Mexico-U.S. border.
4. Because most shipments from Belpre are via truck; transloading just to reach Belpre (where storage would be in rail cars) would result in an excessive number of transloads from a product quality perspective. See Part II-B-3.a.(2).	4. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	4. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
5. Transloading would be inefficient because it would require the rail car to return empty to Altamira from the bulk terminal when it otherwise could be loaded at nearby Apple Grove. In order to do the same thing on a transload shipment, M&G would have to pay both Norfolk Southern and CSXT to deliver the empty car to Apple Grove, which would completely consume any savings from transloading.	5. **Inefficient use of railcars**. Railcars would not return empty to Altamira as materials coming from Belpre, OR to Altamira, MX could be transloaded at Lima, OH and returned by rail to Altamira.	5. CSXT's plan omits key points, such as the fact that movements in both directions would require double transloads. Also, M&G would have to wash rail cars between each load, a large expense, or stage large quantities of rail cars at Lima in order to ensure that a rail car that had previously carried the same class of PET was always available for traffic moving the opposite direction. It is CSXT's plan that is inefficient. See Part II-B-2.b and II-B-

M&G Opening	CSXT Reply	M&G Rebuttal
		2.d.
6. M&G needs the rail cars to store the product at Belpre. See Part II-B-3.a.(1)(b).	6. **Storage**. M&G could easily store PET in rail cars at Belpre without using rail transportation. M&G has extensive experience with PET transloads at Apple Grove and offers no reason why it could not transload PET from a rail car to truck for transport. {{ [redacted] }}	6. Using trucks for delivery to Belpre Grove would require a double transload, into the trucks at Columbus and then into rail cars at Apple Grove. Such a double transload is impermissible due to product quality concerns. M&G has shown that CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. See Part II-B-2.f.(3).
7. The need for rail on this lane is consistent with {{ [redacted] }}.	7. **Truck Volumes**. {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	7. The use of trucks in the past in the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
8. Although the transload rate is {{ [redacted] }} the through rail rate, CSXT has increased its rate by { [redacted] } from 2008-2010, without a loss of rail traffic to this alternative. See Part II-B-3.a.(4)(b).	8. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-3: Altamira, MX to Cambridge, OH

B-3	Altamira, MX to Cambridge, OH	CSXT tariff $5039, route Chicago-Columbus	R/VC 599%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Rail transport by CFE railroad from Chicago to Lima, OH, then transload to truck for delivery to customer in Cambridge, OH.	{{[redacted]}}	{{[redacted]}}	Not effective competition because CSXT's alternative ends at Cambridge, but the CSXT tariff transportation terminates at interchange to CUOH in Columbus. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Additionally, the alternative cannot be effective competition because it involves a double transload, the Lima site is uncovered, and other reasons. See Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] }.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at Chicago to interchange with the Columbus & Ohio River Railroad ("CUOH") in Columbus, OH.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3.{ [redacted] } rail cars shipped on this lane in 2006.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. Truck rates are not applicable because it is impossible to send a through truck of PET across the Mexico-U.S. border.	4. **Truck Border Crossings**. Whether trucks can cross the U.S.-Mexico border is irrelevant because CSXT is not proposing that M&G truck PET across the border—PET would move across the border in railcars, as it does today.	4. CSXT apparently agrees with M&G that it is not possible to truck PET across the Mexico-U.S. border.
5. The need for rail on this lane is consistent with {{ [redacted]	5. **Truck Volumes**. {{ [redacted]	5. The use of trucks in the past in the lane at issue is a relevant factor under

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}.	[redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b. Furthermore {{ [redacted] }} traffic has moved on this lane for the last 3 years.	established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d. Moreover, Opening Exhibit II-B-5 {[redacted] }.
6. Although the transload rate is {{ [redacted] }} the through rail rate, CSXT has increased its rate by { [redacted] } from 2008-2010, without a loss of rail traffic to this alternative. See Part II-B-3.a.(4)(b).	6. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	6. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-4: Altamira, MX to Cartersville, GA

B-4	Altamira, MX to Cartersville, GA	CSXT tariff $6020, route New Orleans-Cartersville	R/VC 401%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Rail transport by NS from New Orleans to Dalton, GA bulk terminal, then transload to truck for delivery to customers in Cartersville, GA.	{{[redacted]}}	{{[redacted]}}	Not effective competition because {{[redacted]}}. See below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customers are {[redacted]}.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at New Orleans to the delivery locations in Cartersville, GA.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. {{[redacted]}}	3. {{[redacted]}}	3. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{[redacted]}}
4. {{[redacted]}}	4. {{[redacted]}}	4. {{[redacted]}}

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }} *See supra* at II.B.2.g.i.	[redacted] }}
5. Customers use rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	5. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).
6. Truck rate is not applicable because it is impossible to send a through truck of PET across the Mexico-U.S. border.	6. **Truck Border Crossings**. Whether trucks can cross the U.S.-Mexico border is irrelevant because CSXT is not proposing that M&G truck PET across the border—PET would move across the border in railcars, as it does today.	6. CSXT apparently agrees with M&G that it is not possible to truck PET across the Mexico-U.S. border.
7. The need for rail on this lane is consistent with {{ [redacted]	7. **Truck Volumes**. {{ [redacted]	7. The amount of historical truck volume on the lane at issue is a relevant factor

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}.	[redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.

Lane B-5: Altamira, MX to Clifton Forge, VA

B-5	Altamira, MX to Clifton Forge, VA	CSXT tariff $7553, route New Orleans-Clifton Forge	R/VC 247%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Rail transport by NS from New Orleans to Petersburg, VA bulk terminal, then transload to truck for delivery to customer in Clifton Forge, VA.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} challenged tariff. CSXT appeared to base truck portion of rate on routing via U.S. Route 60 through Virginia, a road not normally used by heavy trucks across the Blue Ridge Mountains. Other reasons are described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] }.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at New Orleans to the delivery location in Clifton Forge, VA.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{[redacted]}} *See supra* at § II.B.2.d.	3. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{[redacted]}}

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.e.(1)(f).
4. Truck rate is not applicable because it is impossible to send a through truck of PET across the Mexico-U.S. border.	4. **Truck Border Crossings**. Whether trucks can cross the U.S.-Mexico border is irrelevant because CSXT is not proposing that M&G truck PET across the border—PET would move across the border in railcars, as it does today.	4. CSXT apparently agrees with M&G that it is not possible to truck PET across the Mexico-U.S. border.
5. Transload rate is {{ [redacted] }} the through rail rate.	5. **Cost of alternative**. Alternative transportation via rail-truck transload to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	5. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
6. The need for rail on this lane is consistent with {{ [redacted] }}.	6. **Truck Volumes**. {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	6. The use of trucks in the past in the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
7. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	7. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	7. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-6: Altamira, MX to Orlando, FL

B-6	Altamira, MX to Orlando, FL	CSXT tariff $7695, route New Orleans-Orlando	R/VC 355%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Rail transport by NS from New Orleans to City Point, FL terminal on FEC, then transload to truck for delivery to customers in Orlando, FL.	{{[redacted]}}	{{[redacted]}}	Not feasible because {[redacted]}.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customers are {[redacted]}.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at New Orleans to delivery locations in Orlando, FL.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. {[redacted]}	3. {[redacted]} *See supra* at II.B.2.g.i.	3. {[redacted]}.

M&G Opening	CSXT Reply	M&G Rebuttal
4. {{ [redacted] }}	4. {{ [redacted] }}	4. {{ [redacted] }}
5. {{ [redacted] }}	5. {{ [redacted] }} *See supra* at II.B.2.g.i.	5. {{ [redacted] }}
6. Customers use rail cars for storage. See Part II-B-3.a.(1)(b).	6. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted]	6. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }} *See supra* at § II.B.2.d.	[redacted] }}. See Part II-B-2.e.(1)(f).
7. Truck rate is not applicable because it is impossible to send a through truck of PET across the Mexico-U.S. border.	7. **Truck Border Crossings**. Whether trucks can cross the U.S.-Mexico border is irrelevant because CSXT is not proposing that M&G truck PET across the border—PET would move across the border in railcars, as it does today.	7. CSXT apparently agrees with M&G that it is not possible to truck PET across the Mexico-U.S. border.
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes**. {{ [redacted] }} *See supra* at § II.B.2.b and II.B.2.e.	8. {{ [redacted] }}
9. Although the transload rate is {{ [redacted] }} the through rail rate, the Cumulative 2008-2010 CSXT rate increase has been { [redacted] }, without a loss of rail traffic to this alternative. See Part II-B-3.a.(4)(b).	9. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	9. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-7: Apple Grove, WV to Aguila, AZ

B-7	Apple Grove, WV to Aguila, AZ	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 381%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH, then transload into rail cars for CFER rail shipment to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from Apple Grove to Aguila, AZ for storage and/or transload at a facility owned and operated by the Arizona Central Railroad ("AZRC"). Storage would be followed by rail delivery to a customer or transload to a truck for delivery to a customer.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's facility in Apple Grove, WV to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Most rail cars at Aguila are used for {{[redacted]}}.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. {{[redacted]}}.	4. (no response)	4. The Board should accept M&G's position as the only evidence of record.
5. Truck shipments to Aguila would require at least two transloads, once at Apple Grove and once at Aguila (for transfer into rail car for storage), and	5. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}	5. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single

M&G Opening	CSXT Reply	M&G Rebuttal
additional transloads would be needed for any eventual truck shipments to customers. Product quality concerns prevent any route that requires more than one transload. See Part II-B-3.a.(2).	[redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. Directly trucking to the customer in Tolleson would eliminate M&G's ability to stage product close to the customer.	6. **Staging at Aguila**. M&G's argument that direct truck shipments are not practical is irrelevant because the Aguila storage facility will still receive PET by rail.	6. CSXT's "solution" has created another insurmountable problem – trucking from Apple Grove to Lima involves an impermissible double-transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f. The inevitable transload from rail car to truck at Aguila would add a third transload, something that even CSXT's experts would not permit. See Part II-B-2.f.(5).
7. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	7. **Cost of alternative**. Alternative transportation via rail-truck transload to Aguila, AZ for storage is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	7. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
8. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	8. **Product integrity**. See above response for M&G argument #5.	8. See above rebuttal under #5.
9. Rail cars are used for storage at destination SIT yard. See Part II-B-	9. **Storage**. M&G's argument that rail cars are used for storage is irrelevant because	9. As with item #6 above, CSXT's "solution" has created another

M&G Opening	CSXT Reply	M&G Rebuttal
3.a.(1)(b).	the Aguila storage facility will still receive PET by rail.	insurmountable problem – trucking from Apple Grove to Lima involves an impermissible double-transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f. The inevitable transload from rail car to truck at Aguila would add a third transload, something that even CSXT's experts would not permit. See Part II-B-2.f.(5).
10. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	10. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	10. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
11. The need for rail on this lane is consistent with {{ [redacted] }}.	11. **Truck Volumes**. {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	11. The use of trucks in the past in the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
12. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	12. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	12. CSXT's claim that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.a.(4)(d).

Lane B-8: Apple Grove, WV to Allentown, PA

B-8	Apple Grove, WV to Allentown, PA	CSXT tariff $5430, route Apple Grove-Hagerstown	R/VC 452%

Alternative transportation #1 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Allentown, PA.	{{[redacted]}}	{{[redacted]}}	Not effective competition because CSXT's alternative #1 ends at Allentown, but the CSXT tariff transportation terminates at interchange to NS in Hagerstown. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

Alternative transportation #2 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Utility Supply Company site in St. James, MD, for transloading into rail cars on NS.	{{[redacted]}}	{{[redacted]}}	Not effective competition because CSXT's alternative ends at St. James, but the CSXT tariff transportation terminates at interchange to NS in Hagerstown. See Part II-B-2.a.(1). NS has confirmed that the rail rate from St. James is significantly higher than the rate from Hagerstown. Moreover, the St. James site proposed by CSXT is wholly unsuitable, and NS will not allow plastics transloading there. See Part II-B-2.a.(5)(b). Alternative rate is also {{[redacted]}} the tariff rate.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Allentown, PA.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with the Norfolk Southern Railway at Hagerstown,	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.

M&G Opening	CSXT Reply	M&G Rebuttal
MD.		
3. M&G also has a non-rail served customer in the Allentown area { [redacted] } that receives PET exclusively via truck. Historical truck transportation data reflects only shipments to { [redacted] } in the chart above.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. { [redacted] }	4. { [redacted] } *See supra* at II.B.2.g.i.	4. { [redacted] }
5. {{ [redacted] }}	5. {{ [redacted] }}	5. {{ [redacted] }}
6. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	6. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted]	6. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }} *See supra* at § II.B.2.d. M&G's storage argument is irrelevant as to the transload option because in that scenario the customer will still receive PET by rail.	[redacted] }}. See Part II-B-2.e.(1)(f). CSXT's transload alternative means that the customer would receive a rail car of PET that has been transloaded twice, which is impermissible due to product integrity concerns. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
7. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	7. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	8. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	8. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.

M&G Opening	CSXT Reply	M&G Rebuttal
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes**. {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that rail-truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	9. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1). M&G has a different PET customer in Allentown, but that customer does not have rail access; and is not at issue in Lane B-8.
10. Although the truck rate is {{ [redacted] }} the through rail rate, the Cumulative 2008-2010 CSXT rate increase has been { [redacted] }, without a loss of traffic to this alternative. See Part II-B-3.a.(4)(b).	10. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	10. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-9: Apple Grove, WV to Altamira, MX

B-9	Apple Grove, WV to Altamira, MX	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 381%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH, then transload into rail cars for CFER rail shipment to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from M&G's Apple Grove facility to the Altamira facility for recycling, sampling, or bagging purposes.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. PET is transported from M&G's Apple Grove facility to the Altamira facility for recycling, sampling, or bagging purposes.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Truck rate is not applicable because it is impossible to send a through truck of PET across the Mexico-U.S. border.	3. **Truck Border Crossings**. Whether trucks can cross the U.S.-Mexico border is irrelevant because CSXT is not proposing that M&G truck PET across the border—PET would move across the border in railcars, as it does today.	3. CSXT apparently agrees with M&G that it is not possible to truck PET across the Mexico-U.S. border.
4. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	4. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to	4. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity

M&G Opening	CSXT Reply	M&G Rebuttal
	substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	concerns. See Part II-B-2.b.(2) and II-B-2.f.
5. M&G uses the rail cars to store the product at Altamira. See Part II-B-3.a.(1)(b).	5. **Storage**. M&G's storage argument is irrelevant because the Altamira plant will still receive PET by rail.	5. CSXT's "solution" has created another insurmountable problem – trucking from Apple Grove to Lima involves an impermissible double-transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
6. The need for rail on this lane is consistent with {{ [redacted] }}.	6. **Truck Volumes**. {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	6. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
7. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	7. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	7. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-10: Apple Grove, WV to Champaign, IL

B-10	Apple Grove, WV to Champaign, IL	CSXT tariff $5684, route Apple Grove-Chicago	R/VC 408%

Alternative transportation #1 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Champaign, IL.	{{[redacted]}}	{{[redacted]}}	Not effective competition because CSXT's alternative #1 ends at Champaign, but the CSXT tariff transportation terminates at interchange to CN in Chicago. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

Alternative transportation #2 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars and then CFER rail service to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative rate is {{[redacted]}} the tariff rate. Moreover, the alternative impermissibly includes a double-transload, and the Lima site proposed by CSXT is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Champaign, IL.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with the Canadian National Railway in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. This is an alternate route to Lane B-11; the customer is the same.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	**4. Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged	4. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as

M&G Opening	CSXT Reply	M&G Rebuttal
	preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d. M&G's storage argument is irrelevant as to the transload option because in that scenario the customer will still receive PET by rail.	CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f). CSXT's transload alternative means that the customer would receive a rail car of PET that has been transloaded twice, which is impermissible due to product integrity concerns. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
5. Although the Direct Truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	5. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	5. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
6. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-	6. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted]	6. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-

M&G Opening	CSXT Reply	M&G Rebuttal
3.a.(2).	[redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
7. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	7. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its trans loading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	7. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes**. {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	8. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).

Lane B-11: Apple Grove, WV to Champaign, IL

B-11	Apple Grove, WV to Champaign, IL	CSXT tariff $5712, route Apple Grove-Effingham	R/VC 437%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Champaign, IL.	{{[redacted]}}	{{[redacted]}}	Not effective competition because CSXT's alternative ends at Champaign, but the CSXT tariff transportation terminates at interchange to CN in Effingham. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Champaign, IL.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with the Canadian National Railway in Effingham, IL.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. This is an alternate route to Lane B-10; the customer is the same.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	4. **Storage.** M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{[redacted]}}	4. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{[redacted]}}

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }} *See supra* at § II.B.2.d.	[redacted] }}. See Part II-B-2.e.(1)(f).
5. Although the Direct Truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a(4)(b).	5. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	5. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
6. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	6. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	6. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
7. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	7. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated.	7. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.

M&G Opening	CSXT Reply	M&G Rebuttal
	See CSXT Reply Ex. II-B-36.	
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	8. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).

Lane B-14: Apple Grove, WV to Franklin, IN

B-14	Apple Grove, WV to Franklin, IN	CSXT tariff $3782, route Apple Grove-Louisville	R/VC 365%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Franklin, IN.	{{[redacted]}}	{{[redacted]}}	Not effective competition because CSXT's alternative ends at Franklin, but the CSXT tariff transportation terminates at interchange to LIRC in Louisville. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Additionally, see M&G Reb. Ex. II-B-26. Other reasons are described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is {[redacted]} in Franklin, IN.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with the Louisville & Indiana Railroad Company at Louisville, KY.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. {[redacted]}	3. {[redacted]} *See supra* at II.B.2.g.i.	3. {[redacted]}
4. {{[redacted]}	4. {{[redacted]}}	4. {{[redacted]}} {{

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}		[redacted] }}
5. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	5. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).
6. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	6. **Cost of alternative**. Alternative transportation via truck service to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	6. In reality, CSXT has not provided any alternative to the transportation covered by the tariff. See Part II-B-2.a.(1). Even if an alternative existed, comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
7. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload	7. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted]	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single

M&G Opening	CSXT Reply	M&G Rebuttal
terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	[redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	8. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).
9. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	9. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	9. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
10. {{ [redacted]	10. **Reasons for truck shipments irrelevant to market dominance.** {{ [redacted]	10. CSXT is wrong; the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under exigent circumstances. See Part II-B-2.f.(3). {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }} See Exhibit II-B-13.	[redacted] }}	[redacted] .}}
11. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	11. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	11. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-15: Apple Grove, WV to Fremont, OH

B-15	Apple Grove, WV to Fremont, OH	CSXT tariff $2995, route Apple Grove-Columbus	R/VC 432%

Alternative transportation #1 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Fremont, OH.	{{[redacted]}}	{{[redacted]}}	Not effective competition because CSXT's alternative ends at Fremont, but the CSXT tariff transportation terminates at interchange to NS in Columbus. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Moreover, alternative is a double-transload, and Columbus site is uncovered. Other reasons are described below.

Alternative transportation #2 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to bulk terminal in Columbus for transloading into rail cars on NS.	{{[redacted]}}	{{[redacted]}}	Not effective competition because involves a double-transload, Columbus transload site is uncovered, and other reasons. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Fremont, OH.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Norfolk Southern Railway at Columbus, OH.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. { [redacted] }	3. { [redacted] } *See*	3. { [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
	supra at II.B.2.g.i.	[redacted] }}
4. {{ [redacted] }}	4. {{ [redacted] }}	4. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{ [redacted] }}
5. {{ [redacted] }}	5. {{ [redacted] }} *See supra* at II.B.2.g.i.	5. {{ [redacted] }}
6. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	6. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i.	6. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously

M&G Opening	CSXT Reply	M&G Rebuttal
	{{ [redacted] }} *See supra* at § II.B.2.d. Further, if the transload alternative is used, M&G's storage argument is irrelevant because this customer will still receive PET by rail.	provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f). Moreover, CSXT's transload alternative creates another insurmountable problem – trucking from Apple Grove to Columbus involves an impermissible double-transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
7. Although direct Truck rate {{ [redacted] }} the through rail rate, CSXT has increased rates cumulatively from 2008-2010 by { [redacted] } without traffic shifting to alternative transportation. See Part II-B-3.a.(4)(b).	7. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	7. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
8. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	8. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to	8. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity

M&G Opening	CSXT Reply	M&G Rebuttal
	substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	concerns. See Part II-B-2.b.(2) and II-B-2.f.
9. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	9. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	9. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
10. The need for rail on this lane is consistent with {{ [redacted] }}.	10. **Truck Volumes**. {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	10. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1). Finally, M&G has provided extensive documentation of the exigent circumstances surrounding many truck deliveries. See item #11 below.
11. {{ [redacted]	11. {{ [redacted]	11. CSXT is wrong; the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under exigent circumstances. See Part II-B-2.f.(3). {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }} See Exhibit II-B-28.	[redacted] }}	[redacted] }}
12. { [redacted] } See Exhibit II-B-29, which include documents with the Bates number: M&G-HC- 000326 to 000328 000495 000496	12. See above response to M&G argument #11.	12. See above rebuttal in item #11.

M&G Opening	CSXT Reply	M&G Rebuttal
000497 to 000498 000499 000532 000577 to 000580 000584 001224 to 1225 001582 002456 002983 to 002984 003301 to 003302 003514 to 003517 003518 to 003520 003762 to 003763 003916 to 003925 003939 004933 005538 to 005539 005812 to 005813 005981 006035 to 006036 006512 to 006513 006516 006903		

Lane B-16: Apple Grove, WV to Glendale, AZ

B-16	Apple Grove, WV to Glendale, AZ	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 381%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars and, then, rail transportation on CFER to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from Apple Grove to Glendale, AZ for storage and/or transload. Storage would be followed by rail delivery to a customer or transload to a truck for delivery to a customer.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's facility in Apple Grove, WV to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Most rail cars at Glendale are used for {{[redacted]}}.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. Truck shipments to Glendale would require at least two transloads, once at Apple Grove and once at Glendale (for transfer into rail car for storage), and additional transloads would be needed for any subsequent truck shipments to customers. Product quality concerns	4. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}} Moreover, standard quality control measures—{[redacted]	4. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer

M&G Opening	CSXT Reply	M&G Rebuttal
prevent any route that requires more than one transload. See Part II-B-3.a.(2).	[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
5. Direct Truck rate is {{[redacted]}} the through rail rate. See Part II-B-3.a.(4). Direct trucking is not only prohibitively expensive, but it would eliminate M&G's ability to stage product close to the customer.	5. **Cost of alternative.** Alternative transportation via rail-truck transload to the ultimate customers is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	5. The alternative proposed by CSXT has a rate {{[redacted]}} the CSXT tariff. {{[redacted]}} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
6. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	6. **Product integrity.** See above response to M&G argument #4.	6. See rebuttal in item #4 above.
7. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	7. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	7. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
8. The need for rail on this lane is consistent with {{[redacted]}}.	8. **Truck Volumes.** {{[redacted]}} does not demonstrate CSXT's	8. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to

M&G Opening	CSXT Reply	M&G Rebuttal
	market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
9. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	9. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	9. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-18: Apple Grove, WV to Havre de Grace, MD

B-18	Apple Grove, WV to Havre de Grace, MD	CSXT tariff $5430, route Apple Grove-Hagerstown	R/VC 452%

Alternative transportation #1 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Havre de Grace, MD.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at Havre de Grace, but CSXT tariff transportation terminates at interchange to NS in Hagerstown. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

Alternative transportation #2 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Utility Supply Company site in St. James, MD, for transloading into rail cars on NS.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative #2 ends at St. James, but CSXT tariff transportation terminates at interchange to NS in Hagerstown. See Part II-B-2.a.(1). NS has confirmed that the rail rate from St. James is significantly higher than the rate from Hagerstown. Moreover, the St. James site proposed by CSXT is wholly unsuitable, and NS will not allow plastics transloading there. See Part II-B-2.a.(5)(b). Alternative rate is also {{[redacted]}} the tariff rate.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Havre de Grace, MD.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Norfolk Southern Railway at Hagerstown, MD.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.

M&G Opening	CSXT Reply	M&G Rebuttal
3. { [redacted] }	3. { [redacted] } *See supra* at II.B.2.g.i.	3. { [redacted] }
4. {{ [redacted] }}	4. {{ [redacted] }} *See supra* at § II.B.2.g.i. and II.B.2.g.i.	4. {{ [redacted] }}. See Part II-B-2.e.(1)(f).
5. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage.** M&G provides no evidence that its customer uses rail cars for storage,	5. It is an established fact in the polymer industry that rail cars are used for storage

M&G Opening	CSXT Reply	M&G Rebuttal
	and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d. Further, if the transload alternative is used, M&G's storage argument is irrelevant because this customer will still receive PET by rail.	by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f). CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
6. Although the direct truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates from 2008-2010 by { [redacted] } without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	6. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	6. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
7. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-	7. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted]	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-

M&G Opening	CSXT Reply	M&G Rebuttal
3.a.(2).	[redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	8. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	8. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. Notably, M&G transported {{ [redacted] }} to this customer in 2010. *See supra* at § II.B.2.b.	9. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).

Lane B-19: Apple Grove, WV to Hazleton, PA

B-19	Apple Grove, WV to Hazleton, PA	CSXT tariff $5430, route Apple Grove-Hagerstown	R/VC 452%

Alternative transportation #1 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customers in Hazleton, PA.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at Hazleton, but CSXT tariff transportation terminates at interchange to NS in Hagerstown. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

Alternative transportation #2 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Utility Supply Company site in St. James, MD, for transloading into rail cars on NS.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at St. James, but CSXT tariff transportation terminates at interchange to NS in Hagerstown. See Part II-B-2.a.(1). NS has confirmed that the rail rate from St. James is significantly higher than the rate from Hagerstown. Moreover, the St. James site proposed by CSXT is wholly unsuitable, and NS will not allow plastics transloading there. See Part II-B-2.(8). Alternative rate is also {{[redacted]}} the tariff rate.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customers are { [redacted] } in Hazleton, PA.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Norfolk	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.

M&G Opening	CSXT Reply	M&G Rebuttal
Southern Railway at Hagerstown, MD.		
3. {{ [redacted] }}	3. {{ [redacted] }}	3. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{ [redacted] }}
4. {{ [redacted] }}	4. {{ [redacted] }} *See supra* at II.B.2.g.i.	4. {{ [redacted] }}
5. Customers use rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage.** M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged	5. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as

M&G Opening	CSXT Reply	M&G Rebuttal
	preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d. Further, if the transload alternative is used, M&G's storage argument is irrelevant because this customer will still receive PET by rail.	CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f). CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f. It is also {{ [redacted] }} and not a true alternative. See Part II-B-2.a.(1).
6. Although the direct truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates from 2008-2010 by { [redacted] } without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	6. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	6. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
7. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating	7. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover,	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness

M&G Opening	CSXT Reply	M&G Rebuttal
product integrity concerns. See Part II-B-3.a.(2).	standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	8. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	8. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	9. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1). Finally, M&G has explained exigent circumstances surrounding some truck shipments. See item #10 below.
10. The increased number of bulk trucks in 2010 was due to emergency shipments or other unusual circumstances, which are described by the documents in Exhibit II-	10. **Reasons for truck shipments irrelevant to market dominance.** {{ [redacted]	10. CSXT is wrong; the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under

M&G Opening	CSXT Reply	M&G Rebuttal
B-30, with the Bates numbers: M&G-HC- 000322 003940 001569 to 001571 003941 002519 005140 002436 005212	[redacted] }}	exigent circumstances. See Part II-B-2.f.(3). {{[redacted].}}

Lane B-20: Apple Grove, WV to Hebron, OH

B-20	Apple Grove, WV to Hebron, OH	CSXT tariff $3056, route Apple Grove-Columbus	R/VC 282%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Hebron, OH.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at Hebron, but CSXT tariff transportation terminates at interchange to NS in Columbus. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Hebron, OH.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Norfolk Southern Railway at Columbus, OH.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. { [redacted] }	3. { [redacted] } *See supra* at II.B.2.g.i.	3. { [redacted] }
4. {{ [redacted] }}	4. {{ [redacted]	4. {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }} *See supra* at II.B.2.g.i.	[redacted] }}. See Part II-B-2.e.(1)(f).
5. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage.** M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).
6. Although the direct truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates from 2008-2010 by { [redacted] } without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	6. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	6. CSXT's claim that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.a.(4)(d).
7. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	7. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	8. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	8. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	9. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.

Lane B-21: Apple Grove, WV to Lenexa, KS

B-21	Apple Grove, WV to Lenexa, KS	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 380%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{ [redacted] }}	{{ [redacted] }}	Not effective competition. Rate asserted by CSXT is {{ [redacted] }} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Lenexa, KS.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. { [redacted] }	3. { [redacted] } *See supra* at II.B.2.g.i.	3. { [redacted] }
4. {{ [redacted] }}	4. {{ [redacted] }}	4. {{ [redacted] }}

M&G Opening	CSXT Reply	M&G Rebuttal
5. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage.** M&G's storage argument is irrelevant because this customer will still receive PET by rail.	5. CSXT's alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
6. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	6. **Cost of alternative.** Alternative transportation via rail-truck transload is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	6. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
7. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	7. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	8. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its	8. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are

M&G Opening	CSXT Reply	M&G Rebuttal
	transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	reasonable.
9. The need for rail is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that rail-truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	9. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1). M&G has described the exigent circumstances surrounding many truck deliveries. See item #11 below.
10. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	10. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	10. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
11. Customer requested numerous emergency bulk truck shipments in 2009 and 2010 in order to prevent its Lenexa production facility from shutting down. Descriptions of the need for many of these bulk trucks are provided in Exhibit II-B-31, which includes documents with the Bates number: M&G-HC- 001862 to 001864 005438	11. {{ [redacted] }}	11. CSXT is wrong; the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under exigent circumstances. See Part II-B-2.f.(3). {{ [redacted] .}}

M&G Opening		CSXT Reply	M&G Rebuttal
002639 to 002643	005511 to 005514		
002928 to 002933	005575 to 005576		
003049 to 003051	005577 to 005579		
003052 to 003055	006024 to 006026		
004101	006152 to 006155		
004102	006160 to 006163		
005368 to 005372	007394[7]		

[7] Some of these documents describe the same incident in several different ways, thus giving the Board a more complete perspective on the incident described therein.

Lane B-22: Apple Grove, WV to Little Rock, AR

B-22	Apple Grove, WV to Little Rock, AR	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 381%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{ [redacted] }}	{{ [redacted] }}	Not effective competition. Rate asserted by CSXT is {{ [redacted] }} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Little Rock, AR.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage.** M&G's storage argument is irrelevant because this customer will still receive PET by rail.	3. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
4. Direct truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	4. **Cost of alternative.** Alternative transportation via rail-truck transload is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	4. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
5. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once	5. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted]	5. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload

M&G Opening	CSXT Reply	M&G Rebuttal
at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	[redacted] }} Moreover, standard quality control measures—{ [redacted] }— can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	6. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	6. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
7. The need for rail on this lane is consistent with {{ [redacted] }}.	7. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	7. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).
8. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	8. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.a.(4)(d).

Lane B-24: Apple Grove, WV to Nicholasville, KY

B-24	Apple Grove, WV to Nicholasville, KY	CSXT tariff $2995, route Apple Grove-Columbus	R/VC 433%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to bulk terminal in Columbus for transload into rail cars on NS.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Alternative involves a double-transload, Columbus site in uncovered, and other reasons. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is {[redacted]} in Nicholasville, KY.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Norfolk Southern Railway in Columbus, OH.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. {[redacted]}	3. {[redacted]} *See supra* at II.B.2.g.i.	3. {[redacted]}
4. {{[redacted]}}	4. {{[redacted]}}	4. {{[redacted]}}
5. Customer uses rail cars for storage. See	5. **Storage.** M&G's storage argument is	5. CSXT's transload alternative creates

M&G Opening	CSXT Reply	M&G Rebuttal
Part II-B-3.a.(1)(b).	irrelevant because this customer will still receive PET by rail.	another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
6. Although the Direct Truck rate is {{ [redacted] }} the through rail rate, CSXT increased its rate by ([redacted] } from 2008-2010, without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	6. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	6. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
7. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	7. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	8. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its	8. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are

M&G Opening	CSXT Reply	M&G Rebuttal
	transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	reasonable.
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that rail-truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	9. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance, and M&G has provided explanations for many of the truck shipments. See item #10 below. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).
10. The increase in bulk trucks in 2010 resulted from situations such as railroad delays, customer's increased PET use, and M&G running low on product at Apple Grove. Exhibit II-B-32, describes the reasons for many of these bulk truck shipments in documents with the Bates number: M&G-HC- 001473 005113 003636 to 003638 005541 003639 to 003640 006517 to 006518 005082 006816 to 006817 005086 007422 to 007423[8]	10. {{ [redacted] }}	10. CSXT is wrong; the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under exigent circumstances. See Part II-B-2.f.(3). {{ [redacted] .}}
11. { [redacted]	11. **Product integrity.** { [redacted]	11. { [redacted]

[8] Some of these documents describe the same incident in several different ways, thus giving the Board a more complete perspective on the incident described therein.

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted]	[redacted] }	[redacted] } Moreover, truck deliveries cannot be effective competition because the CSXT rail service terminates at an interchange to NS.

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }		

Lane B-25: Apple Grove, WV to Rockford, IL

B-25	Apple Grove, WV to Rockford, IL	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 379%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{ [redacted] }}	{{ [redacted] }}	Not effective competition. Rate asserted by CSXT is {{ [redacted] }} challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Rockford, IL.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage.** M&G's storage argument is irrelevant because this customer will still receive PET by rail.	3. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
4. Direct Truck rate {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	4. **Cost of alternative.** Alternative transportation via rail-truck transload is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	4. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
5. Transload rate does not apply because transloading would require at least two	5. **Product integrity.** M&G's claim that it cannot transload PET more than once	5. CSXT has either misrepresented or misconstrued various M&G transactions

M&G Opening	CSXT Reply	M&G Rebuttal
transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	6. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	6. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
7. The need for rail on this lane is consistent with {{ [redacted] }}.	7. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	7. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).
8. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	8. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.a.(4)(d).

Lane B-26: Apple Grove, WV to Rogers, MN

B-26	Apple Grove, WV to Rogers, MN	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 380%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Rogers, MN.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage.** M&G's storage argument is irrelevant because this customer will still receive PET by rail.	3. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
4. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	4. **Cost of alternative.** Alternative transportation via rail-truck transload is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	4. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
5. Transload rate does not apply because transloading would require at least two	5. **Product integrity.** M&G's claim that it cannot transload PET more than once	5. CSXT has either misrepresented or misconstrued various M&G transactions

M&G Opening	CSXT Reply	M&G Rebuttal
transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	6. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	6. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
7. The need for rail on this lane is consistent with {{ [redacted] }}.	7. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	7. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
8. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	8. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.a.(4)(d).

Lane B-30: Apple Grove, WV to Sweetwater, TX

B-30	Apple Grove, WV to Sweetwater, TX	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 381%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from Apple Grove to Sweetwater, TX for storage and/or transload. Storage would be followed by rail delivery to a customer or transload to a truck for delivery to a customer.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's facility in Apple Grove, WV to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. The Sweetwater facility is owned, operated, and served by BNSF, though the transload track at Sweetwater is operated by A&R Transport pursuant to a contract with BNSF.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. Truck shipments to Sweetwater would require at least two transloads, once at Apple Grove and once at Sweetwater (for transfer into rail car for storage), and additional transloads would be needed for any eventual truck shipments to customers. Product quality concerns prevent any route	4. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}} Moreover, standard quality control measures—{[redacted]	4. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer

M&G Opening	CSXT Reply	M&G Rebuttal
that requires more than one transload. See Part II-B-3.a.(2).	[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
5. Directly trucking to the customers served from Sweetwater is not only prohibitively expensive, but it would also eliminate M&G's ability to stage product close to the customers.	5. **Direct truck infeasible.** M&G's argument that it cannot directly truck to Sweetwater is irrelevant because the Sweetwater storage facility will still receive PET by rail.	5. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f. Any truck shipments from Sweetwater would then have to undergo a third transload, something even CSXT's own experts would apparently not condone.
6. The need for rail on this lane is consistent with {{ [redacted] }}.	6. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	6. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
7. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4). This rate is based on direct trucking to the main customer served via Sweetwater.	7. **Cost of alternative.** Alternative transportation via rail-truck transload to Sweetwater, TX for storage is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	7. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
8. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload	8. **Product integrity.** See above response to M&G argument #4.	8. See rebuttal in item #4 above.

M&G Opening	CSXT Reply	M&G Rebuttal
terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).		
9. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	9. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	9. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
10. Rail cars are used for storage at Sweetwater. See Part II-B-3.a.(1)(b).	10. **Storage.** M&G's storage argument is irrelevant because the Sweetwater storage facility will still receive PET by rail.	10. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f. Any truck shipments from Sweetwater would then have to undergo a third transload, something even CSXT's own experts would apparently not condone.
11. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	11. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	11. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-32: Apple Grove, WV to University Park, IL

B-32	Apple Grove, WV to University Park, IL	CSXT tariff $5697, route Apple Grove-Chicago	R/VC 387%

Alternative transportation #1 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in University Park, IL.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at University Park, but the CSXT tariff transportation terminates at interchange to CN in Chicago. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

Alternative transportation #2 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in University Park, IL.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Canadian National Railway in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage.** M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted]	3. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted] }} *See supra* at § II.B.2.d. Further, if the transload alternative is used, M&G's storage argument is irrelevant because this customer will still receive PET by rail.	that {{ [redacted] }}. See Part II-B-2.e.(1)(f). CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
4. Direct Truck rate {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	4. **Cost of alternative.** Alternative transportation via truck service or rail-truck transload is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	4. The direct truck proposal is not a true alternative because CSXT rail service under the challenged tariff ends at the Chicago interchange to CN. The transload alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
5. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-	5. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted]	5. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-

M&G Opening	CSXT Reply	M&G Rebuttal
3.a.(2).	[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	6. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	6. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
7. The need for rail on this lane is consistent with {{ [redacted] }}.	7. **Truck Volumes.** {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	7. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).
8. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	8. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	8. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-33: Apple Grove, WV to Vado, NM

B-33	Apple Grove, WV to Vado, NM	CSXT tariff $5703, route Apple Grove-Chicago	R/VC 381%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from Apple Grove to Vado, NM for storage at a SIT facility on BNSF. Storage would be followed by rail delivery to a customer. No transloading occurs at Vado.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's facility in Apple Grove, WV to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Truck shipments to Vado would require at least two transloads, once at Apple Grove and once at Vado (for transfer into rail car for storage), but no transloading is possible at Vado. Product quality concerns prevent any route that requires more than one transload. See Part II-B-3.a.(2).	3. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}} Moreover, standard quality control measures—{[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	3. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
4. Directly trucking to the customers served from Vado is not only prohibitively	4. **Direct truck infeasible.** M&G's argument that it cannot directly truck to	4. CSXT's transload alternative creates another insurmountable problem – the

M&G Opening	CSXT Reply	M&G Rebuttal
expensive, but it would also eliminate M&G's ability to stage product close to the customers.	Vado is irrelevant because Vado will still receive PET by rail.	alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
5. Direct Truck rate is {{[redacted]}} the through rail rate. See Part II-B-3.a.(4). This rate is based on direct trucking to the main customer served via Vado.	5. **Cost of alternative.** Alternative transportation via truck service or rail-truck transload is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	The alternative proposed by CSXT has a rate {{[redacted]}} the CSXT tariff. {{[redacted]}} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
6. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	6. **Product integrity.** See above response to M&G argument #3.	6. See rebuttal in item #3 above.
7. Rail cars are used for storage at Vado. See Part II-B-3.a.(1)(b).	7. **Storage.** M&G's storage argument is irrelevant because the Vado SIT facility will still receive PET by rail.	7. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
8. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	8. **Plant reconfiguration.** M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § I1.B.2.g.iii. Moreover, M&G's cost estimates for expanding its	8. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are

M&G Opening	CSXT Reply	M&G Rebuttal
	transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	reasonable.
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	9. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
10. Cumulative 2008-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	10. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	10. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-34: Apple Grove, WV to W. Chicago, IL

B-34	Apple Grove, WV to W. Chicago, IL	CSXT tariff $5702, route Apple Grove-Chicago	R/VC 380%

Alternative transportation #1 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in W. Chicago, IL.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at W. Chicago, but the CSXT tariff transportation terminates at interchange to UP in Chicago. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

Alternative transportation #2 proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from M&G facility in Apple Grove to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in W. Chicago, IL.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Union Pacific Railroad in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. {{[redacted]}}	3. {{[redacted]}}	3. {{[redacted]}}

M&G Opening	CSXT Reply	M&G Rebuttal
	[redacted]. }} *See supra* at II.B.2.g.i.	[redacted]}}. See Part II-B-2.e.(1)(f).
4. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	4. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{[redacted]}} *See supra* at § II.B.2.d. Further, if the transload alternative is used, M&G's storage argument is irrelevant because this customer will still receive PET by rail.	4. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{[redacted]}}. See Part II-B-2.e.(1)(f). CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-

M&G Opening	CSXT Reply	M&G Rebuttal
		2.d, and II-B-2.f.
5. Direct Truck rate is {{[redacted]}} the through rail rate. See Part II-B-3.a.(4).	5. **Cost of alternative**. Alternative transportation via truck service or rail-truck transload is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	5. The direct truck proposal is not a true alternative because transportation under the challenged CSXT tariff ends at interchange to UP. The transload alternative proposed by CSXT has a rate {{[redacted]}} the CSXT tariff. {{[redacted]}} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
6. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	6. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}} Moreover, standard quality control measures—{[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	6. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
7. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	7. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated.	7. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.

M&G Opening	CSXT Reply	M&G Rebuttal
	See CSXT Reply Ex. II-B-36.	
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	8. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
9. Cumulative 2008-2010 CSXT rate increase: { [redacted]. } See Part II-B-3.a.(4)(b).	9. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	9. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-35: Apple Grove, WV to Waynesville, NC

B-35	Apple Grove, WV to Waynesville, NC	CSXT tariff $4079, route Apple Grove-Lynchburg	R/VC 266%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from M&G facility in Apple Grove to customer in Waynesville, NC.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at Waynesville, but the CSXT tariff transportation terminates at interchange to NS in Lynchburg. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Waynesville, NC.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from M&G's Apple Grove origin to interchange with Norfolk Southern Railway in Lynchburg, VA.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{[redacted]. }} *See supra* at § II.B.2.d.	3. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{[redacted]}}

M&G Opening	CSXT Reply	M&G Rebuttal
		[redacted]}}. See Part II-B-2.e.(1)(f).
4. Although the Direct Truck rate is {{[redacted]}} the through rail rate, CSXT has increased rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	4. **Rate increase**. CSXT's rate increases {{[redacted]}} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	4. CSXT's claim that {{[redacted]}}. See Part II-B-2.a.(4)(d).
5. Transload rate does not apply because transloading would require at least two transloads (once at Apple Grove to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	5. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{[redacted]}} Moreover, standard quality control measures—{[redacted]}—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	5. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
6. M&G cannot cost-effectively reconfigure Apple Grove for direct truck loading or expand its transloading capacity. See Part II-B-3.a.(3).	6. **Plant reconfiguration**. M&G would not have to spend any resources to reconfigure its Apple Grove plant as it currently has sufficient capacity to load enough additional trucks at Apple Grove to handle 100% of the 2010 traffic volume of Apple-Grove-originating complaint lanes. *See supra* at § II.B.2.g.iii. Moreover, M&G's cost estimates for expanding its transloading capacity are vastly overstated. *See* CSXT Reply Ex. II-B-36.	6. CSXT wildly inflates M&G's current truck loading capacity based on a formulaic approach that ignores real-world constraints and is contrary even to CSXT's own evidence. See Part II-B-2.g.(1). Moreover, CSXT understates the facilities that M&G truly requires to increase Apple Grove's truck loading capacity. See Part II-B-2.g. M&G's cost estimates are reasonable.
7. The need for rail on this lane is consistent with {{[redacted]	7. **Truck Volumes**. {{[redacted], }} its	7. CSXT is wrong. {{[redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted]}}.	extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	[redacted]}} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).

Lane B-36: Belpre, OH to Aguila, AZ

B-36	Belpre, OH to Aguila, AZ	CSXT tariff $5907, route Belpre-Chicago	R/VC 351%
Alternative transportation proposed by CSXT	**Rate asserted by CSXT for alternative**	**Restatement by M&G of rate for alternative**	**M&G description of feasibility of alternative**
Truck shipment from bulk terminal in Belpre to Lima, OH for transload into rail cars, and then CFER rail service to Chicago.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} the challenged tariff, alternative involves a double-transload, and the Lima site is not covered. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from Belpre to Aguila, AZ for storage and/or transload at a facility owned and operated by the Arizona Central Railroad ("AZRC"). Storage would be followed by rail delivery to a customer or transload to a truck for delivery to a customer.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the Bulkmatic Terminal on CSXT in Belpre, OH to interchange with BNSF in Chicago.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Most rail cars at Aguila are transloaded into trucks for transportation to {{[redacted]}}.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. {[redacted]}.	4. (no response)	4. The Board should accept M&G's position as the only evidence of record.
5. Directly trucking to the destination would eliminate M&G's ability to stage product close to the customer.	5. **Storage**. M&G's storage argument is irrelevant because the Aguila storage facility will still receive PET by rail.	5. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-

M&G Opening	CSXT Reply	M&G Rebuttal
		2.d, and II-B-2.f. Truck shipments from Aguila would then be transloaded a third time, something CSXT's own witnesses do not condone.
6. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	6. **Cost of alternative**. Alternative transportation via rail-truck transload is cost competitive with CSXT's rail service. *See supra* at § II.B.2.f.	6. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
7. Transload rate does not apply because transloading would require at least two transloads (once at Belpre to load the bulk truck, and once at the transload terminal to load a rail car), and additional transloads would be needed for any subsequent truck shipments to customers. Product integrity concerns prevent any route that requires more than one transload. See Part II-B-3.a.(2). Moreover, any PET in a rail car at Belpre must be delivered by CSXT.	7. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes**. {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	8. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.
9. Cumulative 2008-2010 CSXT rate	9. **Rate increase**. CSXT's rate increases	9. CSXT's claim that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
increase: { [redacted]. } See Part II-B-3.a.(4)(b).	{{ [redacted] }} and do not demonstrate market dominance. *See Supra* at § II.B.3.b.	[redacted] }}. See Part II-B-2.a.(4)(d).

Lane B-37: Belpre, OH to Allentown, PA

B-37	Belpre, OH to Allentown, PA	CSXT tariff $4762, route Belpre-Hagerstown	R/VC 469%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from bulk terminal in Belpre to Utility Supply Company site in St. James, MD, for transloading into rail cars on NS.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at St. James, but CSXT tariff transportation terminates at interchange to NS in Hagerstown. See Part II-B-2.a.(1). NS has confirmed that the rail rate from St. James is significantly higher than the rate from Hagerstown. Moreover, the St. James site proposed by CSXT is wholly unsuitable, and NS will not allow plastics transloading there. See Part II-B-2.a.(5)(b). Alternative rate is also {{[redacted]}} the tariff rate. Alternative would require double-transloading.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Allentown, PA.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the Bulkmatic Terminal on CSXT in Belpre, OH to interchange with the Norfolk Southern Railway at Hagerstown, MD.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. M&G also has a non-rail served customer in the Allentown area { [redacted] } that receives PET exclusively via truck. Historical truck transportation data to in the chart above includes only { [redacted] }.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. { [redacted]	4. { [redacted]	4. { [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }	[redacted] } *See supra* at II.B.2.g.i.	[redacted] }
5. {{ [redacted] }}	5. {{ [redacted] }}	5. {{ [redacted] }}
6. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	6. **Storage**. M&G's storage argument is irrelevant because this customer will still receive PET by rail.	6. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.
7. Although the Direct Truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	7. **Rate increase**. CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	7. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
8. Transload rate does not apply because transloading would require at least two transloads (once at Belpre to load the bulk	8. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted]	8. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a

M&G Opening	CSXT Reply	M&G Rebuttal
truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2). Moreover, any PET in a rail car at Belpre must be delivered by CSXT.	[redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	9. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.

Lane B-39: Belpre, OH to Franklin, IN

B-39	Belpre, OH to Franklin, IN	CSXT tariff $5247, route Belpre-Louisville	R/VC 432%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from bulk terminal in Belpre to customer in Franklin, IN.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at Franklin, but CSXT tariff transportation terminates at interchange to LIRC in Louisville. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). For additional reasons, see below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is {[redacted]} in Franklin, IN.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the Bulkmatic Terminal on CSXT in Belpre, OH to interchange with the Louisville & Indiana Railroad Company at Louisville, KY.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. {[redacted]}	3. {[redacted]} *See supra* at II.B.2.g.i.	3. {[redacted]}
4. {{[redacted]}	4. {{[redacted]}	4. {{[redacted]} {{

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}		[redacted] }}
5. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage**. M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] . }} *See supra* at § II.B.2.d.	5. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).
6. Although the Direct Truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	6. **Cost of alternative**. Alternative transportation via truck service to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	6. Although CSXT claims the rate is "cost-competitive", comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4). Moreover, CSXT has not even posited a true alternative, because transportation under the CSXT tariff ends at Louisville, not Franklin. See Part II-B-2.a.(1).
7. Transload rate does not apply because transloading would require at least two transloads (once at Belpre to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2).	7. **Product integrity**. M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted]	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-

M&G Opening	CSXT Reply	M&G Rebuttal
Moreover, any PET in a rail car at Belpre was transported there by CSXT.	[redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes**. {{ [redacted] }} its extensive use of trucking for other destinations, and the cost-competitiveness of truck transportation all demonstrate that direct truck transportation is an effective competitive option. *See supra* at § II.B.2.b.	8. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance. Moreover, direct trucks to the customer are not a true alternative, and cannot provide effective competition, because the CSXT tariff transportation ends at an interchange. See Part II-B-2.a.(1).
9. {{ [redacted] }} This is the reason for the truck volumes in 2009. See Exhibit II-B-13.	9. {{ [redacted] }}	9. CSXT is wrong; the reasons for truck shipments are highly relevant. In the market dominance analysis, the Board and ICC disregard transportation made under exigent circumstances. See Part II-B-2.f.(3). {{ [redacted] }}

Lane B-40: Belpre, OH to Fremont, OH

B-40	Belpre, OH to Fremont, OH	CSXT tariff $3580, route Belpre-Columbus	R/VC 402%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Truck shipment from bulk terminal in Belpre to bulk terminal in Columbus for transload into rail cars on NS.	{{[redacted]}}	{{[redacted]}}	Not effective competition because requires double-transloading, Columbus site is not covered, and other reasons. See below and Part II-B-2.a.(5).

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is { [redacted] } in Fremont, OH.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the Bulkmatic Terminal on CSXT in Belpre, OH to interchange with Norfolk Southern Railway at Columbus, OH.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. { [redacted] }	3. { [redacted] } *See supra* at II.B.2.g.i.	3. { [redacted] }
4. {{ [redacted]	4. {{ [redacted]	4. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}	[redacted] }}	[redacted] }}
5.{{ [redacted] }}	5. {{ [redacted] }} *See supra* at II.B.2.g.i.	5. {{ [redacted] }}. See Part II-B-2.e.(1)(f).
6. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	6. **Storage.** M&G's storage argument is irrelevant because this customer will still receive PET by rail.	6. CSXT's transload alternative creates another insurmountable problem – the alternative involves an impermissible double transload. See Part II-B-2.b, II-B-2.d, and II-B-2.f.

M&G Opening	CSXT Reply	M&G Rebuttal
7. Although the Direct Truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	7. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	7. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
8. Transload rate does not apply because transloading would require at least two transloads (once at Belpre to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2). Moreover, any PET in a rail car at Belpre was transported there by CSXT.	8. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	8. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	9. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.

Lane B-41: Belpre, OH to Hazleton, PA

B-41	Belpre, OH to Hazleton, PA	CSXT tariff $4762, route Belpre-Hagerstown	R/VC 470%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
Direct truck shipment from bulk terminal in Belpre to customers in Hazleton, PA.	{{[redacted]}}	{{[redacted]}}	Not effective competition because alternative ends at Hazleton, but the CSXT tariff transportation terminates at interchange to NS in Hagerstown. Therefore, CSXT has not posed a true alternative. See Part II-B-2.a.(1). Other reasons are described below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customers are {[redacted]} in Hazleton, PA.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from the Bulkmatic Terminal on CSXT in Belpre, OH to interchange with Norfolk Southern Railway at Hagerstown, MD.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. {{[redacted]}}	3. {{[redacted]}}	3. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{[redacted]}}
4. {{[redacted]}}	4. {{[redacted]}}	4. {{[redacted]}}

M&G Opening	CSXT Reply	M&G Rebuttal
[redacted] }}	[redacted] }} *See supra* at II.B.2.g.i.	[redacted] }}. See Part II-B-2.e.(1)(f).
5. Customers use rail cars for storage. See Part II-B-3.a.(1)(b).	5. **Storage.** M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at §	5. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted]

M&G Opening	CSXT Reply	M&G Rebuttal
	II.B.2.d.	[redacted] }}. See Part II-B-2.e.(1)(f).
6. Although the Direct Truck rate is {{ [redacted] }} the through rail rate, CSXT has increased rates by { [redacted] } from 2008-2010 without a loss of traffic to trucks. See Part II-B-3.a.(4)(b).	6. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	6. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).
7. Transload rate does not apply because transloading would require at least two transloads (once at Belpre to load the bulk truck, and once at the transload terminal to load a rail car), thus implicating product integrity concerns. See Part II-B-3.a.(2). Moreover, any PET in a rail car at Belpre was transported there by CSXT.	7. **Product integrity.** M&G's claim that it cannot transload PET more than once because of product integrity concerns {{ [redacted] }} Moreover, standard quality control measures—{ [redacted] }—can be used to substantially mitigate M&G's alleged quality concerns. *See supra* at § II.B.2.g.ii.	7. CSXT has either misrepresented or misconstrued various M&G transactions over the past 5 years as conduct involving a double transload, when in fact only a single transload occurred. M&G witness Granatelli confirms that double-transloading is very rare among polymer producers because of product integrity concerns. See Part II-B-2.b.(2) and II-B-2.f.
8. The need for rail on this lane is consistent with {{ [redacted] }}.	8. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	8. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.

Lane B-48: Sweetwater, TX to Apple Grove, WV

B-48	Sweetwater, TX to Apple Grove, WV	CSXT tariff $5757, route Chicago-Apple Grove	R/VC 381%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
NS rail transportation from Chicago to bulk terminal in Columbus, then transload into trucks for truck transportation to M&G facility in Apple Grove.	{{[redacted]}}	{{[redacted]}}	Not effective competition for the reasons stated below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. PET is transported from the SIT yard at Sweetwater, TX on BNSF to the Apple Grove facility for recycling.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at Chicago to M&G's facility in Apple Grove, WV.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Direct Truck rate is {{[redacted]}} the through rail rate. See Part II-B-3.a.(4).	3. **Cost of alternative.** Alternative transportation via rail-truck transload to Apple Grove, WV is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	3. Although CSXT claims the rate is "cost-competitive", comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
4. Although the transload rate is {{[redacted]}} the through rail rate, CSXT has increased its rate by {[redacted]} from 2008-2010, without a loss of rail traffic to this alternative. See Part II-B-3.a.(4)(b).	4. **Rate increase.** CSXT's rate increases {{[redacted]}} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	4. CSXT's claim that {{[redacted]}}. See Part II-B-2.a.(4)(d).
5. Because this lane is for product returns, the rail car also must return to Apple	5. **Inefficient use of railcars.** Railcars would not return empty to Apple Grove as	5. CSXT's plan omits key points, such as the fact that movements in both directions

M&G Opening	CSXT Reply	M&G Rebuttal
Grove, which makes transloading an inefficient option.	materials coming from Apple Grove, WV to Sweetwater, TX could be sent by rail to Lima, OH and transloaded into trucks for delivery to Apple Grove.	would require double transloads. Also, M&G would have to wash rail cars between each load, a large expense, or stage large quantities of rail cars at Columbus and/or Lima in order to ensure that a rail car that had previously carried the same class of PET was always available for traffic moving the opposite direction. It is CSXT's plan that is inefficient. See Part II-B-2.b and II-B-2.d.
6. The need for rail on this lane is consistent with {{ [redacted] }}.	6. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § IIB.2.b.	6. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.

Lane B-49: Sweetwater, TX to Cartersville, GA

B-49	Sweetwater, TX to Cartersville, GA	CSXT tariff $6020, route New Orleans-Cartersville	R/VC 400%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
NS transportation from New Orleans to bulk terminal in Dalton, GA, then transload into trucks for truck transportation to customers in Cartersville, GA.	{{[redacted]}}	{{[redacted]}}	Not effective competition because customer requests rail and shipments are {{[redacted]}}. For additional reasons, see below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customers are {[redacted]}.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF in New Orleans to the delivery locations in Cartersville, GA.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Sweetwater is a SIT yard owned, operated, and served by BNSF, though A&R Transport operates the transload track at Sweetwater.	3. (no response)	3. The Board should accept M&G's position as the only evidence of record.
4. {{[redacted]}}	4. {{[redacted]}}	4. Under the basic law of contracts, a contract can exist without being signed or even written. See Part II-B-2.e.(1)(b). {{[redacted]}}

M&G Opening	CSXT Reply	M&G Rebuttal
5. {{ [redacted] }}	5. {{ [redacted] }} *See supra* at ILB.2.g.i.	5. {{ [redacted] }}
6. Customers use rail cars for storage. See Part II-B-3.a.(1)(b).	6. **Storage.** M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{ [redacted] }} *See supra* at § II.B.2.d.	6. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{ [redacted] }}. See Part II-B-2.e.(1)(f).

M&G Opening	CSXT Reply	M&G Rebuttal
7. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	7. **Cost of alternative.** Alternative transportation via rail-truck transload to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	7. Although CSXT claims the rate is "cost-competitive", comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
8. Although transload rate is {{ [redacted] }} the through rail rate, CSXT has not lost any traffic to trucks. See Part II-B-3.a.(4)(b).	8. **Relative truck volume.** M&G's argument that "CSXT has not lost any traffic to trucks" makes little sense in light of the { [redacted] }	8. The fact remains that { [redacted] }
9. The need for rail on this lane is consistent with {{ [redacted] }}.	9. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	9. The amount of historical truck volume on the lane at issue is a relevant factor under established precedent. Trucking to other destinations is less relevant, given that it is based on different circumstances. M&G has demonstrated that trucks play a very limited role in the transportation of PET. See Part II-B-2.b.(1) and II-B-2.d.

Lane B-50: Sweetwater, TX to Clifton Forge, VA

B-50	Sweetwater, TX to Clifton Forge, VA	CSXT tariff $7553, route New Orleans-Clifton Forge	R/VC 247%

Alternative transportation proposed by CSXT	Rate asserted by CSXT for alternative	Restatement by M&G of rate for alternative	M&G description of feasibility of alternative
NS transportation from New Orleans to bulk terminal in Petersburg, VA, then transload into trucks for truck transportation to customer in Clifton Forge, VA.	{{[redacted]}}	{{[redacted]}}	Not effective competition. Rate asserted by CSXT is {{[redacted]}} the challenged tariff. For additional reasons, see below.

M&G Opening	CSXT Reply	M&G Rebuttal
1. The customer is {[redacted]}.	1. (no response)	1. The Board should accept M&G's position as the only evidence of record.
2. Transportation is from interchange with BNSF at New Orleans to the delivery location in Clifton Forge, VA.	2. (no response)	2. The Board should accept M&G's position as the only evidence of record.
3. Customer uses rail cars for storage. See Part II-B-3.a.(1)(b).	3. **Storage.** M&G provides no evidence that its customer uses rail cars for storage, and no evidence that this alleged preference would render CSXT market dominant. *See supra* at § II.B.2.g.i. {{[redacted]}} *See supra* at § II.B.2.d.	3. It is an established fact in the polymer industry that rail cars are used for storage by both producers and consumers, as CSXT undoubtedly knows. See Part II-B-2.b and II-B-2.d. M&G previously provided Op. Ev. Ex. II-B-7 which showed that {{[redacted]}}. See Part II-B-2.e.(1)(f).

M&G Opening	CSXT Reply	M&G Rebuttal
4. Direct Truck rate is {{ [redacted] }} the through rail rate. See Part II-B-3.a.(4).	4. **Cost of alternative.** CSXT does not contend that direct truck service is competitive for this lane.	4. CSXT apparently concedes that truck service does not provide effective competition.
5. Transload rate is {{ [redacted] }} the through rail rate.	5. **Cost of alternative.** Alternative transportation via rail-truck transload to the ultimate customer is cost-competitive with CSXT's rail service. *See supra* at § II.B.2.f.	5. The alternative proposed by CSXT has a rate {{ [redacted] }} the CSXT tariff. {{ [redacted] }} comparable pricing does not constitute effective competition because the alternative proposed by CSXT has much higher costs. See Part II-B-2.a.(4).
6. The need for rail on this lane is consistent with {{ [redacted] }}.	6. **Truck Volumes.** {{ [redacted] }} does not demonstrate CSXT's market dominance in light of M&G's extensive use of trucking for other destinations and the cost-competitiveness of truck transportation. *See supra* at § II.B.2.b.	6. CSXT is wrong. {{ [redacted] }} This fact confirms CSXT's market dominance.
7. Cumulative 2009-2010 CSXT rate increase: { [redacted] } See Part II-B-3.a.(4)(b).	7. **Rate increase.** CSXT's rate increases {{ [redacted] }} and do not demonstrate market dominance. *See supra* at § II.B.3.b.	7. CSXT's claim that {{ [redacted] }}. See Part II-B-2.a.(4)(d).

Part IV

VERIFICATION

I, Thomas D. Crowley, verify under penalty of perjury that I am the same Thomas D. Crowley whose Statement of Qualifications appears in Part IV of the Narrative portion of M&G's Opening Evidence in this proceeding; that I am co-sponsoring the portions of M&G's Rebuttal Evidence in this proceeding that relate to quantitative market dominance (Part II-A) with Witness Timothy D. Crowley; and that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Thomas D. Crowley

Executed on: August 4, 2011

VERIFICATION

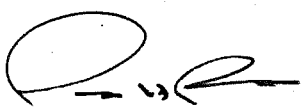
I, Timothy D. Crowley, verify under penalty of perjury that I am the same Timothy D. Crowley whose Statement of Qualifications appears in Part IV of the Narrative portion of M&G's Opening Evidence in this proceeding; that I am co-sponsoring the portions of M&G's Rebuttal Evidence in this proceeding that relate to quantitative market dominance (Part II-A) with Witness Thomas D. Crowley; and that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Timothy D. Crowley

Executed on: August 4, 2011

VERIFICATION

I, Philip H. Burris, verify under penalty of perjury that I am the same Philip H. Burris whose Statement of Qualifications appears in Part IV of the Narrative portion of M&G's Opening Evidence in this proceeding; that I am co-sponsoring the portions of M&G's Rebuttal Evidence in this proceeding that relate to qualitative market dominance (Part II-B) with Witness Sean D. Nolan; and that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Philip H. Burris

Executed on: August 4, 2011

VERIFICATION

I, Sean D. Nolan, verify under penalty of perjury that I am the same Sean D. Nolan whose Statement of Qualifications appears in Part IV of the Narrative portion of M&G's Opening Evidence in this proceeding; that I am co-sponsoring the portions of M&G's Rebuttal Evidence in this proceeding that relate to qualitative market dominance (Part II-B) with Witness Philip H. Burris; and that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Sean D. Nolan

Executed on: August 4, 2011

MELBA AGUILAR
North America Traffic Manager
M&G Polymers USA, LLC

Ms. Aguilar is sponsoring factual evidence pertaining to transportation costs and the distribution network used by M&G to transport polyethylene terephthalate ("PET") to its customers. Ms. Aguilar's testimony encompasses the transportation providers engaged by M&G to transport PET to its customers, the contracts and agreements between M&G and those transportation providers, and M&G's use of lease tracks, transload sites, and SIT yards. Ms. Aguilar provides responses to assertions made by CSX Transportation, Inc. in its Reply Evidence regarding the transportation needs and requirements of M&G's customers, M&G's supply contracts with its customers, and the transportation costs (motor, rail, and terminal rates) that are or would be incurred by M&G under various scenarios. These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Ms. Aguilar is qualified and competent to provide testimony in this proceeding. Since January 2008, Ms. Aguilar has held the position of North America Traffic Manager for M&G. In this position, her responsibilities include: rate negotiations with North American (Mexico, US, and Canada) railroads, van and bulk carriers, freight forwarders, and sea lines. She also engages in contract negotiation and execution for supply chain services and transportation in North America (rail, truck, warehousing, packaging, terminals, and freight forwarders), rail-route determination and optimization, intermodal and bulk terminal selection, set up, and rate negotiations. Ms. Aguilar also handles contract negotiation and procurement of utilities for Mexico and US plants. Prior to becoming the North America Traffic Manager, Ms. Aguilar was the Supply Chain Manager for M&G Polímeros México, S.A. de C.V. Ms. Aguilar has worked

in the procurement, supply chain, and transportation industry since 1995, and she has specifically worked in the field of PET packaging, transportation, warehousing, and terminal operations since 1998.

Ms. Aguilar is a member of the North American Rail Shippers Association (since 2008). Ms. Aguilar has been licensed by the Mexican federal government as a Business Administrator since 1995. She was the president of the Logistics council at the AISTAC (Southern Tamaulipas Industrial Association) from 2006 to 2007, and has been a Logistics professor at the Tecnologico de Monterrey University (Altamira, Mexico) since 2007.

Ms. Aguilar has a Masters degree in Science from the Tecnologico de Monterrey University (Altamira, Mexico) and a degree in Business Administration and International Commerce from the same university.

VERIFICATION

I, Melba Aguilar, verify under penalty of perjury that I have read the Rebuttal Evidence of M&G Polymers USA, LLC in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Melba Aguilar
North America Traffic Manager

Executed on 7/29/11

ROBERT W. GRANATELLI
Transportation Consultant

Mr. Granatelli is sponsoring factual evidence pertaining to the polymers industry and supply chain practices used in the industry, as well as the reasons for use of those practices. In particular, Mr. Granatelli responds to Reply Evidence arguments made by CSX Transportation, Inc. ("CSXT") regarding the various storage and transportation methods used for polymers such as polyethylene terephthalate ("PET") by manufacturers of polymers, transportation providers, and consumers of polymers. Mr. Granatelli provides an evaluation of the operations of M&G Polymers USA, LLC ("M&G") in light of assertions made by CSXT in its Reply Evidence. He also analyzes the various transportation and supply chain alternatives that CSXT claims can or should be used by M&G.

Mr. Granatelli is an independent transportation consultant with an address of 401 SW 4th Avenue, Apt 1503, Ft Lauderdale, FL 33315. Mr. Granatelli has 32 years of experience in all modes of domestic and international transportation and logistics, a large portion of which was spent working for Basell on plastics supply chain issues. He directed Basell's transportation for almost 20 years before retiring in 2008. In addition, Mr. Granatelli was manager of rail procurement for International Paper. During his Basell tenure, Mr. Granatell was responsible for the operational management and economics of all modes of deliveries. This entailed operation of over 5,000 plastics hopper cars delivering over 20,000 rail shipments of polymer products annually, as well as establishment and operation of plastic intermodal transload facilities throughout the U.S. and Canada. Basell held contracts with all U.S. and Canadian Class I railroads, and with the largest U.S. and Canadian bulk motor carriers of plastics, to accomplish this transportation. Mr. Granatelli has made presentations regarding logistics business issues to

members of Congress, and before industry groups, including the National Industrial Transportation League, The Intermodal Association of North America, The Council of Logistics Management, and The American Chemistry Council. He is a former director of the American Plastics Council-Committee and Transportation and Distribution, Chairman of the Railroad Sub-Committee of the American Plastics Council-Committee and Transportation and Distribution, Board member of the National Industrial Transportation League, and Chairman of the National Industrial Transportation League Executive Rail Advisory Panel. Mr. Granatelli has been engaged in supply chain consulting since 2008.

VERIFICATION

I, Robert W. Granatelli, verify under penalty of perjury that I have read the Rebuttal Evidence of M&G Polymers USA, LLC in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Robert W. Granatelli

Executed on July 28, 2011

ANDRE MEYER
Americas Supply Chain Manager
M&G Polymers USA, LLC

Mr. Meyer is sponsoring factual evidence pertaining to the Apple Grove facility, customers of M&G Polymers USA, LLC ("M&G"), and the distribution network used by M&G to transport polyethylene terephthalate ("PET") to its customers. Mr. Meyer responds to certain assertions made by CSX Transportation, Inc. ("CSXT") in its Reply Evidence regarding the transportation needs and requirements of M&G's customers and M&G's supply contracts with its customers. Additionally, Mr. Meyer's testimony responds to CSXT statements about the configuration and operations at the PET production facility in Apple Grove, WV, with particular emphasis on the limitations in transportation options available to M&G resulting from such configuration and operations. He also supports other supply chain issues. These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Meyer is qualified and competent to provide testimony in this proceeding. In his role as the Americas Supply Chain Manager for M&G, he is responsible for supply chain operations including Production Planning, Customer Service, and Delivery for the Americas region which includes operations in Brazil, Mexico, and the United States. Mr. Meyer has worked in the PET business since 1989, staying with the operations that are the focus of this proceeding through the sale from Goodyear to Shell Chemical to M&G. During this period, he has had roles ranging from Research and Development Engineer to Site Manager at the Apple Grove facility.

Mr. Meyer has a degree in Chemical Engineering from the University of Michigan.

VERIFICATION

I, Andre Meyer, verify under penalty of perjury that I have read the Rebuttal Evidence of M&G Polymers USA, LLC in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Andre Meyer
Americas Supply Chain Manager

Executed on 7/30/2011

GIL ROGERS
Senior Project Engineer
M&G Polymers USA, LLC

Mr. Rogers is sponsoring factual evidence pertaining to the changes that would need to be made to the Apple Grove facility of M&G Polymers USA, LLC ("M&G") to avoid rail service for transportation of polyethylene terephthalate ("PET"). Mr. Rogers' testimony encompasses the construction necessary, and costs that would be incurred, if M&G reconfigured the Apple Grove facility so that all bulk PET shipments were transported via motor carrier after being transloaded from railcars at Apple Grove. Additionally, his Rebuttal testimony also responds to assertions made by CSX Transportation, Inc. ("CSXT") in its Reply Evidence that M&G can dramatically increase its truck origin shipments at Apple Grove, via transloading, with no investments whatsoever, and that even further trucks can be loaded with minimal investment.

Mr. Rogers is qualified and competent to provide testimony in this proceeding. Since June 1, 2000, Mr. Rogers has held the position of Senior Project Engineer with M&G. In this position, his responsibilities include estimating construction projects, cost control of construction projects, equipment, material and fabrication quotations and requisitions, and management of local construction contractor and engineering companies. Prior to becoming the Senior Project Engineer for M&G, Mr. Rogers was the a Senior Project Engineer for six years and Engineering Manager for two years with Shell Chemical LLC at the same plant site. Mr. Rogers has worked in the PET industry for 30 years in project/construction management. He also worked four years for Goodyear Tire and Rubber Company in a petrochemical plant as a Department Manager.

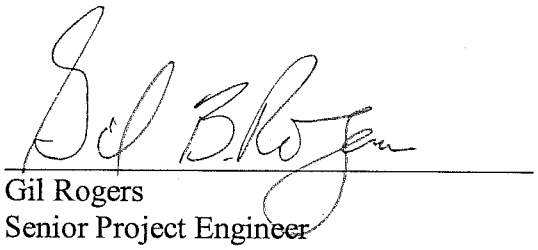
Mr. Rogers has been a member of the Appalachian Construction User Council for the last 18 years. The Appalachian Construction User Council deals with construction labor issues. He

held the position of Chairman and Assistant Chairman in the Appalachian Construction User Council in the past.

Mr. Rogers has a BS degree in Chemical Engineering from the West Virginia Institute of Technology.

VERIFICATION

I, Gil Rogers, verify under penalty of perjury that I have read the Rebuttal Evidence of M&G Polymers USA, LLC in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.



Gil Rogers
Senior Project Engineer

Executed on _____

PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

M & G POLYMERS USA, LLC	)	
Complainant,	)	
v.	)	**Docket No. NOR 42123**
CSX TRANSPORTATION, INC.	)	
Defendant.	)	

REBUTTAL MARKET DOMINANCE EVIDENCE OF

M&G POLYMERS USA, LLC

Volume II of II

EXHIBITS

Jeffrey O. Moreno
Sandra L. Brown
David E. Benz
Thompson Hine LLP
Suite 800
1920 N St. NW
Washington, DC 20036
Phone: (202) 331-8800
Fax: (202) 331-8330

August 4, 2011

filing contains color images

PUBLIC VERSION

Exhibit

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for M&G Movements – 1Q10 ..... II-A-1

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for M&G Movements – 2Q10 ..... II-A-2

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for M&G Movements – 3Q10 ..... II-A-3

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for M&G Movements – 4Q10 ..... II-A-4

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The Dispatch, Newsletter of Watco Companies, Inc. (May 2005), "Watco friend and partner retires after 19 years in the industry" II-B-2

SupplyChainBrain, Chemicals & Energy, "Sunoco's Shipping Process Inside Its Plants Goes from Manual to Highly Optimized" (Sept. 1, 2004) II-B-3

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Motor carrier e-mail regarding proposal (July 7, 2011) II-B-5

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Rebuttal Exhibit II-A-1

Variable Cost, Jurisdictional Threshold, Tariff Rate
and Revenue/Variable Cost Ratios Per Car for M&G Movements -- 1Q10

Origin 1/		Destination		Railroad	Commodity	Phase III Cost Base Year 2009	1Q2010 Index to 1Q10	1Q2010 Phase III Cost 2/	1Q2010 Jurisdictional Threshold 3/	1Q2010 Tariff Rate 4/	1Q2010 Revenue/Variable Cost Ratio 5/	CSXT Reply Variable Cost 6/	Variable Cost Difference 7/	CSXT Reply R/VC Ratio 8/	R/VC Difference 9/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Exhibit A - Local Moves															
1. APPLE GROVE	WV	BELPRE	OH	CSXT	Polyethylene Terephthalate	$759	1.04806	$795	$1,431	$2,563	322%	$859	-$64	299%	23%
2. APPLE GROVE	WV	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,869	1.04806	$1,959	$3,525	$5,848	299%	$2,317	-$359	252%	47%
3. APPLE GROVE	WV	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,961	1.04806	$2,055	$3,699	$5,669	276%	$2,055	$0	276%	0%
4. APPLE GROVE	WV	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$1,122	1.04806	$1,175	$2,116	$3,893	331%	$1,359	-$183	287%	44%
5. APPLE GROVE	WV	DEVON	KY	CSXT	Polyethylene Terephthalate	$935	1.04806	$980	$1,763	$2,788	285%	$980	$0	285%	0%
6. APPLE GROVE	WV	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,499	1.04806	$2,619	$4,714	$8,012	306%	$2,706	-$87	296%	10%
7. APPLE GROVE	WV	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,315	1.04806	$1,379	$2,481	$5,450	395%	$1,378	$0	395%	0%
8. APPLE GROVE	WV	PARKERSBURG	WV	CSXT	Polyethylene Terephthalate	$755	1.04806	$791	$1,424	$2,563	324%	$791	$0	324%	0%
9. APPLE GROVE	WV	RAINS	SC	CSXT	Polyethylene Terephthalate	$2,131	1.04806	$2,233	$4,020	$5,424	243%	$2,233	$0	243%	0%
10. APPLE GROVE	WV	ROCHESTER	NY	CSXT	Polyethylene Terephthalate	$1,748	1.04806	$1,832	$3,298	$8,570	468%	$2,057	-$225	417%	51%
11. BELPRE	OH	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.04806	$790	$1,422	$3,111	394%	$790	$0	394%	0%
12. BELPRE	OH	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,685	1.04806	$1,766	$3,178	$5,252	297%	$1,766	$0	298%	-1%
13. BELPRE	OH	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$2,077	1.04806	$2,177	$3,919	$6,554	301%	$2,177	$0	301%	0%
14. BELPRE	OH	DEVON	KY	CSXT	Polyethylene Terephthalate	$1,109	1.04806	$1,162	$2,092	$3,823	329%	$1,162	$0	329%	0%
15. BELPRE	OH	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,678	1.04806	$2,807	$5,053	$7,995	285%	$2,807	$0	285%	0%
16. BELPRE	OH	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,502	1.04806	$1,574	$2,833	$5,122	325%	$1,574	$0	325%	0%
17. PARKERSBURG	WV	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.04806	$790	$1,423	$3,111	394%	$790	$0	394%	0%
18. RAINS	SC	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,523	1.04806	$1,597	$2,874	$4,129	259%	$1,597	$0	259%	0%
Exhibit B - Joint Moves															
1. ALTAMIRA	TM	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,375	1.04806	$1,441	$2,594	$5,584	388%	$1,441	$0	388%	0%
2. ALTAMIRA	TM	BELPRE	OH	CSXT	Polyethylene Terephthalate	$1,548	1.04806	$1,622	$2,920	$5,515	340%	$1,622	$0	340%	0%
3. ALTAMIRA	TM	CAMBRIDGE	OH	CSXT	Polyethylene Terephthalate	$767	1.04806	$804	$1,447	$4,903	610%	$804	$0	610%	0%
4. ALTAMIRA	TM	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,369	1.04806	$1,435	$2,584	$5,953	415%	$1,435	$0	415%	0%
5. ALTAMIRA	TM	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,791	1.04806	$2,926	$5,266	$7,259	248%	$2,926	$0	248%	0%
6. ALTAMIRA	TM	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$1,974	1.04806	$2,069	$3,724	$7,406	358%	$2,069	$0	358%	0%
7. APPLE GROVE	WV	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.04806	$1,430	$2,573	$5,548	388%	$1,430	$0	388%	0%
8. APPLE GROVE	WV	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$1,095	1.04806	$1,148	$2,066	$5,297	461%	$1,148	$0	461%	0%
9. APPLE GROVE	WV	ALTAMIRA	TM	CSXT	Polyethylene Terephthalate	$1,364	1.04806	$1,429	$2,573	$5,548	388%	$1,429	$0	388%	0%
10. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,270	1.04806	$1,331	$2,395	$5,537	416%	$1,331	$0	416%	0%
11. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,191	1.04806	$1,248	$2,247	$5,568	446%	$1,248	$0	446%	0%
12. APPLE GROVE	WV	DARLINGTON	SC	CSXT	Polyethylene Terephthalate	$1,547	1.04806	$1,621	$2,919	$5,387	332%	$1,621	$0	332%	0%
13. APPLE GROVE	WV	DONEY SPUR	PQ	CSXT	Polyethylene Terephthalate	$851	1.04806	$892	$1,606	$2,861	321%	$971	-$79	295%	26%
14. APPLE GROVE	WV	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$945	1.04806	$990	$1,783	$3,583	362%	$990	$0	362%	0%
15. APPLE GROVE	WV	FREMONT	OH	CSXT	Polyethylene Terephthalate	$632	1.04806	$662	$1,192	$2,854	431%	$742	-$80	385%	46%
16. APPLE GROVE	WV	GLENDALE	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.04806	$1,430	$2,573	$5,548	388%	$1,430	$0	388%	0%
17. APPLE GROVE	WV	HAMILTON	ON	CSXT	Polyethylene Terephthalate	$854	1.04806	$895	$1,610	$2,861	320%	$974	-$79	294%	26%
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	CSXT	Polyethylene Terephthalate	$1,095	1.04806	$1,148	$2,067	$5,297	461%	$1,148	$0	461%	0%
19. APPLE GROVE	WV	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$1,095	1.04806	$1,147	$2,065	$5,297	462%	$1,147	$0	462%	0%
20. APPLE GROVE	WV	HEBRON	OH	CSXT	Polyethylene Terephthalate	$987	1.04806	$1,034	$1,861	$2,892	280%	$1,034	$0	280%	0%
21. APPLE GROVE	WV	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,367	1.04806	$1,433	$2,580	$5,548	387%	$1,433	$0	387%	0%
22. APPLE GROVE	WV	LITTLE ROCK	AR	CSXT	Polyethylene Terephthalate	$1,366	1.04806	$1,432	$2,577	$5,548	388%	$1,432	$0	388%	0%
23. APPLE GROVE	WV	MEMPHIS	TN	CSXT	Polyethylene Terephthalate	$1,697	1.04806	$1,778	$3,201	$6,012	338%	$1,778	$0	338%	0%
24. APPLE GROVE	WV	NICHOLASVILLE	KY	CSXT	Polyethylene Terephthalate	$630	1.04806	$661	$1,189	$2,854	432%	$740	-$80	385%	47%
25. APPLE GROVE	WV	ROCKFORD	IL	CSXT	Polyethylene Terephthalate	$1,370	1.04806	$1,436	$2,585	$5,548	386%	$1,436	$0	386%	0%
26. APPLE GROVE	WV	ROGERS	MN	CSXT	Polyethylene Terephthalate	$1,367	1.04806	$1,433	$2,579	$5,548	387%	$1,433	$0	387%	0%
27. APPLE GROVE	WV	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,354	1.04806	$1,419	$2,554	$5,587	394%	$1,500	-$81	373%	21%
28. APPLE GROVE	WV	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$851	1.04806	$892	$1,606	$2,861	321%	$971	-$79	295%	26%
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,350	1.04806	$1,415	$2,548	$5,587	395%	$1,496	-$81	374%	21%
30. APPLE GROVE	WV	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,365	1.04806	$1,431	$2,575	$5,548	388%	$1,431	$0	388%	0%
31. APPLE GROVE	WV	TEXARKANA	TX	CSXT	Polyethylene Terephthalate	$1,354	1.04806	$1,419	$2,553	$5,587	394%	$1,499	-$81	373%	21%
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	CSXT	Polyethylene Terephthalate	$1,342	1.04806	$1,406	$2,532	$5,545	394%	$1,406	$0	394%	0%
33. APPLE GROVE	WV	VADO	NM	CSXT	Polyethylene Terephthalate	$1,364	1.04806	$1,430	$2,574	$5,548	388%	$1,430	$0	388%	0%
34. APPLE GROVE	WV	W CHICAGO	IL	CSXT	Polyethylene Terephthalate	$1,370	1.04806	$1,435	$2,584	$5,548	386%	$1,435	$0	387%	-1%
35. APPLE GROVE	WV	WAYNESVILLE	NC	CSXT	Polyethylene Terephthalate	$1,399	1.04806	$1,466	$2,639	$3,948	269%	$1,466	$0	269%	0%
36. BELPRE	OH	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,534	1.04806	$1,607	$2,893	$5,721	356%	$1,607	$0	356%	0%
37. BELPRE	OH	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$925	1.04806	$969	$1,745	$4,636	478%	$969	$0	478%	0%
38. BELPRE	OH	CAMBRIDGE	ON	CSXT	Polyethylene Terephthalate	$1,239	1.04806	$1,299	$2,338	$4,060	313%	$1,299	$0	313%	0%
39. BELPRE	OH	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$1,106	1.04806	$1,159	$2,086	$5,100	440%	$1,159	$0	440%	0%
40. BELPRE	OH	FREMONT	OH	CSXT	Polyethylene Terephthalate	$812	1.04806	$851	$1,531	$3,295	387%	$851	$0	387%	0%
41. BELPRE	OH	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$924	1.04806	$969	$1,744	$4,636	479%	$969	$0	479%	0%
42. BELPRE	OH	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,537	1.04806	$1,611	$2,899	$5,721	355%	$1,611	$0	355%	0%
43. BELPRE	OH	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,560	1.04806	$1,635	$2,943	$6,131	375%	$1,635	$0	375%	0%
44. BELPRE	OH	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$1,237	1.04806	$1,297	$2,334	$4,060	313%	$1,297	$0	313%	0%
45. BELPRE	OH	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,557	1.04806	$1,631	$2,936	$6,131	376%	$1,631	$0	376%	0%
46. BELPRE	OH	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,535	1.04806	$1,608	$2,895	$5,721	356%	$1,608	$0	356%	0%
47. SPRING	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,444	1.04806	$1,514	$2,724	$5,428	359%	$1,514	$0	359%	0%
48. SWEETWATER	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,376	1.04806	$1,442	$2,596	$5,584	387%	$1,442	$0	387%	0%
49. SWEETWATER	TX	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,371	1.04806	$1,437	$2,586	$5,953	414%	$1,437	$0	414%	0%
50. SWEETWATER	TX	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,793	1.04806	$2,927	$5,269	$7,259	248%	$2,927	$0	248%	0%
51. APPLE GROVE	WV	LEXINGTON	KY	CSXT	Polyethylene Terephthalate	$858	1.04806	$899	$1,618	$3,128	348%	$899	$0	348%	0%
52. APPLE GROVE	WV	PRATTVILLE	AL	CSXT	Polyethylene Terephthalate	$688	1.04806	$721	$1,298	$2,787	387%	$721	$0	387%	0%

1/ The issue movement lane numbers correspond to the issue movement lane numbers in M&G's Third Amended Complaint.
2/ Column (5) x Column (6)
3/ Column (7) x 1.8
4/ Average Tariff Rate including fuel surcharge for 1Q10 -- see Exhibit II-A-9 to M&G's Opening Evidence
5/ Column (9) + Column (7)
6/ Source: CSXT Reply II-A-2 dated July 5, 2011
7/ Column (7) - Column (11)
8/ Source: CSXT Reply II-A-2 dated July 5, 2011
9/ Column (10) - Column (13)

Rebuttal Exhibit II-A-2

Variable Cost, Jurisdictional Threshold, Tariff Rate
and Revenue/Variable Cost Ratios Per Car for M&G Movements -- 2Q10

Origin 1/		Destination		Railroad	Commodity	Phase III Cost Base Year 2009	2Q2010 Index to 2Q10	2Q2010 Phase III Cost 2/	2Q2010 Jurisdictional Threshold 3/	2Q2010 Tariff Rate 4/	2Q2010 Revenue/Variable Cost Ratio 5/	CSXT Reply Variable Cost 6/	Variable Cost Difference 7/	CSXT Reply R/VC Ratio 8/	R/VC Difference 9/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Exhibit A - Local Moves															
1. APPLE GROVE	WV	BELPRE	OH	CSXT	Polyethylene Terephthalate	$759	1.06005	$804	$1,448	$2,607	324%	$868	-$64	300%	24%
2. APPLE GROVE	WV	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,869	1.06005	$1,981	$3,566	$5,961	301%	$2,344	-$363	254%	47%
3. APPLE GROVE	WV	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,961	1.06005	$2,079	$3,741	$5,781	278%	$2,078	$0	278%	0%
4. APPLE GROVE	WV	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$1,122	1.06005	$1,189	$2,140	$3,964	333%	$1,374	-$185	288%	45%
5. APPLE GROVE	WV	DEVON	KY	CSXT	Polyethylene Terephthalate	$935	1.06005	$991	$1,784	$2,838	286%	$991	$0	286%	0%
6. APPLE GROVE	WV	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,499	1.06005	$2,649	$4,768	$8,169	308%	$2,737	-$88	299%	9%
7. APPLE GROVE	WV	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,315	1.06005	$1,394	$2,510	$5,549	398%	$1,394	$0	398%	0%
8. APPLE GROVE	WV	PARKERSBURG	WV	CSXT	Polyethylene Terephthalate	$755	1.06005	$800	$1,441	$2,607	326%	$800	$0	326%	0%
9. APPLE GROVE	WV	RAINS	SC	CSXT	Polyethylene Terephthalate	$2,131	1.06005	$2,259	$4,066	$5,534	245%	$2,259	$0	245%	0%
10. APPLE GROVE	WV	ROCHESTER	NY	CSXT	Polyethylene Terephthalate	$1,748	1.06005	$1,853	$3,336	$8,725	471%	$2,081	-$227	419%	52%
11. BELPRE	OH	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.06005	$799	$1,438	$3,173	397%	$799	$0	397%	0%
12. BELPRE	OH	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,685	1.06005	$1,786	$3,215	$5,369	301%	$1,786	$0	301%	0%
13. BELPRE	OH	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$2,077	1.06005	$2,202	$3,963	$6,701	304%	$2,202	$0	304%	0%
14. BELPRE	OH	DEVON	KY	CSXT	Polyethylene Terephthalate	$1,109	1.06005	$1,176	$2,116	$3,904	332%	$1,176	$0	332%	0%
15. BELPRE	OH	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,678	1.06005	$2,839	$5,111	$8,226	290%	$2,839	$0	290%	0%
16. BELPRE	OH	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,502	1.06005	$1,592	$2,866	$5,234	329%	$1,592	$0	329%	0%
17. PARKERSBURG	WV	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.06005	$799	$1,439	$3,173	397%	$799	$0	397%	0%
18. RAINS	SC	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,523	1.06005	$1,615	$2,907	$4,209	261%	$1,615	$0	261%	0%
Exhibit B - Joint Moves															
1. ALTAMIRA	TM	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,375	1.06005	$1,458	$2,624	$5,706	392%	$1,458	$0	392%	0%
2. ALTAMIRA	TM	BELPRE	OH	CSXT	Polyethylene Terephthalate	$1,548	1.06005	$1,641	$2,954	$5,639	344%	$1,641	$0	344%	0%
3. ALTAMIRA	TM	CAMBRIDGE	OH	CSXT	Polyethylene Terephthalate	$767	1.06005	$813	$1,464	$5,007	616%	$813	$0	616%	0%
4. ALTAMIRA	TM	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,369	1.06005	$1,452	$2,613	$5,969	411%	$1,452	$0	411%	0%
5. ALTAMIRA	TM	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,791	1.06005	$2,959	$5,326	$7,433	251%	$2,959	$0	251%	0%
6. ALTAMIRA	TM	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$1,974	1.06005	$2,092	$3,766	$7,615	364%	$2,092	$0	364%	0%
7. APPLE GROVE	WV	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.06005	$1,446	$2,603	$5,652	391%	$1,446	$0	391%	0%
8. APPLE GROVE	WV	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$1,095	1.06005	$1,161	$2,090	$5,393	464%	$1,161	$0	464%	0%
9. APPLE GROVE	WV	ALTAMIRA	TM	CSXT	Polyethylene Terephthalate	$1,364	1.06005	$1,446	$2,602	$5,652	391%	$1,446	$0	391%	0%
10. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,270	1.06005	$1,346	$2,422	$5,639	419%	$1,346	$0	419%	0%
11. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,191	1.06005	$1,262	$2,272	$5,670	449%	$1,262	$0	449%	0%
12. APPLE GROVE	WV	DARLINGTON	SC	CSXT	Polyethylene Terephthalate	$1,547	1.06005	$1,640	$2,952	$5,491	335%	$1,640	$0	335%	0%
13. APPLE GROVE	WV	DONEY SPUR	PQ	CSXT	Polyethylene Terephthalate	$851	1.06005	$902	$1,624	$2,940	326%	$982	-$80	299%	27%
14. APPLE GROVE	WV	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$945	1.06005	$1,002	$1,803	$3,752	375%	$1,002	$0	374%	1%
15. APPLE GROVE	WV	FREMONT	OH	CSXT	Polyethylene Terephthalate	$632	1.06005	$670	$1,206	$2,981	445%	$751	-$81	397%	48%
16. APPLE GROVE	WV	GLENDALE	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.06005	$1,446	$2,603	$5,652	391%	$1,446	$0	391%	0%
17. APPLE GROVE	WV	HAMILTON	ON	CSXT	Polyethylene Terephthalate	$854	1.06005	$905	$1,629	$2,940	325%	$985	-$80	299%	26%
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	CSXT	Polyethylene Terephthalate	$1,095	1.06005	$1,161	$2,090	$5,393	464%	$1,161	$0	464%	0%
19. APPLE GROVE	WV	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$1,095	1.06005	$1,160	$2,089	$5,393	465%	$1,160	$0	465%	0%
20. APPLE GROVE	WV	HEBRON	OH	CSXT	Polyethylene Terephthalate	$987	1.06005	$1,046	$1,882	$3,025	289%	$1,046	$0	289%	0%
21. APPLE GROVE	WV	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,367	1.06005	$1,449	$2,609	$5,652	390%	$1,449	$0	390%	0%
22. APPLE GROVE	WV	LITTLE ROCK	AR	CSXT	Polyethylene Terephthalate	$1,366	1.06005	$1,448	$2,606	$5,652	390%	$1,448	$0	390%	0%
23. APPLE GROVE	WV	MEMPHIS	TN	CSXT	Polyethylene Terephthalate	$1,697	1.06005	$1,799	$3,237	$6,129	341%	$1,799	$0	341%	0%
24. APPLE GROVE	WV	NICHOLASVILLE	KY	CSXT	Polyethylene Terephthalate	$630	1.06005	$668	$1,203	$2,981	446%	$749	-$81	398%	48%
25. APPLE GROVE	WV	ROCKFORD	IL	CSXT	Polyethylene Terephthalate	$1,370	1.06005	$1,453	$2,615	$5,652	389%	$1,453	$0	389%	0%
26. APPLE GROVE	WV	ROGERS	MN	CSXT	Polyethylene Terephthalate	$1,367	1.06005	$1,449	$2,609	$5,652	390%	$1,449	$0	390%	0%
27. APPLE GROVE	WV	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,354	1.06005	$1,435	$2,583	$5,692	397%	$1,517	-$82	375%	22%
28. APPLE GROVE	WV	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$851	1.06005	$902	$1,624	$2,940	326%	$982	-$80	299%	27%
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,350	1.06005	$1,432	$2,577	$5,692	398%	$1,513	-$81	376%	22%
30. APPLE GROVE	WV	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,365	1.06005	$1,447	$2,604	$5,652	391%	$1,447	$0	391%	0%
31. APPLE GROVE	WV	TEXARKANA	TX	CSXT	Polyethylene Terephthalate	$1,354	1.06005	$1,435	$2,583	$5,692	397%	$1,516	-$82	375%	22%
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	CSXT	Polyethylene Terephthalate	$1,342	1.06005	$1,423	$2,561	$5,649	397%	$1,423	$0	397%	0%
33. APPLE GROVE	WV	VADO	NM	CSXT	Polyethylene Terephthalate	$1,364	1.06005	$1,446	$2,604	$5,652	391%	$1,446	$0	391%	0%
34. APPLE GROVE	WV	W CHICAGO	IL	CSXT	Polyethylene Terephthalate	$1,370	1.06005	$1,452	$2,613	$5,652	389%	$1,452	$0	389%	0%
35. APPLE GROVE	WV	WAYNESVILLE	NC	CSXT	Polyethylene Terephthalate	$1,399	1.06005	$1,483	$2,669	$4,028	272%	$1,483	$0	272%	0%
36. BELPRE	OH	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,534	1.06005	$1,626	$2,926	$5,848	360%	$1,626	$0	360%	0%
37. BELPRE	OH	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$925	1.06005	$980	$1,765	$4,734	483%	$980	$0	483%	0%
38. BELPRE	OH	CAMBRIDGE	ON	CSXT	Polyethylene Terephthalate	$1,239	1.06005	$1,314	$2,364	$4,175	318%	$1,314	$0	318%	0%
39. BELPRE	OH	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$1,106	1.06005	$1,172	$2,110	$5,209	444%	$1,172	$0	444%	0%
40. BELPRE	OH	FREMONT	OH	CSXT	Polyethylene Terephthalate	$812	1.06005	$861	$1,549	$3,557	413%	$861	$0	413%	0%
41. BELPRE	OH	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$924	1.06005	$980	$1,764	$4,734	483%	$980	$0	483%	0%
42. BELPRE	OH	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,537	1.06005	$1,629	$2,933	$5,848	359%	$1,629	$0	359%	0%
43. BELPRE	OH	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,560	1.06005	$1,654	$2,977	$6,266	379%	$1,654	$0	379%	0%
44. BELPRE	OH	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$1,237	1.06005	$1,311	$2,361	$4,175	318%	$1,311	$0	318%	0%
45. BELPRE	OH	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,557	1.06005	$1,650	$2,970	$6,266	380%	$1,650	$0	380%	0%
46. BELPRE	OH	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,535	1.06005	$1,627	$2,928	$5,848	360%	$1,627	$0	360%	0%
47. SPRING	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,444	1.06005	$1,531	$2,756	$5,548	362%	$1,531	$0	362%	0%
48. SWEETWATER	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,376	1.06005	$1,459	$2,626	$5,706	391%	$1,459	$0	391%	0%
49. SWEETWATER	TX	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,371	1.06005	$1,453	$2,616	$5,969	411%	$1,453	$0	411%	0%
50. SWEETWATER	TX	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,793	1.06005	$2,961	$5,329	$7,433	251%	$2,961	$0	251%	0%
51. APPLE GROVE	WV	LEXINGTON	KY	CSXT	Polyethylene Terephthalate	$858	1.06005	$909	$1,636	$3,186	350%	$909	$0	350%	0%
52. APPLE GROVE	WV	PRATTVILLE	AL	CSXT	Polyethylene Terephthalate	$688	1.06005	$729	$1,313	$2,837	389%	$729	$0	389%	0%

1/ The issue movement lane numbers correspond to the issue movement lane numbers in M&G's Third Amended Complaint.
2/ Column (5) x Column (6)
3/ Column (7) x 1.8
4/ Average Tariff Rate including fuel surcharge for 2Q10 -- see Exhibit II-A-9 to M&G's Opening Evidence
5/ Column (9) ÷ Column (7)
6/ Source: CSXT Reply II-A-2 dated July 5, 2011
7/ Column (7) - Column (11)
8/ Source: CSXT Reply II-A-2 dated July 5, 2011
9/ Column (10) - Column (13)

Rebuttal Exhibit II-A-3

Variable Cost, Jurisdictional Threshold, Tariff Rate
and Revenue/Variable Cost Ratios Per Car for M&G Movements -- 3Q10

Origin 1/		Destination		Railroad	Commodity	Phase III Cost Base Year 2009	3Q2010 Index to 3Q10	3Q2010 Phase III Cost 2/	3Q2010 Jurisdictional Threshold 3/	3Q2010 Tariff Rate 4/	3Q2010 Revenue/Variable Cost Ratio 5/	CSXT Reply Variable Cost 6/	Variable Cost Difference 7/	CSXT Reply R/VC Ratio 8/	R/VC Difference 9/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Exhibit A - Local Moves															
1. APPLE GROVE	WV	BELPRE	OH	CSXT	Polyethylene Terephthalate	$759	1.04885	$796	$1,432	$2,609	328%	$859	-$64	304%	24%
2. APPLE GROVE	WV	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,869	1.04885	$1,960	$3,528	$5,975	305%	$2,319	-$359	258%	47%
3. APPLE GROVE	WV	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,961	1.04885	$2,057	$3,702	$5,796	282%	$2,057	$0	282%	0%
4. APPLE GROVE	WV	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$1,122	1.04885	$1,176	$2,117	$3,970	337%	$1,360	-$183	292%	45%
5. APPLE GROVE	WV	DEVON	KY	CSXT	Polyethylene Terephthalate	$935	1.04885	$980	$1,765	$2,842	290%	$980	$0	290%	0%
6. APPLE GROVE	WV	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,499	1.04885	$2,621	$4,718	$8,190	312%	$2,708	-$87	302%	10%
7. APPLE GROVE	WV	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,315	1.04885	$1,380	$2,483	$5,557	403%	$1,380	$0	403%	0%
8. APPLE GROVE	WV	PARKERSBURG	WV	CSXT	Polyethylene Terephthalate	$755	1.04885	$792	$1,426	$2,609	329%	$792	$0	329%	0%
9. APPLE GROVE	WV	RAINS	SC	CSXT	Polyethylene Terephthalate	$2,131	1.04885	$2,235	$4,023	$5,551	248%	$2,235	$0	248%	0%
10. APPLE GROVE	WV	ROCHESTER	NY	CSXT	Polyethylene Terephthalate	$1,748	1.04885	$1,834	$3,301	$8,738	477%	$2,059	-$225	424%	53%
11. BELPRE	OH	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.04885	$791	$1,423	$3,175	402%	$791	$0	402%	0%
12. BELPRE	OH	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,685	1.04885	$1,767	$3,181	$5,381	305%	$1,767	$0	305%	0%
13. BELPRE	OH	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$2,077	1.04885	$2,179	$3,922	$6,718	308%	$2,179	$0	308%	0%
14. BELPRE	OH	DEVON	KY	CSXT	Polyethylene Terephthalate	$1,109	1.04885	$1,163	$2,094	$3,910	336%	$1,163	$0	336%	0%
15. BELPRE	OH	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,678	1.04885	$2,809	$5,057	$8,249	294%	$2,809	$0	294%	0%
16. BELPRE	OH	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,502	1.04885	$1,575	$2,835	$5,244	333%	$1,575	$0	333%	0%
17. PARKERSBURG	WV	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.04885	$791	$1,424	$3,175	401%	$791	$0	401%	0%
18. RAINS	SC	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,523	1.04885	$1,598	$2,876	$4,219	264%	$1,598	$0	264%	0%
Exhibit B - Joint Moves															
1. ALTAMIRA	TM	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,375	1.04885	$1,442	$2,596	$5,718	396%	$1,442	$0	396%	0%
2. ALTAMIRA	TM	BELPRE	OH	CSXT	Polyethylene Terephthalate	$1,548	1.04885	$1,624	$2,923	$5,652	348%	$1,624	$0	348%	0%
3. ALTAMIRA	TM	CAMBRIDGE	OH	CSXT	Polyethylene Terephthalate	$767	1.04885	$805	$1,448	$5,014	623%	$805	$0	623%	0%
4. ALTAMIRA	TM	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,369	1.04885	$1,436	$2,585	$5,981	416%	$1,436	$0	416%	0%
5. ALTAMIRA	TM	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,791	1.04885	$2,928	$5,270	$7,460	255%	$2,928	$0	255%	0%
6. ALTAMIRA	TM	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$1,974	1.04885	$2,070	$3,726	$7,633	369%	$2,070	$0	369%	0%
7. APPLE GROVE	WV	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.04885	$1,431	$2,575	$5,664	396%	$1,431	$0	396%	0%
8. APPLE GROVE	WV	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$1,095	1.04885	$1,149	$2,068	$5,401	470%	$1,149	$0	470%	0%
9. APPLE GROVE	WV	ALTAMIRA	TM	CSXT	Polyethylene Terephthalate	$1,364	1.04885	$1,431	$2,575	$5,664	396%	$1,431	$0	396%	0%
10. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,270	1.04885	$1,332	$2,397	$5,649	424%	$1,332	$0	424%	0%
11. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,191	1.04885	$1,249	$2,248	$5,680	455%	$1,249	$0	455%	0%
12. APPLE GROVE	WV	DARLINGTON	SC	CSXT	Polyethylene Terephthalate	$1,547	1.04885	$1,623	$2,921	$5,504	339%	$1,623	$0	339%	0%
13. APPLE GROVE	WV	DONEY SPUR	PQ	CSXT	Polyethylene Terephthalate	$851	1.04885	$893	$1,607	$2,946	330%	$972	-$79	303%	27%
14. APPLE GROVE	WV	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$945	1.04885	$991	$1,784	$3,759	379%	$991	$0	379%	0%
15. APPLE GROVE	WV	FREMONT	OH	CSXT	Polyethylene Terephthalate	$632	1.04885	$663	$1,193	$2,984	450%	$743	-$80	402%	48%
16. APPLE GROVE	WV	GLENDALE	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.04885	$1,431	$2,575	$5,664	396%	$1,431	$0	396%	0%
17. APPLE GROVE	WV	HAMILTON	ON	CSXT	Polyethylene Terephthalate	$854	1.04885	$895	$1,611	$2,946	329%	$974	-$79	302%	27%
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	CSXT	Polyethylene Terephthalate	$1,095	1.04885	$1,149	$2,068	$5,401	470%	$1,149	$0	470%	0%
19. APPLE GROVE	WV	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$1,095	1.04885	$1,148	$2,067	$5,401	470%	$1,148	$0	470%	0%
20. APPLE GROVE	WV	HEBRON	OH	CSXT	Polyethylene Terephthalate	$987	1.04885	$1,035	$1,862	$3,032	293%	$1,035	$0	293%	0%
21. APPLE GROVE	WV	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,367	1.04885	$1,434	$2,581	$5,664	395%	$1,434	$0	395%	0%
22. APPLE GROVE	WV	LITTLE ROCK	AR	CSXT	Polyethylene Terephthalate	$1,366	1.04885	$1,433	$2,579	$5,664	395%	$1,433	$0	395%	0%
23. APPLE GROVE	WV	MEMPHIS	TN	CSXT	Polyethylene Terephthalate	$1,697	1.04885	$1,779	$3,203	$6,143	345%	$1,779	$0	345%	0%
24. APPLE GROVE	WV	NICHOLASVILLE	KY	CSXT	Polyethylene Terephthalate	$630	1.04885	$661	$1,190	$2,984	451%	$741	-$80	403%	48%
25. APPLE GROVE	WV	ROCKFORD	IL	CSXT	Polyethylene Terephthalate	$1,370	1.04885	$1,437	$2,587	$5,664	394%	$1,437	$0	394%	0%
26. APPLE GROVE	WV	ROGERS	MN	CSXT	Polyethylene Terephthalate	$1,367	1.04885	$1,434	$2,581	$5,664	395%	$1,434	$0	395%	0%
27. APPLE GROVE	WV	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,354	1.04885	$1,420	$2,556	$5,704	402%	$1,501	-$81	380%	22%
28. APPLE GROVE	WV	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$851	1.04885	$893	$1,607	$2,946	330%	$972	-$79	303%	27%
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,350	1.04885	$1,416	$2,550	$5,704	403%	$1,497	-$81	381%	22%
30. APPLE GROVE	WV	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,365	1.04885	$1,432	$2,577	$5,664	396%	$1,432	$0	396%	0%
31. APPLE GROVE	WV	TEXARKANA	TX	CSXT	Polyethylene Terephthalate	$1,354	1.04885	$1,420	$2,555	$5,704	402%	$1,500	-$81	380%	22%
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	CSXT	Polyethylene Terephthalate	$1,342	1.04885	$1,408	$2,534	$5,660	402%	$1,408	$0	402%	0%
33. APPLE GROVE	WV	VADO	NM	CSXT	Polyethylene Terephthalate	$1,364	1.04885	$1,431	$2,576	$5,664	396%	$1,431	$0	396%	0%
34. APPLE GROVE	WV	W CHICAGO	IL	CSXT	Polyethylene Terephthalate	$1,370	1.04885	$1,437	$2,586	$5,663	394%	$1,437	$0	394%	0%
35. APPLE GROVE	WV	WAYNESVILLE	NC	CSXT	Polyethylene Terephthalate	$1,399	1.04885	$1,467	$2,641	$4,039	275%	$1,467	$0	275%	0%
36. BELPRE	OH	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,534	1.04885	$1,609	$2,895	$5,861	364%	$1,609	$0	365%	-1%
37. BELPRE	OH	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$925	1.04885	$970	$1,746	$4,740	489%	$970	$0	489%	0%
38. BELPRE	OH	CAMBRIDGE	ON	CSXT	Polyethylene Terephthalate	$1,239	1.04885	$1,300	$2,339	$4,185	322%	$1,300	$0	322%	0%
39. BELPRE	OH	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$1,106	1.04885	$1,160	$2,088	$5,218	450%	$1,160	$0	450%	0%
40. BELPRE	OH	FREMONT	OH	CSXT	Polyethylene Terephthalate	$812	1.04885	$851	$1,533	$3,563	418%	$851	$0	418%	0%
41. BELPRE	OH	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$924	1.04885	$969	$1,745	$4,740	489%	$969	$0	489%	0%
42. BELPRE	OH	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,537	1.04885	$1,612	$2,902	$5,861	364%	$1,612	$0	364%	0%
43. BELPRE	OH	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,560	1.04885	$1,636	$2,946	$6,280	384%	$1,636	$0	384%	0%
44. BELPRE	OH	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$1,237	1.04885	$1,298	$2,336	$4,185	323%	$1,298	$0	323%	0%
45. BELPRE	OH	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,557	1.04885	$1,633	$2,939	$6,280	385%	$1,633	$0	384%	1%
46. BELPRE	OH	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,535	1.04885	$1,609	$2,897	$5,861	364%	$1,609	$0	364%	0%
47. SPRING	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,444	1.04885	$1,515	$2,726	$5,560	367%	$1,515	$0	367%	0%
48. SWEETWATER	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,376	1.04885	$1,443	$2,598	$5,718	396%	$1,443	$0	396%	0%
49. SWEETWATER	TX	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,371	1.04885	$1,438	$2,588	$5,981	416%	$1,438	$0	416%	0%
50. SWEETWATER	TX	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,793	1.04885	$2,929	$5,273	$7,460	255%	$2,929	$0	254%	1%
51. APPLE GROVE	WV	LEXINGTON	KY	CSXT	Polyethylene Terephthalate	$858	1.04885	$899	$1,619	$3,191	355%	$899	$0	355%	0%
52. APPLE GROVE	WV	PRATTVILLE	AL	CSXT	Polyethylene Terephthalate	$688	1.04885	$722	$1,299	$2,841	394%	$722	$0	394%	0%

1/ The issue movement lane numbers correspond to the issue movement lane numbers in M&G's Third Amended Complaint.
2/ Column (5) x Column (6)
3/ Column (7) x 1.8
4/ Average Tariff Rate including fuel surcharge for 3Q10 -- see Exhibit II-A-9 to M&G's Opening Evidence
5/ Column (9) ÷ Column (7)
6/ Source: CSXT Reply II-A-2 dated July 5, 2011
7/ Column (7) - Column (11)
8/ Source: CSXT Reply II-A-2 dated July 5, 2011
9/ Column (10) - Column (13)

Rebuttal Exhibit II-A-4

Variable Cost, Jurisdictional Threshold, Tariff Rate
and Revenue/Variable Cost Ratios Per Car for M&G Movements -- 4Q10

Origin 1/		Destination		Railroad	Commodity	Phase III Cost Base Year 2009	4Q2010 Index to 4Q10	4Q2010 Phase III Cost 2/	4Q2010 Jurisdictional Threshold 3/	4Q2010 Tariff Rate 4/	4Q2010 Revenue/Variable Cost Ratio 5/	CSXT Reply Variable Cost 6/	Variable Cost Difference 7/	CSXT Reply R/VC Ratio 8/	R/VC Difference 9/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Exhibit A - Local Moves															
1. APPLE GROVE	WV	BELPRE	OH	CSXT	Polyethylene Terephthalate	$759	1.06757	$810	$1,458	$2,609	322%	$875	-$65	298%	24%
2. APPLE GROVE	WV	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,869	1.06757	$1,995	$3,591	$5,975	299%	$2,360	-$365	253%	46%
3. APPLE GROVE	WV	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,961	1.06757	$2,093	$3,768	$5,796	277%	$2,093	$0	277%	0%
4. APPLE GROVE	WV	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$1,122	1.06757	$1,197	$2,155	$3,970	332%	$1,384	-$186	287%	45%
5. APPLE GROVE	WV	DEVON	KY	CSXT	Polyethylene Terephthalate	$935	1.06757	$998	$1,796	$2,842	285%	$998	$0	285%	0%
6. APPLE GROVE	WV	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,499	1.06757	$2,668	$4,802	$8,190	307%	$2,756	-$88	297%	10%
7. APPLE GROVE	WV	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,315	1.06757	$1,404	$2,528	$5,557	396%	$1,404	$0	396%	0%
8. APPLE GROVE	WV	PARKERSBURG	WV	CSXT	Polyethylene Terephthalate	$755	1.06757	$806	$1,451	$2,609	324%	$806	$0	324%	0%
9. APPLE GROVE	WV	RAINS	SC	CSXT	Polyethylene Terephthalate	$2,131	1.06757	$2,275	$4,095	$5,551	244%	$2,275	$0	244%	0%
10. APPLE GROVE	WV	ROCHESTER	NY	CSXT	Polyethylene Terephthalate	$1,748	1.06757	$1,866	$3,360	$8,738	468%	$2,095	-$229	417%	51%
11. BELPRE	OH	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.06757	$805	$1,448	$3,175	395%	$805	$0	395%	0%
12. BELPRE	OH	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,685	1.06757	$1,799	$3,237	$5,381	299%	$1,798	$0	299%	0%
13. BELPRE	OH	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$2,077	1.06757	$2,218	$3,992	$6,718	303%	$2,217	$0	303%	0%
14. BELPRE	OH	DEVON	KY	CSXT	Polyethylene Terephthalate	$1,109	1.06757	$1,184	$2,131	$3,910	330%	$1,184	$0	330%	0%
15. BELPRE	OH	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,678	1.06757	$2,859	$5,147	$8,249	288%	$2,859	$0	289%	-1%
16. BELPRE	OH	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,502	1.06757	$1,603	$2,886	$5,244	327%	$1,603	$0	327%	0%
17. PARKERSBURG	WV	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.06757	$805	$1,449	$3,175	394%	$805	$0	394%	0%
18. RAINS	SC	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,523	1.06757	$1,626	$2,928	$4,219	259%	$1,626	$0	260%	-1%
Exhibit B - Joint Moves															
1. ALTAMIRA	TM	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,375	1.06757	$1,468	$2,642	$5,718	390%	$1,468	$0	390%	0%
2. ALTAMIRA	TM	BELPRE	OH	CSXT	Polyethylene Terephthalate	$1,548	1.06757	$1,653	$2,975	$5,652	342%	$1,652	$0	342%	0%
3. ALTAMIRA	TM	CAMBRIDGE	OH	CSXT	Polyethylene Terephthalate	$767	1.06757	$819	$1,474	$5,014	612%	$819	$0	612%	0%
4. ALTAMIRA	TM	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,369	1.06757	$1,462	$2,632	$5,981	409%	$1,462	$0	409%	0%
5. ALTAMIRA	TM	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,791	1.06757	$2,980	$5,364	$7,460	250%	$2,980	$0	250%	0%
6. ALTAMIRA	TM	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$1,974	1.06757	$2,107	$3,793	$7,633	362%	$2,107	$0	362%	0%
7. APPLE GROVE	WV	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.06757	$1,456	$2,621	$5,664	389%	$1,456	$0	389%	0%
8. APPLE GROVE	WV	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$1,095	1.06757	$1,169	$2,105	$5,401	462%	$1,169	$0	462%	0%
9. APPLE GROVE	WV	ALTAMIRA	TM	CSXT	Polyethylene Terephthalate	$1,364	1.06757	$1,456	$2,621	$5,664	389%	$1,456	$0	389%	0%
10. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,270	1.06757	$1,355	$2,440	$5,649	417%	$1,355	$0	417%	0%
11. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,191	1.06757	$1,271	$2,288	$5,680	447%	$1,271	$0	447%	0%
12. APPLE GROVE	WV	DARLINGTON	SC	CSXT	Polyethylene Terephthalate	$1,547	1.06757	$1,652	$2,973	$5,504	333%	$1,651	$0	333%	0%
13. APPLE GROVE	WV	DONEY SPUR	PQ	CSXT	Polyethylene Terephthalate	$851	1.06757	$909	$1,636	$2,946	324%	$989	-$80	298%	26%
14. APPLE GROVE	WV	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$945	1.06757	$1,009	$1,816	$3,759	373%	$1,009	$0	372%	1%
15. APPLE GROVE	WV	FREMONT	OH	CSXT	Polyethylene Terephthalate	$632	1.06757	$675	$1,214	$2,984	442%	$756	-$81	395%	47%
16. APPLE GROVE	WV	GLENDALE	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.06757	$1,456	$2,621	$5,664	389%	$1,456	$0	389%	0%
17. APPLE GROVE	WV	HAMILTON	ON	CSXT	Polyethylene Terephthalate	$854	1.06757	$911	$1,640	$2,946	323%	$992	-$81	297%	26%
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	CSXT	Polyethylene Terephthalate	$1,095	1.06757	$1,169	$2,105	$5,401	462%	$1,169	$0	462%	0%
19. APPLE GROVE	WV	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$1,095	1.06757	$1,169	$2,104	$5,401	462%	$1,168	$0	462%	0%
20. APPLE GROVE	WV	HEBRON	OH	CSXT	Polyethylene Terephthalate	$987	1.06757	$1,053	$1,896	$3,032	288%	$1,053	$0	288%	0%
21. APPLE GROVE	WV	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,367	1.06757	$1,460	$2,628	$5,664	388%	$1,460	$0	388%	0%
22. APPLE GROVE	WV	LITTLE ROCK	AR	CSXT	Polyethylene Terephthalate	$1,366	1.06757	$1,458	$2,625	$5,664	388%	$1,458	$0	389%	-1%
23. APPLE GROVE	WV	MEMPHIS	TN	CSXT	Polyethylene Terephthalate	$1,697	1.06757	$1,811	$3,260	$6,143	339%	$1,811	$0	339%	0%
24. APPLE GROVE	WV	NICHOLASVILLE	KY	CSXT	Polyethylene Terephthalate	$630	1.06757	$673	$1,211	$2,984	444%	$754	-$81	396%	48%
25. APPLE GROVE	WV	ROCKFORD	IL	CSXT	Polyethylene Terephthalate	$1,370	1.06757	$1,463	$2,633	$5,664	387%	$1,463	$0	387%	0%
26. APPLE GROVE	WV	ROGERS	MN	CSXT	Polyethylene Terephthalate	$1,367	1.06757	$1,460	$2,627	$5,664	388%	$1,460	$0	388%	0%
27. APPLE GROVE	WV	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,354	1.06757	$1,445	$2,602	$5,704	395%	$1,527	-$82	373%	22%
28. APPLE GROVE	WV	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$851	1.06757	$909	$1,636	$2,946	324%	$989	-$80	298%	26%
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,350	1.06757	$1,442	$2,595	$5,704	396%	$1,524	-$82	374%	22%
30. APPLE GROVE	WV	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,365	1.06757	$1,457	$2,623	$5,664	389%	$1,457	$0	389%	0%
31. APPLE GROVE	WV	TEXARKANA	TX	CSXT	Polyethylene Terephthalate	$1,354	1.06757	$1,445	$2,601	$5,704	395%	$1,527	-$82	374%	21%
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	CSXT	Polyethylene Terephthalate	$1,342	1.06757	$1,433	$2,579	$5,660	395%	$1,433	$0	395%	0%
33. APPLE GROVE	WV	VADO	NM	CSXT	Polyethylene Terephthalate	$1,364	1.06757	$1,457	$2,622	$5,664	389%	$1,457	$0	389%	0%
34. APPLE GROVE	WV	W CHICAGO	IL	CSXT	Polyethylene Terephthalate	$1,370	1.06757	$1,462	$2,632	$5,663	387%	$1,462	$0	388%	-1%
35. APPLE GROVE	WV	WAYNESVILLE	NC	CSXT	Polyethylene Terephthalate	$1,399	1.06757	$1,493	$2,688	$4,039	270%	$1,493	$0	270%	0%
36. BELPRE	OH	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,534	1.06757	$1,637	$2,947	$5,861	358%	$1,637	$0	358%	0%
37. BELPRE	OH	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$925	1.06757	$987	$1,777	$4,740	480%	$987	$0	480%	0%
38. BELPRE	OH	CAMBRIDGE	ON	CSXT	Polyethylene Terephthalate	$1,239	1.06757	$1,323	$2,381	$4,185	316%	$1,323	$0	316%	0%
39. BELPRE	OH	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$1,106	1.06757	$1,181	$2,125	$5,218	442%	$1,181	$0	442%	0%
40. BELPRE	OH	FREMONT	OH	CSXT	Polyethylene Terephthalate	$812	1.06757	$867	$1,560	$3,563	411%	$867	$0	411%	0%
41. BELPRE	OH	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$924	1.06757	$987	$1,776	$4,740	480%	$987	$0	480%	0%
42. BELPRE	OH	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,537	1.06757	$1,641	$2,953	$5,861	357%	$1,641	$0	357%	0%
43. BELPRE	OH	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,560	1.06757	$1,666	$2,998	$6,280	377%	$1,665	$0	377%	0%
44. BELPRE	OH	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$1,237	1.06757	$1,321	$2,377	$4,185	317%	$1,321	$0	317%	0%
45. BELPRE	OH	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,557	1.06757	$1,662	$2,991	$6,280	378%	$1,661	$0	378%	0%
46. BELPRE	OH	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,535	1.06757	$1,638	$2,949	$5,861	358%	$1,638	$0	358%	0%
47. SPRING	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,444	1.06757	$1,542	$2,775	$5,560	361%	$1,542	$0	361%	0%
48. SWEETWATER	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,376	1.06757	$1,469	$2,644	$5,718	389%	$1,469	$0	389%	0%
49. SWEETWATER	TX	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,371	1.06757	$1,463	$2,634	$5,981	409%	$1,463	$0	409%	0%
50. SWEETWATER	TX	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,793	1.06757	$2,982	$5,367	$7,460	250%	$2,981	$0	250%	0%
51. APPLE GROVE	WV	LEXINGTON	KY	CSXT	Polyethylene Terephthalate	$858	1.06757	$915	$1,648	$3,191	349%	$915	$0	349%	0%
52. APPLE GROVE	WV	PRATTVILLE	AL	CSXT	Polyethylene Terephthalate	$688	1.06757	$734	$1,322	$2,841	387%	$734	$0	387%	0%

1/ The issue movement lane numbers correspond to the issue movement lane numbers in M&G's Third Amended Complaint.
2/ Column (5) x Column (6)
3/ Column (7) x 1.8
4/ Average Tariff Rate including fuel surcharge for 4Q10 -- see Exhibit II-A-9 to M&G's Opening Evidence
5/ Column (9) ÷ Column (7)
6/ Source: CSXT Reply II-A-2 dated July 5, 2011
7/ Column (7) - Column (11)
8/ Source: CSXT Reply II-A-2 dated July 5, 2011
9/ Column (10) - Column (13)

Rebuttal Exhibit II-A-5

Rebuttal Exhibit II-A-6

Variable Cost, Jurisdictional Threshold, Tariff Rate
and Revenue/Variable Cost Ratios Per Car for M&G Movements -- 1Q11

Origin 1/		Destination		Railroad	Commodity	Phase III Cost Base Year 2009	1Q2011 Index to 1Q11	1Q2011 Phase III Cost 2/	1Q2011 Jurisdictional Threshold 3/	1Q2011 Tariff Rate 4/	1Q2011 Revenue/Variable Cost Ratio 5/	CSXT Reply Variable Cost 6/	Variable Cost Difference 7/	CSXT Reply R/VC Ratio 8/	R/VC Difference 9/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Exhibit A - Local Moves															
1. APPLE GROVE	WV	BELPRE	OH	CSXT	Polyethylene Terephthalate	$759	1.09693	$832	$1,498	$2,616	314%	$899	-$67	291%	23%
2. APPLE GROVE	WV	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,869	1.09693	$2,050	$3,690	$6,024	294%	$2,426	-$376	248%	46%
3. APPLE GROVE	WV	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,961	1.09693	$2,151	$3,871	$5,848	272%	$2,151	-$1	272%	0.5%
4. APPLE GROVE	WV	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$1,122	1.09693	$1,230	$2,215	$3,990	324%	$1,422	-$192	281%	43%
5. APPLE GROVE	WV	DEVON	KY	CSXT	Polyethylene Terephthalate	$935	1.09693	$1,025	$1,846	$2,856	279%	$1,026	$0	278%	1%
6. APPLE GROVE	WV	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,499	1.09693	$2,741	$4,934	$8,263	301%	$2,832	-$91	292%	9%
7. APPLE GROVE	WV	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,315	1.09693	$1,443	$2,597	$5,585	387%	$1,443	$0	387%	0%
8. APPLE GROVE	WV	PARKERSBURG	WV	CSXT	Polyethylene Terephthalate	$755	1.09693	$828	$1,491	$2,615	316%	$828	$0	316%	0%
9. APPLE GROVE	WV	RAINS	SC	CSXT	Polyethylene Terephthalate	$2,131	1.09693	$2,337	$4,207	$5,610	240%	$2,338	-$1	240%	0%
10. APPLE GROVE	WV	ROCHESTER	NY	CSXT	Polyethylene Terephthalate	$1,748	1.09693	$1,918	$3,452	$8,780	458%	$2,154	-$236	408%	50%
11. BELPRE	OH	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.09693	$827	$1,488	$3,182	385%	$827	$0	385%	0%
12. BELPRE	OH	BORDENTOWN	NJ	CSXT	Polyethylene Terephthalate	$1,685	1.09693	$1,848	$3,326	$5,423	293%	$1,848	$0	294%	-0.5%
13. BELPRE	OH	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$2,077	1.09693	$2,279	$4,101	$6,775	297%	$2,279	-$1	297%	0%
14. BELPRE	OH	DEVON	KY	CSXT	Polyethylene Terephthalate	$1,109	1.09693	$1,217	$2,190	$3,930	323%	$1,217	$0	323%	0%
15. BELPRE	OH	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$2,678	1.09693	$2,938	$5,289	$8,329	283%	$2,939	-$1	283%	0%
16. BELPRE	OH	PARIS	IL	CSXT	Polyethylene Terephthalate	$1,502	1.09693	$1,647	$2,965	$5,279	320%	$1,648	$0	320%	0%
17. PARKERSBURG	WV	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$754	1.09693	$827	$1,489	$3,181	385%	$827	$0	385%	0.5%
18. RAINS	SC	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,523	1.09693	$1,671	$3,008	$4,255	255%	$1,672	$0	255%	0%
Exhibit B - Joint Moves															
1. ALTAMIRA	TM	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,375	1.09693	$1,508	$2,715	$5,757	382%	$1,509	$0	382%	0%
2. ALTAMIRA	TM	BELPRE	OH	CSXT	Polyethylene Terephthalate	$1,548	1.09693	$1,698	$3,057	$5,698	336%	$1,699	$0	335%	1%
3. ALTAMIRA	TM	CAMBRIDGE	OH	CSXT	Polyethylene Terephthalate	$767	1.09693	$841	$1,515	$5,039	599%	$842	$0	599%	0%
4. ALTAMIRA	TM	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,369	1.09693	$1,502	$2,704	$6,020	401%	$1,503	$0	401%	0%
5. ALTAMIRA	TM	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,791	1.09693	$3,062	$5,512	$7,553	247%	$3,063	-$1	246%	1%
6. ALTAMIRA	TM	ORLANDO	FL	CSXT	Polyethylene Terephthalate	$1,974	1.09693	$2,165	$3,897	$7,695	355%	$2,166	-$1	355%	0%
7. APPLE GROVE	WV	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.09693	$1,496	$2,693	$5,703	381%	$1,497	$0	381%	0%
8. APPLE GROVE	WV	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$1,095	1.09693	$1,201	$2,163	$5,430	452%	$1,202	$0	452%	0%
9. APPLE GROVE	WV	ALTAMIRA	TM	CSXT	Polyethylene Terephthalate	$1,364	1.09693	$1,496	$2,693	$5,703	381%	$1,496	$0	381%	0%
10. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,270	1.09693	$1,393	$2,507	$5,684	408%	$1,393	$0	408%	0%
11. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	Polyethylene Terephthalate	$1,191	1.09693	$1,306	$2,351	$5,712	437%	$1,307	$0	437%	0%
12. APPLE GROVE	WV	DARLINGTON	SC	CSXT	Polyethylene Terephthalate	$1,547	1.09693	$1,697	$3,055	$5,550	327%	$1,697	$0	327%	0%
13. APPLE GROVE	WV	DONEY SPUR	PQ	CSXT	Polyethylene Terephthalate	$851	1.09693	$934	$1,681	$2,965	318%	$1,017	-$83	292%	26%
14. APPLE GROVE	WV	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$945	1.09693	$1,037	$1,866	$3,782	365%	$1,037	$0	364%	1%
15. APPLE GROVE	WV	FREMONT	OH	CSXT	Polyethylene Terephthalate	$632	1.09693	$693	$1,248	$2,995	432%	$777	-$84	386%	46%
16. APPLE GROVE	WV	GLENDALE	AZ	CSXT	Polyethylene Terephthalate	$1,364	1.09693	$1,496	$2,693	$5,703	381%	$1,497	$0	381%	0%
17. APPLE GROVE	WV	HAMILTON	ON	CSXT	Polyethylene Terephthalate	$854	1.09693	$936	$1,685	$2,965	317%	$1,019	-$83	291%	26%
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	CSXT	Polyethylene Terephthalate	$1,095	1.09693	$1,202	$2,163	$5,430	452%	$1,202	$0	452%	0%
19. APPLE GROVE	WV	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$1,095	1.09693	$1,201	$2,161	$5,430	452%	$1,201	$0	452%	0%
20. APPLE GROVE	WV	HEBRON	OH	CSXT	Polyethylene Terephthalate	$987	1.09693	$1,082	$1,948	$3,056	282%	$1,082	$0	282%	0%
21. APPLE GROVE	WV	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,367	1.09693	$1,500	$2,700	$5,703	380%	$1,500	$0	380%	0%
22. APPLE GROVE	WV	LITTLE ROCK	AR	CSXT	Polyethylene Terephthalate	$1,366	1.09693	$1,498	$2,697	$5,703	381%	$1,499	$0	381%	0%
23. APPLE GROVE	WV	MEMPHIS	TN	CSXT	Polyethylene Terephthalate	$1,697	1.09693	$1,861	$3,350	$6,195	333%	$1,862	$0	333%	0%
24. APPLE GROVE	WV	NICHOLASVILLE	KY	CSXT	Polyethylene Terephthalate	$630	1.09693	$691	$1,244	$2,995	433%	$775	-$84	386%	47%
25. APPLE GROVE	WV	ROCKFORD	IL	CSXT	Polyethylene Terephthalate	$1,370	1.09693	$1,503	$2,705	$5,703	379%	$1,503	$0	379%	0%
26. APPLE GROVE	WV	ROGERS	MN	CSXT	Polyethylene Terephthalate	$1,367	1.09693	$1,500	$2,700	$5,703	380%	$1,500	$0	380%	0%
27. APPLE GROVE	WV	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,354	1.09693	$1,485	$2,673	$5,742	387%	$1,570	-$85	366%	21%
28. APPLE GROVE	WV	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$851	1.09693	$934	$1,681	$2,965	318%	$1,017	-$83	292%	26%
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,350	1.09693	$1,481	$2,666	$5,742	388%	$1,566	-$85	367%	21%
30. APPLE GROVE	WV	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,365	1.09693	$1,497	$2,695	$5,703	381%	$1,498	$0	381%	0%
31. APPLE GROVE	WV	TEXARKANA	TX	CSXT	Polyethylene Terephthalate	$1,354	1.09693	$1,485	$2,672	$5,742	387%	$1,569	-$85	366%	21%
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	CSXT	Polyethylene Terephthalate	$1,342	1.09693	$1,472	$2,650	$5,697	387%	$1,472	$0	387%	0%
33. APPLE GROVE	WV	VADO	NM	CSXT	Polyethylene Terephthalate	$1,364	1.09693	$1,497	$2,694	$5,703	381%	$1,497	$0	381%	0%
34. APPLE GROVE	WV	W CHICAGO	IL	CSXT	Polyethylene Terephthalate	$1,370	1.09693	$1,502	$2,704	$5,702	380%	$1,503	$0	380%	0%
35. APPLE GROVE	WV	WAYNESVILLE	NC	CSXT	Polyethylene Terephthalate	$1,399	1.09693	$1,534	$2,762	$4,079	266%	$1,535	$0	266%	0%
36. BELPRE	OH	AGUILA	AZ	CSXT	Polyethylene Terephthalate	$1,534	1.09693	$1,682	$3,028	$5,907	351%	$1,683	$0	351%	0%
37. BELPRE	OH	ALLENTOWN	PA	CSXT	Polyethylene Terephthalate	$925	1.09693	$1,015	$1,826	$4,762	469%	$1,015	$0	469%	0%
38. BELPRE	OH	CAMBRIDGE	ON	CSXT	Polyethylene Terephthalate	$1,239	1.09693	$1,359	$2,447	$4,219	310%	$1,360	$0	310%	0%
39. BELPRE	OH	FRANKLIN	IN	CSXT	Polyethylene Terephthalate	$1,106	1.09693	$1,213	$2,184	$5,247	432%	$1,213	$0	432%	0%
40. BELPRE	OH	FREMONT	OH	CSXT	Polyethylene Terephthalate	$812	1.09693	$890	$1,603	$3,580	402%	$891	$0	402%	0%
41. BELPRE	OH	HAZLETON	PA	CSXT	Polyethylene Terephthalate	$924	1.09693	$1,014	$1,825	$4,762	470%	$1,014	$0	470%	0%
42. BELPRE	OH	LENEXA	KS	CSXT	Polyethylene Terephthalate	$1,537	1.09693	$1,686	$3,035	$5,907	350%	$1,686	$0	350%	0%
43. BELPRE	OH	RUSSELLVILLE	AR	CSXT	Polyethylene Terephthalate	$1,560	1.09693	$1,711	$3,081	$6,326	370%	$1,712	$0	369%	1%
44. BELPRE	OH	ST JEAN	PQ	CSXT	Polyethylene Terephthalate	$1,237	1.09693	$1,357	$2,443	$4,219	311%	$1,357	$0	311%	0%
45. BELPRE	OH	SUISUN FAIRFIELD	CA	CSXT	Polyethylene Terephthalate	$1,557	1.09693	$1,707	$3,073	$6,326	370%	$1,708	$0	370%	0%
46. BELPRE	OH	SWEETWATER	TX	CSXT	Polyethylene Terephthalate	$1,535	1.09693	$1,683	$3,030	$5,907	351%	$1,684	$0	351%	0%
47. SPRING	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,444	1.09693	$1,584	$2,851	$5,602	354%	$1,585	$0	354%	0%
48. SWEETWATER	TX	APPLE GROVE	WV	CSXT	Polyethylene Terephthalate	$1,376	1.09693	$1,509	$2,717	$5,757	381%	$1,510	$0	381%	0%
49. SWEETWATER	TX	CARTERSVILLE	GA	CSXT	Polyethylene Terephthalate	$1,371	1.09693	$1,504	$2,707	$6,020	400%	$1,504	$0	400%	0%
50. SWEETWATER	TX	CLIFTON FORGE	VA	CSXT	Polyethylene Terephthalate	$2,793	1.09693	$3,064	$5,514	$7,553	247%	$3,064	-$1	246%	1%
51. APPLE GROVE	WV	LEXINGTON	KY	CSXT	Polyethylene Terephthalate	$858	1.09693	$941	$1,693	$3,211	341%	$941	$0	341%	0%
52. APPLE GROVE	WV	PRATTVILLE	AL	CSXT	Polyethylene Terephthalate	$688	1.09693	$755	$1,358	$2,854	378%	$755	$0	378%	0%

1/ The issue movement lane numbers correspond to the issue movement lane numbers in M&G's Third Amended Complaint.
2/ Column (5) x Column (6)
3/ Column (7) x 1.8
4/ Average Tariff Rate including fuel surcharge for 1Q11 -- see Exhibit II-A-9 to M&G's Opening Evidence
5/ Column (9) + Column (7)
6/ Source: CSXT Reply II-A-2 dated July 5, 2011
7/ Column (7) - Column (11)
8/ Source: CSXT Reply II-A-2 dated July 5, 2011
9/ Column (10) - Column (13)

Rebuttal Exhibit II-A-7

Traffic and Operating Characteristics Used For Rebuttal Variable Cost Calculations

Origin 1/		Destination		Railroad	Miles	Shipment Type	Cars Per Train	Car Type	Car Owner	Tons Per Car	Commodity (Full STCC)	Movement Type	Accepted CSXT Miles
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Exhibit A - Local Moves													
1. APPLE GROVE	WV	BELPRE	OH	CSXT	97	ORIGINATE & TERM	1	Covered Hopper	Private	96.7	2821156	Single Car	No
2. APPLE GROVE	WV	BORDENTOWN	NJ	CSXT	700	ORIGINATE & TERM	1	Covered Hopper	Private	97.0	2821156	Single Car	No
3. APPLE GROVE	WV	CARTERSVILLE	GA	CSXT	750	ORIGINATE & TERM	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
4. APPLE GROVE	WV	CLIFTON FORGE	VA	CSXT	294	ORIGINATE & TERM	1	Covered Hopper	Private	97.0	2821156	Single Car	No
5. APPLE GROVE	WV	DEVON	KY	CSXT	193	ORIGINATE & TERM	1	Covered Hopper	Private	96.6	2821156	Single Car	Yes
6. APPLE GROVE	WV	ORLANDO	FL	CSXT	1,043	ORIGINATE & TERM	1	Covered Hopper	Private	96.9	2821156	Single Car	No
7. APPLE GROVE	WV	PARIS	IL	CSXT	400	ORIGINATE & TERM	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
8. APPLE GROVE	WV	PARKERSBURG	WV	CSXT	95	ORIGINATE & TERM	1	Covered Hopper	Private	96.8	2821156	Single Car	Yes
9. APPLE GROVE	WV	RAINS	SC	CSXT	840	ORIGINATE & TERM	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
10. APPLE GROVE	WV	ROCHESTER	NY	CSXT	614	ORIGINATE & TERM	1	Covered Hopper	Private	102.6	2821156	Single Car	No
11. BELPRE	OH	APPLE GROVE	WV	CSXT	97	ORIGINATE & TERM	1	Covered Hopper	Private	93.0	2821156	Single Car	Yes
12. BELPRE	OH	BORDENTOWN	NJ	CSXT	600	ORIGINATE & TERM	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
13. BELPRE	OH	CARTERSVILLE	GA	CSXT	823	ORIGINATE & TERM	1	Covered Hopper	Private	95.0	2821156	Single Car	Yes
14. BELPRE	OH	DEVON	KY	CSXT	290	ORIGINATE & TERM	1	Covered Hopper	Private	95.5	2821156	Single Car	Yes
15. BELPRE	OH	ORLANDO	FL	CSXT	1,140	ORIGINATE & TERM	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
16. BELPRE	OH	PARIS	IL	CSXT	500	ORIGINATE & TERM	1	Covered Hopper	Private	97.2	2821156	Single Car	Yes
17. PARKERSBURG	WV	APPLE GROVE	WV	CSXT	95	ORIGINATE & TERM	1	Covered Hopper	Private	96.0	2821156	Single Car	Yes
18. RAINS	SC	CARTERSVILLE	GA	CSXT	513	ORIGINATE & TERM	1	Covered Hopper	Private	96.8	2821156	Single Car	Yes
Exhibit B - Joint Moves													
1. ALTAMIRA	TM	APPLE GROVE	WV	CSXT	563	RECEIVE & TERM	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
2. ALTAMIRA	TM	BELPRE	OH	CSXT	660	RECEIVE & TERM	1	Covered Hopper	Private	96.2	2821156	Single Car	Yes
3. ALTAMIRA	TM	CAMBRIDGE	OH	CSXT	359	RECEIVE & DELIVER	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
4. ALTAMIRA	TM	CARTERSVILLE	GA	CSXT	558	RECEIVE & TERM	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
5. ALTAMIRA	TM	CLIFTON FORGE	VA	CSXT	1,335	RECEIVE & TERM	1	Covered Hopper	Private	96.5	2821156	Single Car	Yes
6. ALTAMIRA	TM	ORLANDO	FL	CSXT	889	RECEIVE & TERM	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
7. APPLE GROVE	WV	AGUILA	AZ	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
8. APPLE GROVE	WV	ALLENTOWN	PA	CSXT	409	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
9. APPLE GROVE	WV	ALTAMIRA	TM	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
10. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	501	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
11. APPLE GROVE	WV	CHAMPAIGN	IL	CSXT	458	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
12. APPLE GROVE	WV	DARLINGTON	SC	CSXT	653	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.8	2821156	Single Car	Yes
13. APPLE GROVE	WV	DONEY SPUR	PQ	CSXT	279	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.4	2821156	Single Car	No
14. APPLE GROVE	WV	FRANKLIN	IN	CSXT	327	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.6	2821156	Single Car	Yes
15. APPLE GROVE	WV	FREMONT	OH	CSXT	157	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.2	2821156	Single Car	No
16. APPLE GROVE	WV	GLENDALE	AZ	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
17. APPLE GROVE	WV	HAMILTON	ON	CSXT	279	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.4	2821156	Single Car	No
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	CSXT	409	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
19. APPLE GROVE	WV	HAZLETON	PA	CSXT	409	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
20. APPLE GROVE	WV	HEBRON	OH	CSXT	347	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
21. APPLE GROVE	WV	LENEXA	KS	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
22. APPLE GROVE	WV	LITTLE ROCK	AR	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
23. APPLE GROVE	WV	MEMPHIS	TN	CSXT	733	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.1	2821156	Single Car	Yes
24. APPLE GROVE	WV	NICHOLASVILLE	KY	CSXT	157	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.2	2821156	Single Car	No
25. APPLE GROVE	WV	ROCKFORD	IL	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
26. APPLE GROVE	WV	ROGERS	MN	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
27. APPLE GROVE	WV	RUSSELLVILLE	AR	CSXT	554	ORIGINATE & DELIVER	1	Covered Hopper	Private	95.7	2821156	Single Car	No
28. APPLE GROVE	WV	ST JEAN	PQ	CSXT	279	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.4	2821156	Single Car	No
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	CSXT	554	ORIGINATE & DELIVER	1	Covered Hopper	Private	95.7	2821156	Single Car	No
30. APPLE GROVE	WV	SWEETWATER	TX	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
31. APPLE GROVE	WV	TEXARKANA	TX	CSXT	554	ORIGINATE & DELIVER	1	Covered Hopper	Private	95.7	2821156	Single Car	No
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	CSXT	542	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
33. APPLE GROVE	WV	VADO	NM	CSXT	558	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
34. APPLE GROVE	WV	W CHICAGO	IL	CSXT	557	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.7	2821156	Single Car	Yes
35. APPLE GROVE	WV	WAYNESVILLE	NC	CSXT	572	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
36. BELPRE	OH	AGUILA	AZ	CSXT	652	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.2	2821156	Single Car	Yes
37. BELPRE	OH	ALLENTOWN	PA	CSXT	316	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
38. BELPRE	OH	CAMBRIDGE	ON	CSXT	487	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
39. BELPRE	OH	FRANKLIN	IN	CSXT	422	ORIGINATE & DELIVER	1	Covered Hopper	Private	93.6	2821156	Single Car	Yes
40. BELPRE	OH	FREMONT	OH	CSXT	254	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.2	2821156	Single Car	Yes
41. BELPRE	OH	HAZLETON	PA	CSXT	316	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
42. BELPRE	OH	LENEXA	KS	CSXT	652	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.2	2821156	Single Car	Yes
43. BELPRE	OH	RUSSELLVILLE	AR	CSXT	662	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.9	2821156	Single Car	Yes
44. BELPRE	OH	ST JEAN	PQ	CSXT	487	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
45. BELPRE	OH	SUISUN FAIRFIELD	CA	CSXT	662	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.9	2821156	Single Car	Yes
46. BELPRE	OH	SWEETWATER	TX	CSXT	652	ORIGINATE & DELIVER	1	Covered Hopper	Private	96.2	2821156	Single Car	Yes
47. SPRING	TX	APPLE GROVE	WV	CSXT	603	RECEIVE & TERM	1	Covered Hopper	Private	96.0	2821156	Single Car	Yes
48. SWEETWATER	TX	APPLE GROVE	WV	CSXT	563	RECEIVE & TERM	1	Covered Hopper	Private	97.0	2821156	Single Car	Yes
49. SWEETWATER	TX	CARTERSVILLE	GA	CSXT	558	RECEIVE & TERM	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
50. SWEETWATER	TX	CLIFTON FORGE	VA	CSXT	1,335	RECEIVE & TERM	1	Covered Hopper	Private	96.5	2821156	Single Car	Yes
51. APPLE GROVE	WV	LEXINGTON	KY	CSXT	277	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes
52. APPLE GROVE	WV	PRATTVILLE	AL	CSXT	189	ORIGINATE & DELIVER	1	Covered Hopper	Private	97.5	2821156	Single Car	Yes

1/ The issue movement lane numbers correspond to the issue movement lane numbers in M&G's Third Amended Complaint.

Summary of CSXT Tariff Rates for M&G Movements 1Q10-1Q11

Origin 1/		Destination		Miles	Base Tariff Rate Ex Fuel Eff. 10/10/08-1/31/10	Base Tariff Rate Ex Fuel Eff. 2/1/10-7/31/10	Base Tariff Rate Ex Fuel Eff. 8/1/10-Present	1Q10 Fuel Surcharge Per Mile 2/	1Q10 Fuel Surcharge Per Car 3/	1Q10 Rate Inc. Fuel 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. APPLE GROVE	WV	BELPRE	OH	97	$2,462	$2,585	$2,585	$0.20	$19	$2,563
2. APPLE GROVE	WV	BORDENTOWN	NJ	700	$5,524	$5,800	$5,800	$0.20	$140	$5,848
3. APPLE GROVE	WV	CARTERSVILLE	GA	750	$5,341	$5,608	$5,608	$0.20	$150	$5,669
4. APPLE GROVE	WV	CLIFTON FORGE	VA	294	$3,710	$3,896	$3,896	$0.20	$59	$3,893
5. APPLE GROVE	WV	DEVON	KY	193	$2,661	$2,794	$2,794	$0.20	$39	$2,788
6. APPLE GROVE	WV	ORLANDO	FL	1,043	$7,551	$7,929	$7,929	$0.20	$209	$8,012
7. APPLE GROVE	WV	PARIS	IL	400	$5,197	$5,457	$5,457	$0.20	$80	$5,450
8. APPLE GROVE	WV	PARKERSBURG	WV	95	$2,462	$2,585	$2,585	$0.20	$19	$2,563
9. APPLE GROVE	WV	RAINS	SC	840	$5,087	$5,341	$5,341	$0.20	$168	$5,424
10. APPLE GROVE	WV	ROCHESTER	NY	614	$8,175	$8,584	$8,584	$0.20	$123	$8,570
11. BELPRE	OH	APPLE GROVE	WV	97	$2,973	$3,151	$3,151	$0.20	$19	$3,111
12. BELPRE	OH	BORDENTOWN	NJ	600	$4,935	$5,231	$5,231	$0.20	$120	$5,252
13. BELPRE	OH	CARTERSVILLE	GA	823	$6,143	$6,512	$6,512	$0.20	$165	$6,554
14. BELPRE	OH	DEVON	KY	290	$3,620	$3,837	$3,837	$0.20	$58	$3,823
15. BELPRE	OH	ORLANDO	FL	1,140	$7,374	$7,964	$7,964	$0.20	$228	$7,995
16. BELPRE	OH	PARIS	IL	500	$4,829	$5,119	$5,119	$0.20	$100	$5,122
17. PARKERSBURG	WV	APPLE GROVE	WV	95	$2,973	$3,151	$3,151	$0.20	$19	$3,111
18. RAINS	SC	CARTERSVILLE	GA	513	$3,896	$4,091	$4,091	$0.20	$103	$4,129
Exhibit B - Joint Moves										
1. ALTAMIRA	TM	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.20	$113	$5,584
2. ALTAMIRA	TM	BELPRE	OH	660	$5,176	$5,487	$5,487	$0.20	$132	$5,515
3. ALTAMIRA	TM	CAMBRIDGE	OH	359	$4,645	$4,924	$4,924	$0.20	$72	$4,903
4. ALTAMIRA	TM	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.20	$112	$5,953
5. ALTAMIRA	TM	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.20	$267	$7,259
6. ALTAMIRA	TM	ORLANDO	FL	889	$6,862	$7,411	$7,411	$0.20	$178	$7,406
7. APPLE GROVE	WV	AGUILA	AZ	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
8. APPLE GROVE	WV	ALLENTOWN	PA	409	$5,047	$5,299	$5,299	$0.20	$82	$5,297
9. APPLE GROVE	WV	ALTAMIRA	TM	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
10. APPLE GROVE	WV	CHAMPAIGN	IL	501	$5,261	$5,524	$5,524	$0.20	$100	$5,537
11. APPLE GROVE	WV	CHAMPAIGN	IL	458	$5,300	$5,565	$5,565	$0.20	$92	$5,568
12. APPLE GROVE	WV	DARLINGTON	SC	653	$5,087	$5,341	$5,341	$0.20	$131	$5,387
13. APPLE GROVE	WV	DONEY SPUR	PQ	279	$2,663	$2,876	$2,876	$0.20	$56	$2,861
14. APPLE GROVE	WV	FRANKLIN	IN	327	$3,198	$3,677	$3,677	$0.20	$65	$3,583
15. APPLE GROVE	WV	FREMONT	OH	157	$2,577	$2,945	$2,945	$0.20	$31	$2,854
16. APPLE GROVE	WV	GLENDALE	AZ	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
17. APPLE GROVE	WV	HAMILTON	ON	279	$2,663	$2,876	$2,876	$0.20	$56	$2,861
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	409	$5,047	$5,299	$5,299	$0.20	$82	$5,297
19. APPLE GROVE	WV	HAZLETON	PA	409	$5,047	$5,299	$5,299	$0.20	$82	$5,297
20. APPLE GROVE	WV	HEBRON	OH	347	$2,577	$2,945	$2,945	$0.20	$69	$2,892
21. APPLE GROVE	WV	LENEXA	KS	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
22. APPLE GROVE	WV	LITTLE ROCK	AR	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
23. APPLE GROVE	WV	MEMPHIS	TN	733	$5,676	$5,960	$5,960	$0.20	$147	$6,012
24. APPLE GROVE	WV	NICHOLASVILLE	KY	157	$2,577	$2,945	$2,945	$0.20	$31	$2,854
25. APPLE GROVE	WV	ROCKFORD	IL	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
26. APPLE GROVE	WV	ROGERS	MN	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
27. APPLE GROVE	WV	RUSSELLVILLE	AR	554	$5,300	$5,565	$5,565	$0.20	$111	$5,587
28. APPLE GROVE	WV	ST JEAN	PQ	279	$2,663	$2,876	$2,876	$0.20	$56	$2,861
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	554	$5,300	$5,565	$5,565	$0.20	$111	$5,587
30. APPLE GROVE	WV	SWEETWATER	TX	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
31. APPLE GROVE	WV	TEXARKANA	TX	554	$5,300	$5,565	$5,565	$0.20	$111	$5,587
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	542	$5,261	$5,524	$5,524	$0.20	$108	$5,545
33. APPLE GROVE	WV	VADO	NM	558	$5,261	$5,524	$5,524	$0.20	$112	$5,548
34. APPLE GROVE	WV	W CHICAGO	IL	557	$5,261	$5,524	$5,524	$0.20	$111	$5,548
35. APPLE GROVE	WV	WAYNESVILLE	NC	572	$3,710	$3,896	$3,896	$0.20	$114	$3,948
36. BELPRE	OH	AGUILA	AZ	652	$5,375	$5,698	$5,698	$0.20	$130	$5,721
37. BELPRE	OH	ALLENTOWN	PA	316	$4,397	$4,661	$4,661	$0.20	$63	$4,636
38. BELPRE	OH	CAMBRIDGE	ON	487	$3,762	$4,063	$4,063	$0.20	$97	$4,060
39. BELPRE	OH	FRANKLIN	IN	422	$4,823	$5,112	$5,112	$0.20	$84	$5,100
40. BELPRE	OH	FREMONT	OH	254	$2,735	$3,499	$3,499	$0.20	$51	$3,295
41. BELPRE	OH	HAZLETON	PA	316	$4,397	$4,661	$4,661	$0.20	$63	$4,636
42. BELPRE	OH	LENEXA	KS	652	$5,375	$5,698	$5,698	$0.20	$130	$5,721
43. BELPRE	OH	RUSSELLVILLE	AR	662	$5,768	$6,114	$6,114	$0.20	$132	$6,131
44. BELPRE	OH	ST JEAN	PQ	487	$3,762	$4,063	$4,063	$0.20	$97	$4,060
45. BELPRE	OH	SUISUN FAIRFIELD	CA	662	$5,768	$6,114	$6,114	$0.20	$132	$6,131
46. BELPRE	OH	SWEETWATER	TX	652	$5,375	$5,698	$5,698	$0.20	$130	$5,721
47. SPRING	TX	APPLE GROVE	WV	603	$5,103	$5,409	$5,409	$0.20	$121	$5,428
48. SWEETWATER	TX	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.20	$113	$5,584
49. SWEETWATER	TX	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.20	$112	$5,953
50. SWEETWATER	TX	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.20	$267	$7,259
51. APPLE GROVE	WV	LEXINGTON	KY	277	$2,973	$3,122	$3,122	$0.20	$55	$3,128
52. APPLE GROVE	WV	PRATTVILLE	AL	189	$2,661	$2,794	$2,794	$0.20	$38	$2,787

Summary of CSXT Tariff Rates for M&G Movements 1Q10-1Q11

Origin 1/		Destination		Miles	Base Tariff Rate Ex Fuel Eff. 10/10/08-1/31/10	Base Tariff Rate Ex Fuel Eff. 2/1/10-7/31/10	Base Tariff Rate Ex Fuel Eff. 8/1/10-Present	2Q10 Fuel Surcharge Per Mile 5/	2Q10 Fuel Surcharge Per Car 6/	Rate Inc. Fuel 7/
(1)		(2)		(3)	(4)	(5)	(6)	(10)	(11)	(12)
Exhibit A - Local Moves										
1. APPLE GROVE	WV	BELPRE	OH	97	$2,462	$2,585	$2,585	$0.23	$22	$2,607
2. APPLE GROVE	WV	BORDENTOWN	NJ	700	$5,524	$5,800	$5,800	$0.23	$161	$5,961
3. APPLE GROVE	WV	CARTERSVILLE	GA	750	$5,341	$5,608	$5,608	$0.23	$173	$5,781
4. APPLE GROVE	WV	CLIFTON FORGE	VA	294	$3,710	$3,896	$3,896	$0.23	$68	$3,964
5. APPLE GROVE	WV	DEVON	KY	193	$2,661	$2,794	$2,794	$0.23	$44	$2,838
6. APPLE GROVE	WV	ORLANDO	FL	1,043	$7,551	$7,929	$7,929	$0.23	$240	$8,169
7. APPLE GROVE	WV	PARIS	IL	400	$5,197	$5,457	$5,457	$0.23	$92	$5,549
8. APPLE GROVE	WV	PARKERSBURG	WV	95	$2,462	$2,585	$2,585	$0.23	$22	$2,607
9. APPLE GROVE	WV	RAINS	SC	840	$5,087	$5,341	$5,341	$0.23	$193	$5,534
10. APPLE GROVE	WV	ROCHESTER	NY	614	$8,175	$8,584	$8,584	$0.23	$141	$8,725
11. BELPRE	OH	APPLE GROVE	WV	97	$2,973	$3,151	$3,151	$0.23	$22	$3,173
12. BELPRE	OH	BORDENTOWN	NJ	600	$4,935	$5,231	$5,231	$0.23	$138	$5,369
13. BELPRE	OH	CARTERSVILLE	GA	823	$6,143	$6,512	$6,512	$0.23	$189	$6,701
14. BELPRE	OH	DEVON	KY	290	$3,620	$3,837	$3,837	$0.23	$67	$3,904
15. BELPRE	OH	ORLANDO	FL	1,140	$7,374	$7,964	$7,964	$0.23	$262	$8,226
16. BELPRE	OH	PARIS	IL	500	$4,829	$5,119	$5,119	$0.23	$115	$5,234
17. PARKERSBURG	WV	APPLE GROVE	WV	95	$2,973	$3,151	$3,151	$0.23	$22	$3,173
18. RAINS	SC	CARTERSVILLE	GA	513	$3,896	$4,091	$4,091	$0.23	$118	$4,209
Exhibit B - Joint Moves										
1. ALTAMIRA	TM	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.23	$129	$5,706
2. ALTAMIRA	TM	BELPRE	OH	660	$5,176	$5,487	$5,487	$0.23	$152	$5,639
3. ALTAMIRA	TM	CAMBRIDGE	OH	359	$4,645	$4,924	$4,924	$0.23	$83	$5,007
4. ALTAMIRA	TM	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.23	$128	$5,969
5. ALTAMIRA	TM	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.23	$307	$7,433
6. ALTAMIRA	TM	ORLANDO	FL	889	$6,862	$7,411	$7,411	$0.23	$204	$7,615
7. APPLE GROVE	WV	AGUILA	AZ	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
8. APPLE GROVE	WV	ALLENTOWN	PA	409	$5,047	$5,299	$5,299	$0.23	$94	$5,393
9. APPLE GROVE	WV	ALTAMIRA	TM	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
10. APPLE GROVE	WV	CHAMPAIGN	IL	501	$5,261	$5,524	$5,524	$0.23	$115	$5,639
11. APPLE GROVE	WV	CHAMPAIGN	IL	458	$5,300	$5,565	$5,565	$0.23	$105	$5,670
12. APPLE GROVE	WV	DARLINGTON	SC	653	$5,087	$5,341	$5,341	$0.23	$150	$5,491
13. APPLE GROVE	WV	DONEY SPUR	PQ	279	$2,663	$2,876	$2,876	$0.23	$64	$2,940
14. APPLE GROVE	WV	FRANKLIN	IN	327	$3,198	$3,677	$3,677	$0.23	$75	$3,752
15. APPLE GROVE	WV	FREMONT	OH	157	$2,577	$2,945	$2,945	$0.23	$36	$2,981
16. APPLE GROVE	WV	GLENDALE	AZ	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
17. APPLE GROVE	WV	HAMILTON	ON	279	$2,663	$2,876	$2,876	$0.23	$64	$2,940
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	409	$5,047	$5,299	$5,299	$0.23	$94	$5,393
19. APPLE GROVE	WV	HAZLETON	PA	409	$5,047	$5,299	$5,299	$0.23	$94	$5,393
20. APPLE GROVE	WV	HEBRON	OH	347	$2,577	$2,945	$2,945	$0.23	$80	$3,025
21. APPLE GROVE	WV	LENEXA	KS	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
22. APPLE GROVE	WV	LITTLE ROCK	AR	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
23. APPLE GROVE	WV	MEMPHIS	TN	733	$5,676	$5,960	$5,960	$0.23	$169	$6,129
24. APPLE GROVE	WV	NICHOLASVILLE	KY	157	$2,577	$2,945	$2,945	$0.23	$36	$2,981
25. APPLE GROVE	WV	ROCKFORD	IL	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
26. APPLE GROVE	WV	ROGERS	MN	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
27. APPLE GROVE	WV	RUSSELLVILLE	AR	554	$5,300	$5,565	$5,565	$0.23	$127	$5,692
28. APPLE GROVE	WV	ST JEAN	PQ	279	$2,663	$2,876	$2,876	$0.23	$64	$2,940
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	554	$5,300	$5,565	$5,565	$0.23	$127	$5,692
30. APPLE GROVE	WV	SWEETWATER	TX	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
31. APPLE GROVE	WV	TEXARKANA	TX	554	$5,300	$5,565	$5,565	$0.23	$127	$5,692
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	542	$5,261	$5,524	$5,524	$0.23	$125	$5,649
33. APPLE GROVE	WV	VADO	NM	558	$5,261	$5,524	$5,524	$0.23	$128	$5,652
34. APPLE GROVE	WV	W CHICAGO	IL	557	$5,261	$5,524	$5,524	$0.23	$128	$5,652
35. APPLE GROVE	WV	WAYNESVILLE	NC	572	$3,710	$3,896	$3,896	$0.23	$132	$4,028
36. BELPRE	OH	AGUILA	AZ	652	$5,375	$5,698	$5,698	$0.23	$150	$5,848
37. BELPRE	OH	ALLENTOWN	PA	316	$4,397	$4,661	$4,661	$0.23	$73	$4,734
38. BELPRE	OH	CAMBRIDGE	ON	487	$3,762	$4,063	$4,063	$0.23	$112	$4,175
39. BELPRE	OH	FRANKLIN	IN	422	$4,823	$5,112	$5,112	$0.23	$97	$5,209
40. BELPRE	OH	FREMONT	OH	254	$2,735	$3,499	$3,499	$0.23	$58	$3,557
41. BELPRE	OH	HAZLETON	PA	316	$4,397	$4,661	$4,661	$0.23	$73	$4,734
42. BELPRE	OH	LENEXA	KS	652	$5,375	$5,698	$5,698	$0.23	$150	$5,848
43. BELPRE	OH	RUSSELLVILLE	AR	662	$5,768	$6,114	$6,114	$0.23	$152	$6,266
44. BELPRE	OH	ST JEAN	PQ	487	$3,762	$4,063	$4,063	$0.23	$112	$4,175
45. BELPRE	OH	SUISUN FAIRFIELD	CA	662	$5,768	$6,114	$6,114	$0.23	$152	$6,266
46. BELPRE	OH	SWEETWATER	TX	652	$5,375	$5,698	$5,698	$0.23	$150	$5,848
47. SPRING	TX	APPLE GROVE	WV	603	$5,103	$5,409	$5,409	$0.23	$139	$5,548
48. SWEETWATER	TX	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.23	$129	$5,706
49. SWEETWATER	TX	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.23	$128	$5,969
50. SWEETWATER	TX	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.23	$307	$7,433
51. APPLE GROVE	WV	LEXINGTON	KY	277	$2,973	$3,122	$3,122	$0.23	$64	$3,186
52. APPLE GROVE	WV	PRATTVILLE	AL	189	$2,661	$2,794	$2,794	$0.23	$43	$2,837

Summary of CSXT Tariff Rates for M&G Movements 1Q10-1Q11

Origin 1/		Destination		Miles	Base Tariff Rate Ex Fuel Eff. 10/10/08-1/31/10	Base Tariff Rate Ex Fuel Eff. 2/1/10-7/31/10	Base Tariff Rate Ex Fuel Eff. 8/1/10-Present	3Q10 Fuel Surcharge Per Mile 8/	3Q10 Fuel Surcharge Per Car 9/	Rate Inc. Fuel 10/
(1)		(2)		(3)	(4)	(5)	(6)	(13)	(14)	(15)
Exhibit A - Local Moves										
1. APPLE GROVE	WV	BELPRE	OH	97	$2,462	$2,585	$2,585	$0.25	$24	$2,609
2. APPLE GROVE	WV	BORDENTOWN	NJ	700	$5,524	$5,800	$5,800	$0.25	$175	$5,975
3. APPLE GROVE	WV	CARTERSVILLE	GA	750	$5,341	$5,608	$5,608	$0.25	$188	$5,796
4. APPLE GROVE	WV	CLIFTON FORGE	VA	294	$3,710	$3,896	$3,896	$0.25	$74	$3,970
5. APPLE GROVE	WV	DEVON	KY	193	$2,661	$2,794	$2,794	$0.25	$48	$2,842
6. APPLE GROVE	WV	ORLANDO	FL	1,043	$7,551	$7,929	$7,929	$0.25	$261	$8,190
7. APPLE GROVE	WV	PARIS	IL	400	$5,197	$5,457	$5,457	$0.25	$100	$5,557
8. APPLE GROVE	WV	PARKERSBURG	WV	95	$2,462	$2,585	$2,585	$0.25	$24	$2,609
9. APPLE GROVE	WV	RAINS	SC	840	$5,087	$5,341	$5,341	$0.25	$210	$5,551
10. APPLE GROVE	WV	ROCHESTER	NY	614	$8,175	$8,584	$8,584	$0.25	$154	$8,738
11. BELPRE	OH	APPLE GROVE	WV	97	$2,973	$3,151	$3,151	$0.25	$24	$3,175
12. BELPRE	OH	BORDENTOWN	NJ	600	$4,935	$5,231	$5,231	$0.25	$150	$5,381
13. BELPRE	OH	CARTERSVILLE	GA	823	$6,143	$6,512	$6,512	$0.25	$206	$6,718
14. BELPRE	OH	DEVON	KY	290	$3,620	$3,837	$3,837	$0.25	$73	$3,910
15. BELPRE	OH	ORLANDO	FL	1,140	$7,374	$7,964	$7,964	$0.25	$285	$8,249
16. BELPRE	OH	PARIS	IL	500	$4,829	$5,119	$5,119	$0.25	$125	$5,244
17. PARKERSBURG	WV	APPLE GROVE	WV	95	$2,973	$3,151	$3,151	$0.25	$24	$3,175
18. RAINS	SC	CARTERSVILLE	GA	513	$3,896	$4,091	$4,091	$0.25	$128	$4,219
Exhibit B - Joint Moves										
1. ALTAMIRA	TM	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.25	$141	$5,718
2. ALTAMIRA	TM	BELPRE	OH	660	$5,176	$5,487	$5,487	$0.25	$165	$5,652
3. ALTAMIRA	TM	CAMBRIDGE	OH	359	$4,645	$4,924	$4,924	$0.25	$90	$5,014
4. ALTAMIRA	TM	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.25	$140	$5,981
5. ALTAMIRA	TM	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.25	$334	$7,460
6. ALTAMIRA	TM	ORLANDO	FL	889	$6,862	$7,411	$7,411	$0.25	$222	$7,633
7. APPLE GROVE	WV	AGUILA	AZ	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
8. APPLE GROVE	WV	ALLENTOWN	PA	409	$5,047	$5,299	$5,299	$0.25	$102	$5,401
9. APPLE GROVE	WV	ALTAMIRA	TM	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
10. APPLE GROVE	WV	CHAMPAIGN	IL	501	$5,261	$5,524	$5,524	$0.25	$125	$5,649
11. APPLE GROVE	WV	CHAMPAIGN	IL	458	$5,300	$5,565	$5,565	$0.25	$115	$5,680
12. APPLE GROVE	WV	DARLINGTON	SC	653	$5,087	$5,341	$5,341	$0.25	$163	$5,504
13. APPLE GROVE	WV	DONEY SPUR	PQ	279	$2,663	$2,876	$2,876	$0.25	$70	$2,946
14. APPLE GROVE	WV	FRANKLIN	IN	327	$3,198	$3,677	$3,677	$0.25	$82	$3,759
15. APPLE GROVE	WV	FREMONT	OH	157	$2,577	$2,945	$2,945	$0.25	$39	$2,984
16. APPLE GROVE	WV	GLENDALE	AZ	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
17. APPLE GROVE	WV	HAMILTON	ON	279	$2,663	$2,876	$2,876	$0.25	$70	$2,946
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	409	$5,047	$5,299	$5,299	$0.25	$102	$5,401
19. APPLE GROVE	WV	HAZLETON	PA	409	$5,047	$5,299	$5,299	$0.25	$102	$5,401
20. APPLE GROVE	WV	HEBRON	OH	347	$2,577	$2,945	$2,945	$0.25	$87	$3,032
21. APPLE GROVE	WV	LENEXA	KS	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
22. APPLE GROVE	WV	LITTLE ROCK	AR	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
23. APPLE GROVE	WV	MEMPHIS	TN	733	$5,676	$5,960	$5,960	$0.25	$183	$6,143
24. APPLE GROVE	WV	NICHOLASVILLE	KY	157	$2,577	$2,945	$2,945	$0.25	$39	$2,984
25. APPLE GROVE	WV	ROCKFORD	IL	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
26. APPLE GROVE	WV	ROGERS	MN	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
27. APPLE GROVE	WV	RUSSELLVILLE	AR	554	$5,300	$5,565	$5,565	$0.25	$139	$5,704
28. APPLE GROVE	WV	ST JEAN	PQ	279	$2,663	$2,876	$2,876	$0.25	$70	$2,946
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	554	$5,300	$5,565	$5,565	$0.25	$139	$5,704
30. APPLE GROVE	WV	SWEETWATER	TX	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
31. APPLE GROVE	WV	TEXARKANA	TX	554	$5,300	$5,565	$5,565	$0.25	$139	$5,704
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	542	$5,261	$5,524	$5,524	$0.25	$136	$5,660
33. APPLE GROVE	WV	VADO	NM	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
34. APPLE GROVE	WV	W CHICAGO	IL	557	$5,261	$5,524	$5,524	$0.25	$139	$5,663
35. APPLE GROVE	WV	WAYNESVILLE	NC	572	$3,710	$3,896	$3,896	$0.25	$143	$4,039
36. BELPRE	OH	AGUILA	AZ	652	$5,375	$5,698	$5,698	$0.25	$163	$5,861
37. BELPRE	OH	ALLENTOWN	PA	316	$4,397	$4,661	$4,661	$0.25	$79	$4,740
38. BELPRE	OH	CAMBRIDGE	ON	487	$3,762	$4,063	$4,063	$0.25	$122	$4,185
39. BELPRE	OH	FRANKLIN	IN	422	$4,823	$5,112	$5,112	$0.25	$106	$5,218
40. BELPRE	OH	FREMONT	OH	254	$2,735	$3,499	$3,499	$0.25	$64	$3,563
41. BELPRE	OH	HAZLETON	PA	316	$4,397	$4,661	$4,661	$0.25	$79	$4,740
42. BELPRE	OH	LENEXA	KS	652	$5,375	$5,698	$5,698	$0.25	$163	$5,861
43. BELPRE	OH	RUSSELLVILLE	AR	662	$5,768	$6,114	$6,114	$0.25	$166	$6,280
44. BELPRE	OH	ST JEAN	PQ	487	$3,762	$4,063	$4,063	$0.25	$122	$4,185
45. BELPRE	OH	SUISUN FAIRFIELD	CA	662	$5,768	$6,114	$6,114	$0.25	$166	$6,280
46. BELPRE	OH	SWEETWATER	TX	652	$5,375	$5,698	$5,698	$0.25	$163	$5,861
47. SPRING	TX	APPLE GROVE	WV	603	$5,103	$5,409	$5,409	$0.25	$151	$5,560
48. SWEETWATER	TX	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.25	$141	$5,718
49. SWEETWATER	TX	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.25	$140	$5,981
50. SWEETWATER	TX	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.25	$334	$7,460
51. APPLE GROVE	WV	LEXINGTON	KY	277	$2,973	$3,122	$3,122	$0.25	$69	$3,191
52. APPLE GROVE	WV	PRATTVILLE	AL	189	$2,661	$2,794	$2,794	$0.25	$47	$2,841

Summary of CSXT Tariff Rates for M&G Movements 1Q10-1Q11

Origin 1/		Destination		Miles	Base Tariff Rate Ex Fuel Eff. 10/10/08-1/31/10	Base Tariff Rate Ex Fuel Eff. 2/1/10-7/31/10	Base Tariff Rate Ex Fuel Eff. 8/1/10-Present	4Q10 Fuel Surcharge Per Mile 11/	4Q10 Fuel Surcharge Per Car 12/	Rate Inc. Fuel 13/
(1)		(2)		(3)	(4)	(5)	(6)	(16)	(17)	(18)
Exhibit A - Local Moves										
1. APPLE GROVE	WV	BELPRE	OH	97	$2,462	$2,585	$2,585	$0.25	$24	$2,609
2. APPLE GROVE	WV	BORDENTOWN	NJ	700	$5,524	$5,800	$5,800	$0.25	$175	$5,975
3. APPLE GROVE	WV	CARTERSVILLE	GA	750	$5,341	$5,608	$5,608	$0.25	$188	$5,796
4. APPLE GROVE	WV	CLIFTON FORGE	VA	294	$3,710	$3,896	$3,896	$0.25	$74	$3,970
5. APPLE GROVE	WV	DEVON	KY	193	$2,661	$2,794	$2,794	$0.25	$48	$2,842
6. APPLE GROVE	WV	ORLANDO	FL	1,043	$7,551	$7,929	$7,929	$0.25	$261	$8,190
7. APPLE GROVE	WV	PARIS	IL	400	$5,197	$5,457	$5,457	$0.25	$100	$5,557
8. APPLE GROVE	WV	PARKERSBURG	WV	95	$2,462	$2,585	$2,585	$0.25	$24	$2,609
9. APPLE GROVE	WV	RAINS	SC	840	$5,087	$5,341	$5,341	$0.25	$210	$5,551
10. APPLE GROVE	WV	ROCHESTER	NY	614	$8,175	$8,584	$8,584	$0.25	$154	$8,738
11. BELPRE	OH	APPLE GROVE	WV	97	$2,973	$3,151	$3,151	$0.25	$24	$3,175
12. BELPRE	OH	BORDENTOWN	NJ	600	$4,935	$5,231	$5,231	$0.25	$150	$5,381
13. BELPRE	OH	CARTERSVILLE	GA	823	$6,143	$6,512	$6,512	$0.25	$206	$6,718
14. BELPRE	OH	DEVON	KY	290	$3,620	$3,837	$3,837	$0.25	$73	$3,910
15. BELPRE	OH	ORLANDO	FL	1,140	$7,374	$7,964	$7,964	$0.25	$285	$8,249
16. BELPRE	OH	PARIS	IL	500	$4,829	$5,119	$5,119	$0.25	$125	$5,244
17. PARKERSBURG	WV	APPLE GROVE	WV	95	$2,973	$3,151	$3,151	$0.25	$24	$3,175
18. RAINS	SC	CARTERSVILLE	GA	513	$3,896	$4,091	$4,091	$0.25	$128	$4,219
Exhibit B - Joint Moves										
1. ALTAMIRA	TM	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.25	$141	$5,718
2. ALTAMIRA	TM	BELPRE	OH	660	$5,176	$5,487	$5,487	$0.25	$165	$5,652
3. ALTAMIRA	TM	CAMBRIDGE	OH	359	$4,645	$4,924	$4,924	$0.25	$90	$5,014
4. ALTAMIRA	TM	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.25	$140	$5,981
5. ALTAMIRA	TM	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.25	$334	$7,460
6. ALTAMIRA	TM	ORLANDO	FL	889	$6,862	$7,411	$7,411	$0.25	$222	$7,633
7. APPLE GROVE	WV	AGUILA	AZ	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
8. APPLE GROVE	WV	ALLENTOWN	PA	409	$5,047	$5,299	$5,299	$0.25	$102	$5,401
9. APPLE GROVE	WV	ALTAMIRA	TM	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
10. APPLE GROVE	WV	CHAMPAIGN	IL	501	$5,261	$5,524	$5,524	$0.25	$125	$5,649
11. APPLE GROVE	WV	CHAMPAIGN	IL	458	$5,300	$5,565	$5,565	$0.25	$115	$5,680
12. APPLE GROVE	WV	DARLINGTON	SC	653	$5,087	$5,341	$5,341	$0.25	$163	$5,504
13. APPLE GROVE	WV	DONEY SPUR	PQ	279	$2,663	$2,876	$2,876	$0.25	$70	$2,946
14. APPLE GROVE	WV	FRANKLIN	IN	327	$3,198	$3,677	$3,677	$0.25	$82	$3,759
15. APPLE GROVE	WV	FREMONT	OH	157	$2,577	$2,945	$2,945	$0.25	$39	$2,984
16. APPLE GROVE	WV	GLENDALE	AZ	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
17. APPLE GROVE	WV	HAMILTON	ON	279	$2,663	$2,876	$2,876	$0.25	$70	$2,946
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	409	$5,047	$5,299	$5,299	$0.25	$102	$5,401
19. APPLE GROVE	WV	HAZLETON	PA	409	$5,047	$5,299	$5,299	$0.25	$102	$5,401
20. APPLE GROVE	WV	HEBRON	OH	347	$2,577	$2,945	$2,945	$0.25	$87	$3,032
21. APPLE GROVE	WV	LENEXA	KS	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
22. APPLE GROVE	WV	LITTLE ROCK	AR	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
23. APPLE GROVE	WV	MEMPHIS	TN	733	$5,676	$5,960	$5,960	$0.25	$183	$6,143
24. APPLE GROVE	WV	NICHOLASVILLE	KY	157	$2,577	$2,945	$2,945	$0.25	$39	$2,984
25. APPLE GROVE	WV	ROCKFORD	IL	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
26. APPLE GROVE	WV	ROGERS	MN	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
27. APPLE GROVE	WV	RUSSELLVILLE	AR	554	$5,300	$5,565	$5,565	$0.25	$139	$5,704
28. APPLE GROVE	WV	ST JEAN	PQ	279	$2,663	$2,876	$2,876	$0.25	$70	$2,946
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	554	$5,300	$5,565	$5,565	$0.25	$139	$5,704
30. APPLE GROVE	WV	SWEETWATER	TX	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
31. APPLE GROVE	WV	TEXARKANA	TX	554	$5,300	$5,565	$5,565	$0.25	$139	$5,704
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	542	$5,261	$5,524	$5,524	$0.25	$136	$5,660
33. APPLE GROVE	WV	VADO	NM	558	$5,261	$5,524	$5,524	$0.25	$140	$5,664
34. APPLE GROVE	WV	W CHICAGO	IL	557	$5,261	$5,524	$5,524	$0.25	$139	$5,663
35. APPLE GROVE	WV	WAYNESVILLE	NC	572	$3,710	$3,896	$3,896	$0.25	$143	$4,039
36. BELPRE	OH	AGUILA	AZ	652	$5,375	$5,698	$5,698	$0.25	$163	$5,861
37. BELPRE	OH	ALLENTOWN	PA	316	$4,397	$4,661	$4,661	$0.25	$79	$4,740
38. BELPRE	OH	CAMBRIDGE	ON	487	$3,762	$4,063	$4,063	$0.25	$122	$4,185
39. BELPRE	OH	FRANKLIN	IN	422	$4,823	$5,112	$5,112	$0.25	$106	$5,218
40. BELPRE	OH	FREMONT	OH	254	$2,735	$3,499	$3,499	$0.25	$64	$3,563
41. BELPRE	OH	HAZLETON	PA	316	$4,397	$4,661	$4,661	$0.25	$79	$4,740
42. BELPRE	OH	LENEXA	KS	652	$5,375	$5,698	$5,698	$0.25	$163	$5,861
43. BELPRE	OH	RUSSELLVILLE	AR	662	$5,768	$6,114	$6,114	$0.25	$166	$6,280
44. BELPRE	OH	ST JEAN	PQ	487	$3,762	$4,063	$4,063	$0.25	$122	$4,185
45. BELPRE	OH	SUISUN FAIRFIELD	CA	662	$5,768	$6,114	$6,114	$0.25	$166	$6,280
46. BELPRE	OH	SWEETWATER	TX	652	$5,375	$5,698	$5,698	$0.25	$163	$5,861
47. SPRING	TX	APPLE GROVE	WV	603	$5,103	$5,409	$5,409	$0.25	$151	$5,560
48. SWEETWATER	TX	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.25	$141	$5,718
49. SWEETWATER	TX	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.25	$140	$5,981
50. SWEETWATER	TX	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.25	$334	$7,460
51. APPLE GROVE	WV	LEXINGTON	KY	277	$2,973	$3,122	$3,122	$0.25	$69	$3,191
52. APPLE GROVE	WV	PRATTVILLE	AL	189	$2,661	$2,794	$2,794	$0.25	$47	$2,841

Summary of CSXT Tariff Rates for M&G Movements 1Q10-1Q11

Origin 1/		Destination		Miles	Base Tariff Rate Ex Fuel Eff. 10/10/08-1/31/10	Base Tariff Rate Ex Fuel Eff. 2/1/10-7/31/10	Base Tariff Rate Ex Fuel Eff. 8/1/10-Present	1Q11 Fuel Surcharge Per Mile 14/	1Q11 Fuel Surcharge Per Car 15/	1Q11 Rate Inc. Fuel 16/
(1)		(2)		(3)	(4)	(5)	(6)	(19)	(20)	(21)
Exhibit A - Local Moves										
1. APPLE GROVE	WV	BELPRE	OH	97	$2,462	$2,585	$2,585	$0.32	$31	$2,616
2. APPLE GROVE	WV	BORDENTOWN	NJ	700	$5,524	$5,800	$5,800	$0.32	$224	$6,024
3. APPLE GROVE	WV	CARTERSVILLE	GA	750	$5,341	$5,608	$5,608	$0.32	$240	$5,848
4. APPLE GROVE	WV	CLIFTON FORGE	VA	294	$3,710	$3,896	$3,896	$0.32	$94	$3,990
5. APPLE GROVE	WV	DEVON	KY	193	$2,661	$2,794	$2,794	$0.32	$62	$2,856
6. APPLE GROVE	WV	ORLANDO	FL	1,043	$7,551	$7,929	$7,929	$0.32	$334	$8,263
7. APPLE GROVE	WV	PARIS	IL	400	$5,197	$5,457	$5,457	$0.32	$128	$5,585
8. APPLE GROVE	WV	PARKERSBURG	WV	95	$2,462	$2,585	$2,585	$0.32	$30	$2,615
9. APPLE GROVE	WV	RAINS	SC	840	$5,087	$5,341	$5,341	$0.32	$269	$5,610
10. APPLE GROVE	WV	ROCHESTER	NY	614	$8,175	$8,584	$8,584	$0.32	$196	$8,780
11. BELPRE	OH	APPLE GROVE	WV	97	$2,973	$3,151	$3,151	$0.32	$31	$3,182
12. BELPRE	OH	BORDENTOWN	NJ	600	$4,935	$5,231	$5,231	$0.32	$192	$5,423
13. BELPRE	OH	CARTERSVILLE	GA	823	$6,143	$6,512	$6,512	$0.32	$263	$6,775
14. BELPRE	OH	DEVON	KY	290	$3,620	$3,837	$3,837	$0.32	$93	$3,930
15. BELPRE	OH	ORLANDO	FL	1,140	$7,374	$7,964	$7,964	$0.32	$365	$8,329
16. BELPRE	OH	PARIS	IL	500	$4,829	$5,119	$5,119	$0.32	$160	$5,279
17. PARKERSBURG	WV	APPLE GROVE	WV	95	$2,973	$3,151	$3,151	$0.32	$30	$3,181
18. RAINS	SC	CARTERSVILLE	GA	513	$3,896	$4,091	$4,091	$0.32	$164	$4,255
Exhibit B - Joint Moves										
1. ALTAMIRA	TM	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.32	$180	$5,757
2. ALTAMIRA	TM	BELPRE	OH	660	$5,176	$5,487	$5,487	$0.32	$211	$5,698
3. ALTAMIRA	TM	CAMBRIDGE	OH	359	$4,645	$4,924	$4,924	$0.32	$115	$5,039
4. ALTAMIRA	TM	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.32	$179	$6,020
5. ALTAMIRA	TM	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.32	$427	$7,553
6. ALTAMIRA	TM	ORLANDO	FL	889	$6,862	$7,411	$7,411	$0.32	$284	$7,695
7. APPLE GROVE	WV	AGUILA	AZ	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
8. APPLE GROVE	WV	ALLENTOWN	PA	409	$5,047	$5,299	$5,299	$0.32	$131	$5,430
9. APPLE GROVE	WV	ALTAMIRA	TM	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
10. APPLE GROVE	WV	CHAMPAIGN	IL	501	$5,261	$5,524	$5,524	$0.32	$160	$5,684
11. APPLE GROVE	WV	CHAMPAIGN	IL	458	$5,300	$5,565	$5,565	$0.32	$147	$5,712
12. APPLE GROVE	WV	DARLINGTON	SC	653	$5,087	$5,341	$5,341	$0.32	$209	$5,550
13. APPLE GROVE	WV	DONEY SPUR	PQ	279	$2,663	$2,876	$2,876	$0.32	$89	$2,965
14. APPLE GROVE	WV	FRANKLIN	IN	327	$3,198	$3,677	$3,677	$0.32	$105	$3,782
15. APPLE GROVE	WV	FREMONT	OH	157	$2,577	$2,945	$2,945	$0.32	$50	$2,995
16. APPLE GROVE	WV	GLENDALE	AZ	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
17. APPLE GROVE	WV	HAMILTON	ON	279	$2,663	$2,876	$2,876	$0.32	$89	$2,965
18. APPLE GROVE	WV	HAVRE DE GRACE	MD	409	$5,047	$5,299	$5,299	$0.32	$131	$5,430
19. APPLE GROVE	WV	HAZLETON	PA	409	$5,047	$5,299	$5,299	$0.32	$131	$5,430
20. APPLE GROVE	WV	HEBRON	OH	347	$2,577	$2,945	$2,945	$0.32	$111	$3,056
21. APPLE GROVE	WV	LENEXA	KS	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
22. APPLE GROVE	WV	LITTLE ROCK	AR	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
23. APPLE GROVE	WV	MEMPHIS	TN	733	$5,676	$5,960	$5,960	$0.32	$235	$6,195
24. APPLE GROVE	WV	NICHOLASVILLE	KY	157	$2,577	$2,945	$2,945	$0.32	$50	$2,995
25. APPLE GROVE	WV	ROCKFORD	IL	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
26. APPLE GROVE	WV	ROGERS	MN	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
27. APPLE GROVE	WV	RUSSELLVILLE	AR	554	$5,300	$5,565	$5,565	$0.32	$177	$5,742
28. APPLE GROVE	WV	ST JEAN	PQ	279	$2,663	$2,876	$2,876	$0.32	$89	$2,965
29. APPLE GROVE	WV	SUISUN FAIRFIELD	CA	554	$5,300	$5,565	$5,565	$0.32	$177	$5,742
30. APPLE GROVE	WV	SWEETWATER	TX	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
31. APPLE GROVE	WV	TEXARKANA	TX	554	$5,300	$5,565	$5,565	$0.32	$177	$5,742
32. APPLE GROVE	WV	UNIVERSITY PARK	IL	542	$5,261	$5,524	$5,524	$0.32	$173	$5,697
33. APPLE GROVE	WV	VADO	NM	558	$5,261	$5,524	$5,524	$0.32	$179	$5,703
34. APPLE GROVE	WV	W CHICAGO	IL	557	$5,261	$5,524	$5,524	$0.32	$178	$5,702
35. APPLE GROVE	WV	WAYNESVILLE	NC	572	$3,710	$3,896	$3,896	$0.32	$183	$4,079
36. BELPRE	OH	AGUILA	AZ	652	$5,375	$5,698	$5,698	$0.32	$209	$5,907
37. BELPRE	OH	ALLENTOWN	PA	316	$4,397	$4,661	$4,661	$0.32	$101	$4,762
38. BELPRE	OH	CAMBRIDGE	ON	487	$3,762	$4,063	$4,063	$0.32	$156	$4,219
39. BELPRE	OH	FRANKLIN	IN	422	$4,823	$5,112	$5,112	$0.32	$135	$5,247
40. BELPRE	OH	FREMONT	OH	254	$2,735	$3,499	$3,499	$0.32	$81	$3,580
41. BELPRE	OH	HAZLETON	PA	316	$4,397	$4,661	$4,661	$0.32	$101	$4,762
42. BELPRE	OH	LENEXA	KS	652	$5,375	$5,698	$5,698	$0.32	$209	$5,907
43. BELPRE	OH	RUSSELLVILLE	AR	662	$5,768	$6,114	$6,114	$0.32	$212	$6,326
44. BELPRE	OH	ST JEAN	PQ	487	$3,762	$4,063	$4,063	$0.32	$156	$4,219
45. BELPRE	OH	SUISUN FAIRFIELD	CA	662	$5,768	$6,114	$6,114	$0.32	$212	$6,326
46. BELPRE	OH	SWEETWATER	TX	652	$5,375	$5,698	$5,698	$0.32	$209	$5,907
47. SPRING	TX	APPLE GROVE	WV	603	$5,103	$5,409	$5,409	$0.32	$193	$5,602
48. SWEETWATER	TX	APPLE GROVE	WV	563	$5,261	$5,577	$5,577	$0.32	$180	$5,757
49. SWEETWATER	TX	CARTERSVILLE	GA	558	$5,841	$5,841	$5,841	$0.32	$179	$6,020
50. SWEETWATER	TX	CLIFTON FORGE	VA	1,335	$6,723	$7,126	$7,126	$0.32	$427	$7,553
51. APPLE GROVE	WV	LEXINGTON	KY	277	$2,973	$3,122	$3,122	$0.32	$89	$3,211
52. APPLE GROVE	WV	PRATTVILLE	AL	189	$2,661	$2,794	$2,794	$0.32	$60	$2,854

Summary of CSXT Tariff Rates for M&G Movements 1Q10-1Q11

Footnotes

1/ The issue movement lane numbers correspond to the issue movement lane numbers in M&G's Third Amended Complaint.
2/ Average fuel surcharge per mile based on CSXT Fuel Surcharge Publication 8661-B for January, February and March 2010 of $0.20/mile, $0.19/mile and $0.22/mile, respectively.
3/ Column (3) x Column (7)
4/ (Column (4) x 1/3) + (Column (5) x 2/3) + Column (8)
5/ Average fuel surcharge per mile based on CSXT Fuel Surcharge Publication 8661-B for April, May and June 2010 of $0.20/mile, $0.23/mile and $0.27/mile, respectively.
6/ Column (3) x Column (10)
7/ Column (5) + Column (11)
8/ Average fuel surcharge per mile based on CSXT Fuel Surcharge Publication 8661-B for July, August and September 2010 of $0.27/mile, $0.24/mile and $0.23/mile, respectively.
9/ Column (3) x Column (13)
10/ (Column (5) x 1/3) + (Column (6) x 2/3) + Column (14)
11/ Average fuel surcharge per mile based on CSXT Fuel Surcharge Publication 8661-B for October, November and December 2010 of $0.24/mile, $0.24/mile and $0.27/mile, respectively.
12/ Column (3) x Column (16)
13/ Column (6) + Column (17)
14/ Average fuel surcharge per mile based on CSXT Fuel Surcharge Publication 8661-B for January, February and March 2011 of $0.29/mile, $0.32/mile and $0.35/mile, respectively.
15/ Column (3) x Column (19)
16/ Column (6) + Column (20)

Rebuttal Exhibit II-A-8

Confidential Information Redacted

Rebuttal Exhibit II-B- 1

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COMPANY NEWS; SUNOCO AGREES TO BUY MITSUBISHI'S ARISTECH CHEMICAL

Published: November 10, 2000

Sunoco agreed yesterday to buy the Aristech Chemical Corporation, a unit of the Mitsubishi Corporation of Japan, for $695 million. Aristech, based in Pittsburgh, makes polypropylene and phenol, two compounds widely used in plastics, at two plants in Texas and one each in West Virginia, Ohio and Pennsylvania. Sunoco will pay $167 million more for Aristech if the company's profit margins exceed a certain level, the company said. Sunoco, which owns five refineries in the United States and sells gasoline through 3,500 stations in 17 states, had $8.3 billion in sales last year.



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Press Releases

Sunoco Chemicals' Press Releases

SUNOCO AND EPSILON ENTER INTO AGREEMENTS UNDER WHICH SUNOCO WILL ASSUME RESPONSIBILITY FOR GENERAL MANAGEMENT OF EPSILON

Philadelphia, October 19, 2001 -- Epsilon Products Company (Marcus Hook, PA) and Sunoco, Inc. (Philadelphia, PA) today announced they have entered into agreements under which Sunoco will assume responsibility for general management, sales, and support functions on Epsilon's behalf. Epsilon Products Company is a joint venture between Sunoco, Inc. and BAR-L, Inc., whose 760 million-pound plant at Marcus Hook, PA, manufactures a full range of polypropylene products. The joint venture was formed in June 2000. Although Epsilon will continue as a distinct legal entity for ownership purposes, Sunoco will combine elements of Epsilon's current organization with its own resources to provide a wider range of services and products to all customers. Sunoco will market Epsilon production under the Sunoco name in combination with production from its own two polypropylene plants. Total combined productive capacity will now equal approximately 2.3 billion pounds per year. Both companies expect the process to be completed by early 2002.

Sunoco Chemicals, a business unit of Sunoco, Inc., currently operates 1.5 billion pounds of polypropylene capacity at its LaPorte, TX and Neal, WV plants, selling products predominantly throughout North America and utilizes a supporting technical center in Pittsburgh, Pa. Sunoco Chemicals is also a leading marketer of phenol and related derivatives and plasticizers.

Sunoco, Inc. (NYSE: SUN) headquartered in Philadelphia, PA, is a leading manufacturer and marketer of petroleum and petrochemical products. With 730,000 barrels per day of refining capacity, almost 4,100 retail sites selling gasoline and convenience items, interests in over 10,000 miles of cured oil and refined product pipelines and 35 product terminals, Sunoco is one of the largest independent refiner-marketers in the United States. Sunoco is a growing force in petrochemicals with over nine billion pounds of annual production capacity, largely chemical intermediates used in the manufacture of fibers, plastics, film and resins. Sunoco also manufactures almost two million tons annually of high-quality metall- rgical grade coke for use in the steel ind- stry.

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A&R Acquires Old Nova Production Site

CHESAPEAKE, VA. (**Updated** Jan. 8, 2:30 p.m. EST) -- A&R Logistics, a provider of bulk resin transportation, has bought a 64-acre plant site in Chesapeake, Va., from Nova Chemicals Corp.

Terms of the deal were not disclosed. Pittsburgh-based Nova stopped production at the site in mid-2006. The plant had operated 300 million pounds of capacity for solid polystyrene and 110 million pounds of capacity for styrenics-based compounds.

In addition to a 45,000-square-foot compounding operation, the purchase includes a 70,000-square-foot warehouse, a 65-car rail yard and 15 million pounds of silo storage. The site also has port access and is served by multiple rail providers.

"The property offers us a unique opportunity to add more value to the current scope of services we provide," A&R Chief Executive Officer Jim Bedeker said in a Jan. 7 news release from the Morris, Ill.-based firm.

"The rail and port access, combined with a facility infrastructure specific to the dry bulk business, just doesn't get any better than this," Bedeker added.

The site no longer will be used for PS production, but A&R President Jeff O'Connor said his firm "intends to begin ramping up the compounding, rail and silo operations as quickly as possible."

In a Jan. 8 phone interview, O'Connor said A&R plans to do toll compounding for its customers on the six extrusion lines — a mix of single- and twin-screw equipment — that Nova had operated. A&R's customer list includes more than 100 resin makers, compounders and distributors. The Chesapeake effort will be the firm's first venture into compounding.

To help with the effort, A&R has hired six former Nova compounding employees and plans to hire more, O'Connor said. A&R expects to employ 70 at the site. The firm also may use part of the site for biodiesel fuel production through a proposed venture with another company.

Nova had employed 135 at the Chesapeake site, which was opened by Huntsman Corp. in 1973. Nova bought the property from Huntsman in 1998.

The Chesapeake property will be the largest of A&R's 22 locations based on acreage, and will be one of its largest in square footage. A&R also manages a fleet of about 700 semi-tractor rigs and 1,100 bulk and dry van trailers. The firm was founded in 1969 by Bedeker, who remains A&R's majority owner.

Privately held A&R doesn't disclose sales data. The firm is looking to make more acquisitions, but O'Connor said A&R "will be opportunistic about it."

Source: Plastics News, January 8, 2008

Rebuttal Exhibit II-B- 2

The Dispatch

May 2005
Volume 6, Issue 5

The newsletter of Watco Companies, Inc.
www.watcocompanies.com

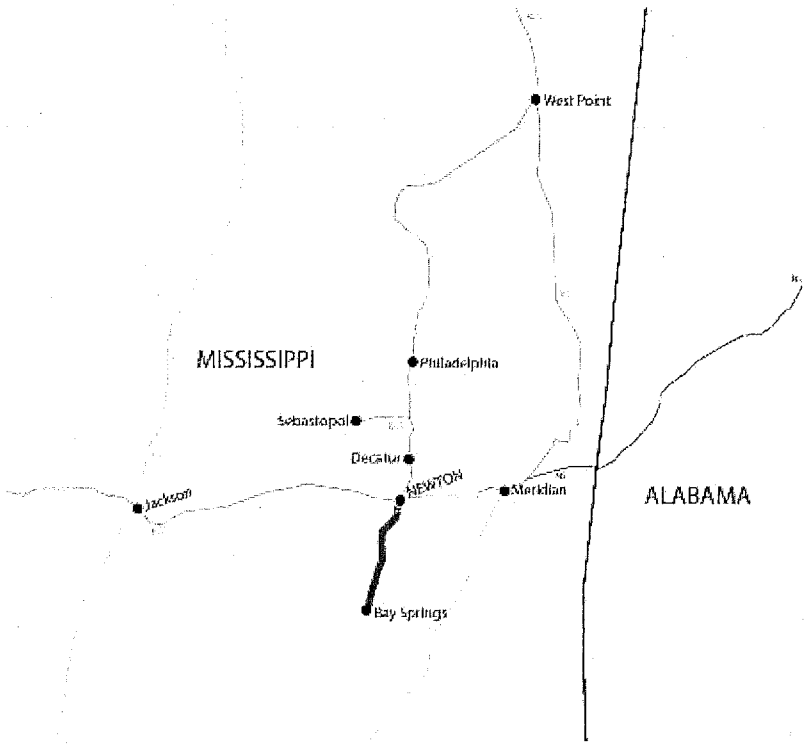
Watco expands gulf region operations with MSR

by Amy Parady
Marketing Manager

Following suit to the recent successful start-up of the Appalachian and Ohio Railroad in West Virginia, Watco is on the move again, expanding in the Gulf Region with the addition of The Mississippi Southern Railroad. The newest addition to our ever growing list of railroads across the nation results from our valued relationship with the Kansas City Southern Railway Company.

The Mississippi Southern, formerly the Bay Springs branch line of the KCS, which extends from Newton, MS to Bay Springs, MS, is the result of a lease agreement with the KCS. Watco began operations on the 28.5 mile line during the first week of April 2005. The lease of this line was welcomed by the community of Bay Springs and the customers located on the line whose businesses largely depend on rail transportation. In February 2005, the Bay Springs branch line had been embargoed by the KCS due to poor track conditions. Watco and KCS worked together, and in record time both parties came to an agreement on the lease arrangements and the plan was quickly put into action.

Operations and Marketing personnel along with KCS representatives met with customers and state/city officials on March 23rd to unveil our plan to take this line out of embargoed status and begin operations as the Mississippi Southern Railroad within the following week. Track work rapidly began and time was spent with the customers to develop customer profiles in order to meet our goal. Due to the support from the community, our Class I partner, and the efforts of Watco personnel, we were able to achieve this goal. On April 5th, 2005, the Mississippi Southern Railroad opened for business to serve customers along the line in several different industries including forest and agricultural products.



While we were able to bring the track out of embargoed status through our rehabilitation efforts, there is still much to do and with that comes the associated expense. Watco is currently working on a capital plan which includes lobbying for federal and state dollars. This plan will allow us to invest in the track and provide a 10 year service guarantee to the City of Bay Springs and customers located on the line.

We have established great communication with our customers and Class I partner through our customer service center, marketing personnel and local operations allowing for the start-up to be highly successful. Our flexibility and commitment has already been noticed by our customers and has provided the ground work for future organic growth with those customers as well as opportunities for new business.

For current job opportunities with Watco Companies, Inc. please visit www.watcocompanies.com and click on "Job Opportunities"!

Watco friend and partner retires after 19 years in the industry

by Julie Fortman
Managing Editor

Gordon Heisler is recognized as a career logistician. Spending the last 19 years of his professional career with Sunoco Chemicals (Sunoco), Heisler spent his time insuring Sunoco's products reached customers safely, on time, and at the right price. However, beginning June 1st, his activities will include golf and bicycling as he enters retirement.

Sunoco, Inc. is one of the largest independent refiners and marketers in the United States of petroleum and petrochemical products with 900,000 barrels per day of refining capacity and approximately 4,800 retail sites in 24 states. The Company has major market positions in domestic polypropylene and phenol businesses as well as refinery petrochemicals.

Watco Companies has provided industrial switching services at Sunoco's Tulsa, Oklahoma refinery for eight years. According to Sunoco's website www.sunocoinc.com the Tulsa refinery can process 85,000 barrels a day of crude oil into fuels and more than 100 lubricants products, waxes and aromatic oils used in a wide variety of industries.

Before 1997, Tulsa's switching services were provided by Class I railroads, but to improve safety and services, Sunoco decided to explore contract switching. Under Heisler's direction, the conversion to private switching and building of a rail storage yard in the refinery was accomplished; with Watco Companies involved in the construction and becoming the switching services provider.

"Watco's switching service has been excellent; our fleet utilization has improved and the level of service to customers is much better. In addition, switching safety performance was upgraded considerably," Heisler said. "Watco's flexibility in adapting to our changing refining operations enabled us to increase the facilities productivity."

Located in Philadelphia, Pennsylvania, Heisler is responsible for managing all land transportation activities supporting Sunoco, operating a 5,800 railcar fleet, negotiating rail and trucking contracts, operating logistics systems and private railroad operations. He is a member of the American Chemistry Council, American Plastics Council and the National Industrial Transportation League.

"Gordon is a true friend of Watco. I've really enjoyed our relationship because he is always willing to share his knowledge of the rail industry and the logistics world as a whole."
-- Rick Webb

Rick Webb, Watco CEO, said Heisler's friendship and knowledge are valuable.

"Gordon is a true friend of Watco. I've really enjoyed our relationship because he is always willing to share his knowledge of the rail industry and the logistics world as a whole," Webb said. "I've learned a lot from Gordon and hope he'll continue to find the time in his retirement to keep educating us on how we can keep improving or service to Sunoco and other Customers. If not for great Customers like Gordon, we would not be the success we are today. I thank Gordon for many years of good service and wish him the best for many, many more in his retirement."

SUNOCO Chemicals

Heisler said the relationship between Watco and Sunoco has been very positive and Sunoco looks forward to future endeavors with Watco.

"Sunoco is very encouraged by the Watco-Sunoco relationship. We like to work with profitable partners who grow with us and continually improve their operations and services. Watco is clearly a progressive company that has demonstrated flexibility and creative solutions in solving our challenges," he said.

During his Sunoco career, Heisler achieved many successes besides converting the Tulsa location to private rail switching. Heisler was responsible for negotiations during the ConRail breakup into Norfolk Southern and CSX, which positioned Sunoco to take full advantage of rail competition and improve service He also led the negotiations in 2004 with the BNSF in LaPorte, Texas, where Sunoco will build a rail switching/storage facility similar to Tulsa for handling plastics. Additionally, besides calling himself a career logistician, he also is known as the Godfather of Sunoco's Transportation Emergency Response due to his leadership in creating an emergency response team, preparing Sunoco for incidents in transit involving their products.

Heisler and his wife of 34 years, Barbara, have one daughter and two grandchildren. In his retirement, he intends to spend plenty of quality time with his family and the outdoors. An avid bicyclist, Heisler has bicycled internationally in France, Switzerland and British Columbia. Most recently he completed the Bike New York in New York City, riding more than 50 miles.

"I had a newspaper delivery route when I was 10 years old and I've been hooked on bicycling ever since," he said.

Though as a 10-year-old he may not have realized it, perhaps that newspaper route was the beginning of a successful life as a career logistician.

Rebuttal Exhibit II-B- 3

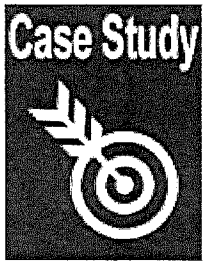
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CHEMICALS & ENERGY

Sunoco's Shipping Process Inside Its Plants Goes from Manual to Highly Optimized

Jean V. Murphy, Global Logistics & Supply Chain Strategies | September 01, 2004

A conversation with Gordon Heisler, director of transportation operations at Sunoco Inc., in Philadelphia.



Sunoco makes a wide range of petroleum-based products and is the largest producer of phenol in the United States and No. 2 globally. It is the third-largest producer of polypropylene in North America, a business that it has built through acquisition over the past five years. As director of transportation, Gordon Heisler recently co-sponsored the selection and implementation of a rail shipping and visibility solution for Sunoco's polypropylene plants.

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Q: Can you describe Sunoco's polypropylene business for us?
Heisler: Sunoco is currently the third-largest producer of polypropylene in the U.S., but five years ago we were not in the polymers business at all. Polypropylene is basically plastic pellets that have a growing number of applications.

The primary end use channels of polypropylene are consumer products, automotive, fibers, film, and packaging.

Over the past five years, we acquired four plants from three different companies. These are all in the U.S., but they are geographically dispersed, so we were looking for a solution that would streamline the processes and standardize the plant shipping operations. The four plants operate under a single order-management system, but beyond that we were looking for ways to improve the supply chain and the utilization of our fleet of railroad hopper cars. Between the four plants, we ship in excess of 12,000 carloads of plastics a year. Virtually all of our polymer product is shipped by rail in hopper cars.

Q: The project was focused on the use of railcars once they were inside your plants?
Heisler: The focus was exclusively "inside the fence." Before we implemented the @Plant solution from Quality Transportation Services (QTS), all movements and activities inside our plants were performed manually. Our shipping process involves receiving, inspecting and validating before loading the cars, weighing them, doing lab sampling, generating the bill of lading and confirming the order in our order management system for each shipment and all the documentation associated with these functions. This was all handled with very manual and non-integrated methods. Since we had built this business through acquisition, each company had its own way of handling the shipping process and we were looking for a way to automate and standardize the shipping process.

To accomplish our goal, we first needed to have visibility at the location and current status of rail equipment inside our plant facilities. We already tracked the movement of cars outside the plants using the railroads' car-location messages, which we then made available to our customers through our online

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service. But inside the plant we needed more detail, in real time, about what cars had arrived and were available for loading. Before, this was done by a person walking along the tracks inside our plants and writing down car numbers.

Manual processes were used on both the inbound as well as the outbound. Weighing the cars, for example, involved having someone get the scale ticket, take it inside the plant and manually key it into a system. The same thing with the lab certificate.

Virtually all of the processes used in the shipping process were essentially manual and utilized non-integrated systems, with a lot of duplicate paperwork and repetitive entries. Obviously, this left a lot of room for error. Accuracy is paramount in today's environment, but it was impossible to be 100 percent accurate due to multiple manual entries into different systems.

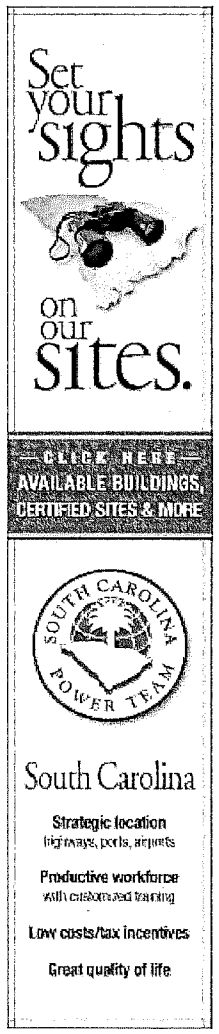
Q: How did you decide on the rail car management system from QTS?
Heisler: We looked at three different solutions that would allow us to have inside-the-plant visibility of railroad equipment. We selected QTS because we liked the technology they offered and the flexibility. QTS has been a supplier to Sunoco for a number of years and had a successful track record on logistics software. When we got into the project we actually discovered many more capabilities in the system than we originally thought were there.

Initially, as I said, we were principally looking to track rail cars inside our facilities. But the QTS product offered us an opportunity to take these previously manual or disparate-system functions involved in the shipping process and integrate them together into a common rail shipping system.

Q: So how does it work?
Heisler: We have integrated all railcar activities and that includes inbound, outbound and intra-plant. We also have incorporated visibility of all railcars inside the facilities as well as at local storage yards in the vicinity. This was accomplished through the installation of fixed readers that scan the Automatic Electronic Identification (AEI) tags on each railcar. These readers are placed at the entrance to each facility. The tag itself, the transponder, is on the railcar and the stationary readers are at the gates, so it is just like what happens when you go through an EZ Pass tollbooth where the reader reads the transponder. It collects the location and direction and car number and this information is time stamped and transmitted to the QTS @Plant system.

We also have portable AEI readers that are used to scan each car number into a specific spot within the plant. As I described before, one of our loaders used to go out and do a car inventory by walking a string of cars and manually writing down each of the car numbers and its position. This is now performed using a portable AEI reader, which accurately captures the car number and its location. It is virtually fail-safe, which is a huge improvement over a manual process. We have taken a process that was completely manual before and replaced it with accurate, real-time data on exactly what cars are where and their status within our facilities.

Q: Explain how this changes your operations.
Heisler: Knowing the exact location and status of railcars has streamlined our loading process. In the past, for example, a person would write down the car information and take it into the office for data entry. If a digit were transposed, we might very well miss a shipment that day because the car number that began with an eight had been written down as a three, and never got onto the loading rack. Instead of loading 10 cars that day, we may have only loaded nine. The system also validates our private car number IDs that reside in the data base against all arriving cars; so a foreign car is identified immediately. Another benefit is automation and integration of the weighing function. The car is indexed at the scale



using one of the handheld readers, so the car identification is synchronized with scale weight of the car loaded. The lab system is similarly integrated. After the car is loaded and weighed, the lab runs various tests on the product. When these tests are completed, the data is transferred right into the shipping office screens as opposed to loaders and lab personnel hand delivering pieces of paper that would previously have to be re-keyed.

Q: Are the various plants connected?
Heisler: Yes. If you look at how we conduct the business now, our supply-chain managers are located in Pittsburgh and the plants are hundreds of miles away. Pittsburgh now has visibility inside the fence at every facility as to the real-time status of every shipment and every car. The data available includes the weight of the car, the product loaded and whether it has passed lab certification and is ready for shipment. This access to data has huge benefits for us. Product inventories are in our system immediately allowing for immediate decisions by supply-chain management. We have consolidated the shipping functions at two plants into one as a result of the project.

Q: Have you quantified the results?
Heisler: The project has exceeded our original estimates of defined benefits in several areas. One would be data accuracy as we are no longer subject to the handwriter of the day. The time it takes to complete our whole shipping administration process has been reduced by more than 50 percent per shipment. We have the benefits from improved visibility locally and from supply-chain management. We have exceeded our original estimates on benefits in terms of personnel savings, data accuracy and real-time, shared data. In addition, we have seen a significant productivity gain in terms of our shipping clerks and other folks inside the plants. It was very time consuming to legibly write down car numbers and to re-key all that data. Now it all just flows onto the screen. Creating our switch list is now a simple drag-and-drop operation. We also generate our bills of lading electronically. We have also automated previous manual processes for railcar demurrage and detention management. Since our in-plant efficiency has improved, we are also seeing railcar asset utilization improvements that we feel are in excess of one day per car. Overall, the project has been viewed as a very successful one.

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Rebuttal Exhibit II-B- 4

Sunoco Chemicals' Letters and Speeches



Sunoco, Inc.
Ten Penn Center
1801 Market Street
Philadelphia PA 19103-1699

To All Sunoco Chemicals Customers:

On Tuesday, September 28, 1999, Charles K. Valutas, vice president of Sunoco Chemicals met along with representatives of the Chemical Manufacturers Association (CMA), Pennsylvania Chemical Industry Council (PCIC) and other chemical companies, with a delegation of Pennsylvania Congressmen and staff. Held in Washington, D.C., the meeting addressed key issues surrounding rail competition and performance in the Northeast corridor and their effect on our industry. The recent service issues resulting from the breakup of Conrail into Norfolk-Southern and CSX were highlighted.

At a second meeting with railroad subcommittee senior staff, these issues were further addressed to Bud Schuster (R-PA), chairman of the House Committee on Transportation and Infrastructure.

Mr. Valutas, in his comments, discussed the poor performance of the railroads since the breakup and its economic hardship on Sunoco Chemicals and its customers, the requirement for performance standards as part of a competitive environment, and the long-range benefits to our industry, region, and the railroads that growth provides. Without competitive, highly service oriented rail carriers, such growth will be limited.

Jack Drosdick, chief operating officer of Sunoco, Inc., has also addressed the Norfolk Southern service issues with David Goode, chairman of Norfolk Southern. Jack's message was that service provided since the Conrail breakup was totally unacceptable and must be improved immediately. He requested additional resources be deployed, specifically on Sunoco's behalf, to improve service to our customers.

You, our customer, can be assured that Sunoco Chemicals is doing everything in its power to make these issues prominent among key policy makers in an effort to provide the highest levels of service and supply of petrochemicals to your plant.

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What can you do? Send a FAX, e-mail, or call your congressman to register your viewpoint. Make your congressman aware of the serious nature of current rail service failures and their effect on your facility and business. Support increased competition and performance standards as a way to improve rail service.

Enclosed is a summary of the CMA issue brief describing current industry legislative initiatives that benefit rail service and competition if enacted. If you would like more information, contact the CMA at (800) 262-8200 or (703) 741-5000. For Sunoco specific data, contact myself at (215) 977-6763, gordon_r_heisler@sunoil.com or your normal Sunoco Chemicals sales representative.

Sincerely,

Gordon R. Heisler

Gordon R. Heisler
Manager, Transportation Operations
Sunoco Chemicals

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Summary of the Chemical Manufacturers Association's Issue Brief on Competitive Rail Transportation

Competitive domestic rail transportation is essential for global chemical industry competitiveness. Additionally, competitive rail transportation improves product delivery and keeps delivery costs affordable.

BACKGROUND

Congress needs to reauthorize the Surface Transportation Board (STB), the agency that regulates rail rates and services. Rail shippers and customers seek legislation that will provide for reasonable rail competition and protections from monopoly abuses by the rail industry.

INDUSTRY POSITION

- The chemical industry is dependent on the railroads. The data shows that about 66% of all chemical production facilities are captive to a single railroad. The railroads exercise monopoly power over the majority of our industry.

- Recently, severe rail service problems have grabbed national headlines, and, during the last Congress, those problems were addressed significantly. The rail service problems that crippled industries in the western states, as well as current Conrail-related problems in the Northeast, are merely symptoms of a larger problem that continues to plague our industry and our economy--a lack of effective competition between the railroads.

- U.S. economy is based on choices; however, in rail transportation that is often *not* the case. The chemical industry seeks commercial access in rail transportation where customer service, reliability and rates are efficient and reasonable.

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GRUPPO MOSSI & GHISOLFI

M&G Selects Corpus Christi, Texas, as the site of its 1 million tons PET and 1.2 million tons PTA plants

Expects to create 250 new jobs at plants, approximately 3,000 jobs anticipated during construction

HOUSTON - July 11, 2011 - M&G Group, the largest producer of PET for packaging applications in the Americas, has selected Corpus Christi, Texas, as the location for construction of its previously announced one million tons per year PET plant (2.2 billion pounds) and accompanying 1.2 million tons per year (2.6 billion pounds) PTA plant. The new plants will generate approximately 250 new jobs. An additional 700 indirect positions are anticipated and as many as 3,000 jobs likely will be created during construction.

The new PET single line plant will employ the same technology as M&G's single reactor Suape (Brazil) PET plant, including M&G's revolutionary EasyUp™ SSP technology. Corpus Christi, Texas, is located 200 miles southwest of Houston, Texas, and 145 miles east of Laredo, Texas. It is strategically located on the Gulf of Mexico with a metropolitan population over 400,000. The Port of Corpus Christi is the sixth largest port in the United States, in terms of tonnage, and will soon expand significantly as a major trade gateway for Mexico and Latin America with development of the La Quinta Container Terminal.

"Corpus Christi is an excellent strategic home for what will be M&G's largest-ever investment. It has exceptional highway, deep-water and rail access, including three Class 1 railroads," said Marco Ghisolfi, CEO of M&G's Polymers Business Unit.

"I'm pleased M&G Group has chosen Corpus Christi as the location of its new North American plant, creating hundreds of jobs for Texans and further strengthening our state economy, and wish them continued success at this new facility," said Governor Rick Perry of Texas. "This announcement is great news for South Texas and for the Lone Star State as we continue to attract companies from around the world to create jobs in Texas thanks to our low taxes, reasonable and predictable regulatory climate, fair legal system and skilled workforce."

"It was not only the Corpus Christi Regional Economic Development Corporation's and Governor Perry's Economic Development & Tourism Division's aggressive business-friendly approach in attracting M&G to Texas that weighed heavily in making the location decision, but also the service and supply efficiencies resulting from the presence of six refineries and Paraxylene production in the area, as well as the excellent port infrastructure that allows the benefit of having marine access to most of the PTA/PET facility's key raw materials, Paraxylene, Acetic Acid and Ethylene Glycol," added Ghisolfi.

Forbes has ranked Corpus Christi in the top 25 percent of the large metropolitan areas for low costs of doing business. The area is populated by a highly skilled workforce in petrochemical, heavy fabrication, water transport and aerospace. Moody's Economy.com ranked Corpus Christi in the best 20 percent of metropolitan areas for low workforce costs.

"We are very proud that M&G Polymers has selected Corpus Christi as the location of its new industrial facility. It brings new investment, new jobs and new opportunities for growth, both upstream and downstream, in our local industry," said Mayor Joe Adame, City of Corpus Christi.

Corpus Christi Regional Economic Development Corporation anticipates direct and indirect payroll resulting from the new plants to reach $780 million over 10 years and expects total economic impact of the new plants on Corpus Christi to be $4.8 billion during that same time.

Roland Mower, CEO of the Corpus Christi Regional Economic Development Corporation, responded to the good news: "Corpus Christi Regional Economic Development Corporation is pleased to welcome M&G Polymers to the Coastal Bend Region. They will be able to leverage superior logistics optionality and the many benefits of our industrial infrastructure."

Construction time for both the PET and PTA plants is estimated to be 30 months. The engineering, project management, sourcing and construction management will be performed by Chemtex Global S.A., a subsidiary company of the M&G Group.

About M&G Group
M&G Group is a family owned chemical engineering and manufacturing group headquartered in Tortona, Italy. M&G Group operates in the PET resin industry through its wholly-owned holding company Mossi & Ghisolfi International S.A. (M&G International). M&G International is presently the largest producer of PET resin for packaging applications in the Americas, with a production capacity in 2010 of approximately 1.6 million tons per annum.

Chemtex, the R&D and engineering arm of the M&G Group, has built the two largest PET plants in the world, both owned by M&G (Suape, Brazil, and Altamira, Mexico). Chemtex has wide EPC experience and has been involved in several PTA projects with different technologies. Chemtex, which employs over 1,000 engineers, has also developed a revolutionary technology for the production of simple and clean sugars from biomasses. A large industrial demonstration plant is being built in Italy (40kt/year of ethanol, start-up Q2 2012).

Media Contact:

Marybeth Roberts
Porter Novelli
760-294-6958
marybeth.roberts@porternovelli.com

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TRANSFLO



Interactive Map & Locations

Health, Safety & Environment

About TRANSFLO

In today's competitive marketplace, shippers often rely on transloading -- transferring products from rail to truck -- to move their products cost effectively.

TRANSFLO is the largest rail-to-truck transloading network in North America. As a subsidiary of CSX Corporation , we have been connecting customers with the efficiencies of transloading and the value of rail transportation for more than 40 years.

Committed to environmental stewardship and the consistent, safe handling of your products. TRANSFLO has been ISO Certified for more than 10 years.

TRANSFLO Services

TRANSFLO operates a network of 58 active terminals that transfer products between railcars, containers and trucks. TRANSFLO has experience transloading more than 500 bulk products.

We also provide Logistics Management services that monitor your transportation activity.

TRANSFLO People

Our people are experienced logistics professionals who provide valuable advice, innovative solutions and careful stewardship of your product.

- **Sales Representatives** manage customer relationships and all commercial aspects of the terminals within a region.
- **Managers of Field Operations & Equipment** oversee the operations of terminals, ensuring they provide safe, quality transloading services. This includes the inspection, maintenance, and safe use of all transloading equipment.

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RESIN HANDLING GUIDE

American Chemistry Council/ American Plastics Council Transportation & Logistics Committee

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ACC/APC/Transportation & Logistics Committee
Resin Handling Guide

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This guide is intended to provide general information concerning the handling of plastic resin. The guide is considered accurate as of the date of preparation. Additional or different measures may be appropriate for the handling of particular resins, and such information may be obtained from each producer regarding properties and particular handling appropriate to that producer's materials. Neither ACC/APC, nor any of their employees, members, or other assigns makes any warranty expressed or implied, or assumes any liability or responsibility for any use, or the results of such use, of any information, product or process disclosed in this Guide, or represents that its use would not infringe privately owned rights.

ACC/APC/TRANSPORTATION & LOGISTICS COMMITTEE
RESIN HANDLING GUIDE

PURPOSE:

This publication is a collection of general guidelines. These guidelines provide general operating considerations for safe, efficient and environmentally responsible pneumatic handling of plastic resins. Plastic resin in this document is understood to mean powder, flake or pellet forms. The information contained in this manual will help contain the plastic resin within the operating facility in order to protect the environment and will help the plastic resin come through pneumatic handling systems in an "as manufactured" condition. In addition, a section has been included which provides references for further information on handling plastic resin. One of the best sources of information is the manufacturer of the particular plastic resin that is being handled.

Most companies that produce plastic resins in the United States are members of the American Chemistry Council (ACC). As such these members are dedicated to the Responsible Care® initiative. This is an approach that recognizes that the best way to improve the public trust in the chemical industry is to demonstrate commitment and performance and to be responsive to public concerns. In addition, The American Plastics Council (APC) is a partner with the Society of the Plastics Industry (SPI) in the initiative known as Operation Clean Sweep©. Producers of plastic resins actively participate in following the principles of this initiative, which is aimed at preventing the release of plastic pellets to the environment. Although not generally considered "hazardous", the Environmental Protection Agency (EPA) Storm Water Regulations classify plastic pellets as "significant materials", making the exposure of even a single pellet in storm water run-off without a permit subject to regulatory action. This publication is intended to assist all companies that handle plastic pellets to fulfill the expectations of these initiatives. For further information on Responsible Care® or Operation Clean Sweep, contact the ACC/APC offices in Arlington, VA., or the SPI offices in Washington D.C.

The end uses of plastic resins are carefully engineered products that touch almost every phase of our daily lives. The designs of these products are based on the properties of the plastic resins, which have been specified for each end product. If these properties are altered through the handling process, the performance of the end use products may suffer. Some examples of this could be:

- Foreign contamination (like minute particles of dirt) can cause electrical failure of wiring and cables constructed with plastic resin insulation material.
- Foreign contamination can cause film to have weak points and also potentially contaminate the products wrapped inside the film.
- Contamination of one plastic resin with another of different properties can cause weak points in tubes or bottles, which may cause the tubes or bottles to fail. This could cause a leak of household cleaning chemicals, lubricants, antifreeze and many other hazardous materials.

- Contamination of plastic resin can cause significant costs in defective final product or serious equipment damage to processing equipment for plastic resin.

It is the desire of all manufacturers of plastics resins to deliver those resins in an "as manufactured" condition to the point of end use. This publication is produced in the hope that these guidelines will help people who handle the plastic resins outside the manufacturing process accomplish that goal.

MOVING RESINS IN BULK-
INTRODUCTION:

Approximately 90% of the plastic resins produced in North America leave the producing plants in covered hopper cars. Many of these railroad cars travel directly to customers who remove the plastic resins from the hopper cars and process the resins into final products. The remainder of the hopper cars go to transfer stations where material is removed from the hopper cars to bulk trucks or to packaging lines where the resin is placed in bags or bulk cartons. Because of the importance of pneumatic transfer to the plastic resin industry, it is vital that the operating principles of pneumatic transfer systems and the impact of pneumatic transfer on plastic resins are understood. What follows are some general guidelines for the Plastics Industry.

Pneumatic transfer systems are essentially moving product through the creation of either positive or negative atmospheric conditions. Therefore, creating the force to move plastic resins. The classifications by motive force are:

- Negative atmospheric pressure or vacuum systems create a negative pressure differential causing the flow of plastic resins and conveying air from the high pressure to the low pressure.
- Positive atmospheric pressure systems where plastic resins are moved from one point to another by applying a higher pressure at the starting point of the transfer and thus allowing resins and conveying air to flow to the desired end point.
- Pull/Push (or Push/Pull) systems that combine both vacuum and pressure sections.

The attached schematics (Figures 1 – 3) are examples of these systems.

Figure 1. *Hopper car unloading, vacuum method*

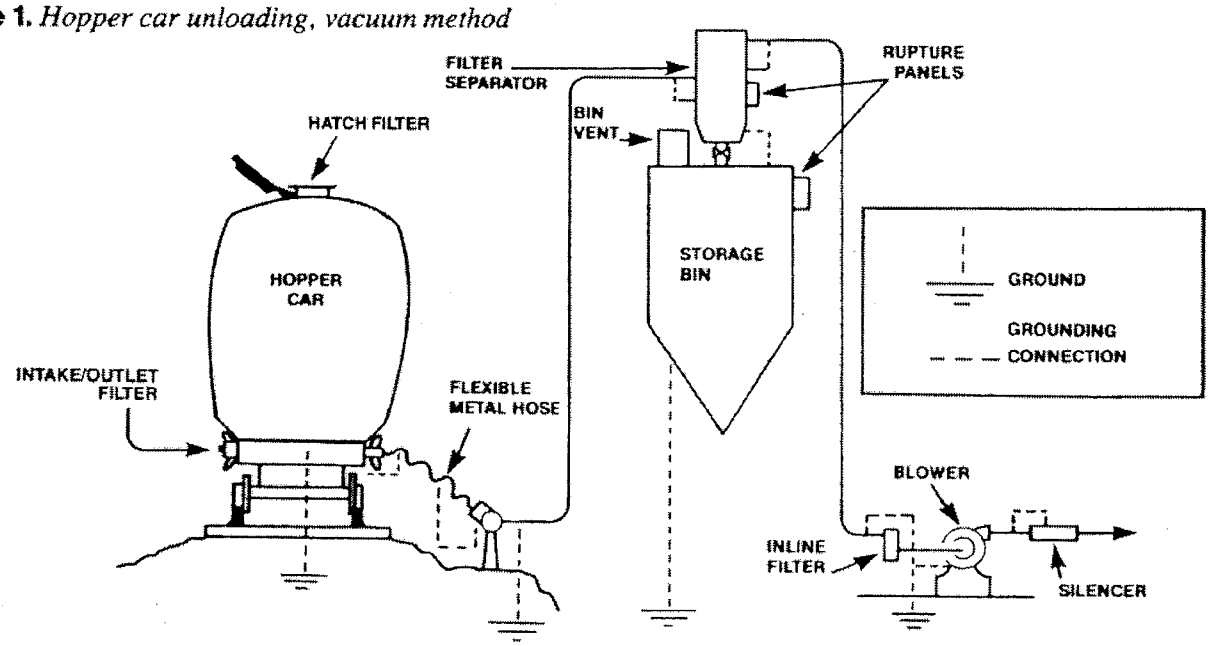
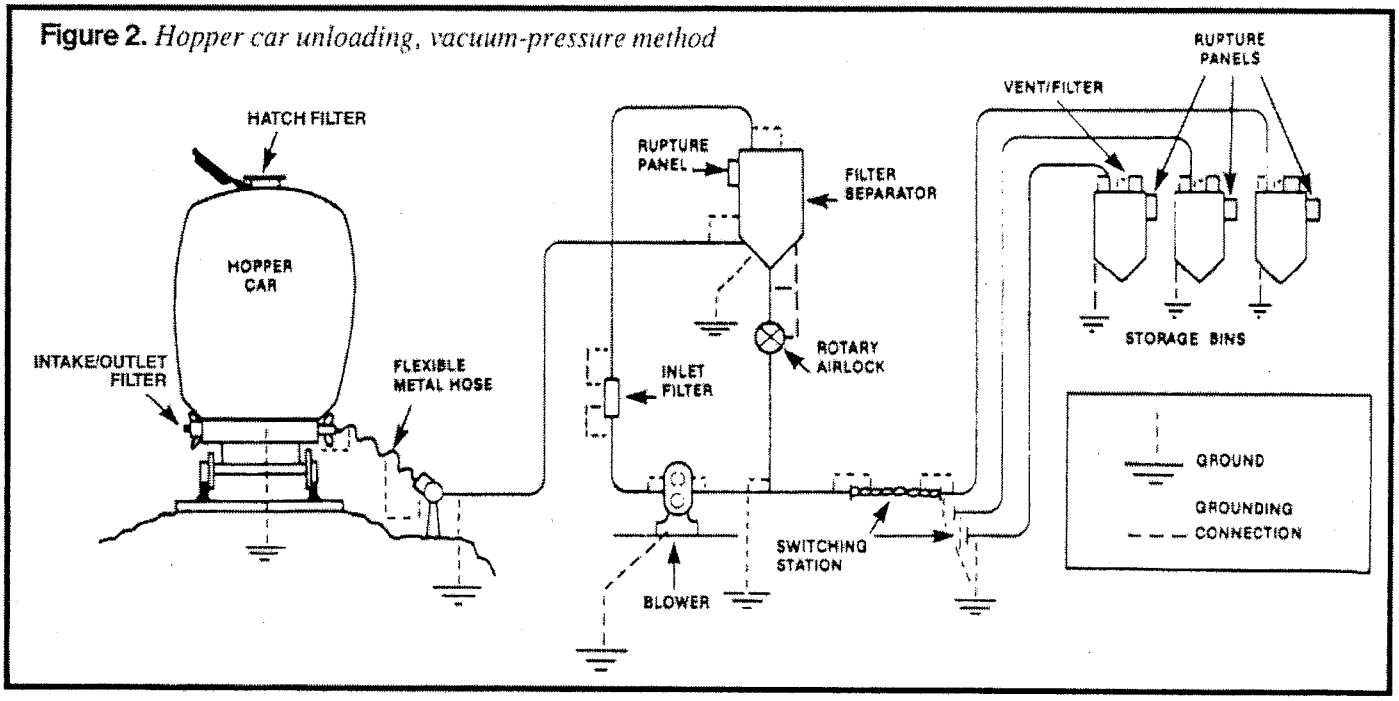


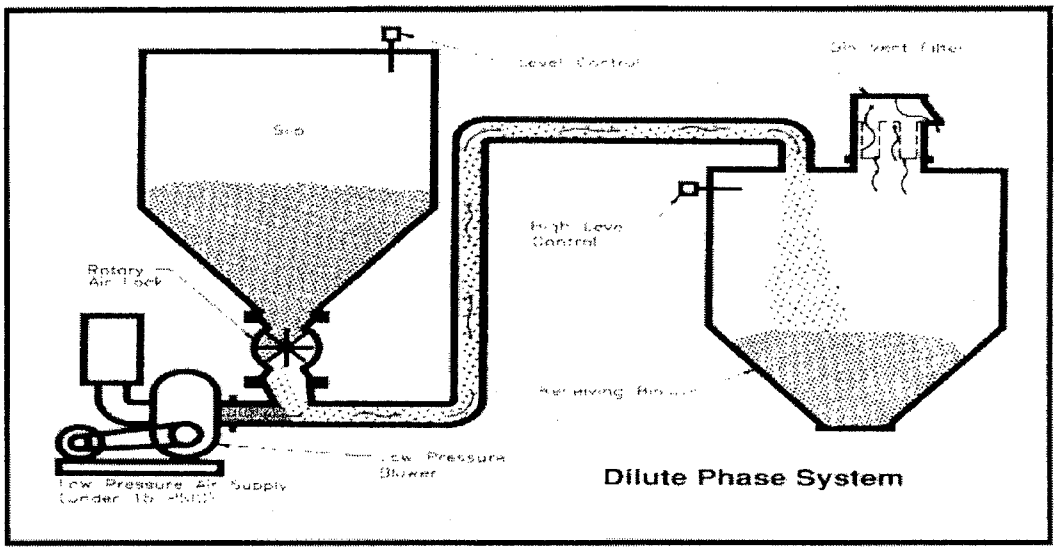
Figure 2. *Hopper car unloading, vacuum-pressure method*



The second classification is by the mass ratio of plastic resins to conveying air in the transfer system. In very general terms, these classifications are:

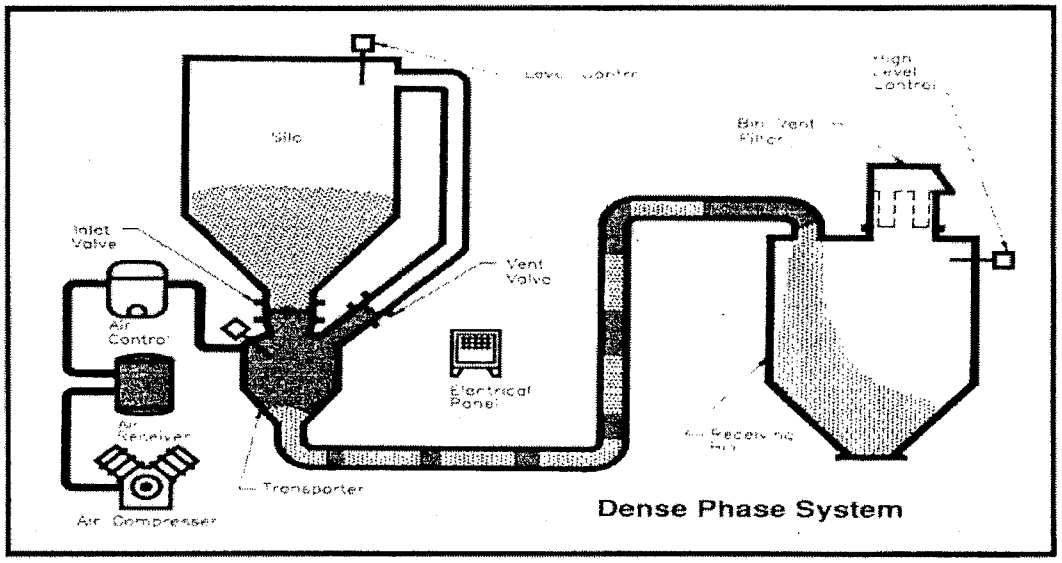
- Dilute phase systems where the mass ratio of plastic resins to conveying air is 10:1.

Figure 4. *Dilute phase systems*



Dense phase systems where the mass ratio of plastic resins to conveying air is greater than 10:1

Figure 5. *Dense phase system*



Transfer systems using either dilute or dense phase can be designed to utilize any of the systems classified by using motive force. Dense phase transfer systems are usually stationary systems, common to manufacturing or processing facilities, which are dedicated to a very limited number of plastic resin grades. The dilute phase system is much more common at transfer stations and situations where multiple grades of plastic resins are

handled. Examples of dilute phase systems are vacuum/pneumatic trailers and portable transfer systems. See page 18 for a "Guideline for Dense Phase Unloading of Bulk Hopper Trucks."

WHAT IMPACTS RESIN QUALITY:

The pneumatic transfer of plastic resins can negatively impact resin quality if not conducted properly. To maintain the quality of the plastic resins during pneumatic transfer, there are three areas that need careful consideration:

- System design can have a major impact on preserving the quality of plastic resins.
- The conditions under which the pneumatic transfer system is operated can have a major impact on the delivered quality of the plastic resins.
- The variety of plastic resins handled within the same system and the cleaning procedures between various grades of plastic resins can have a major impact on the properties of plastic resins.

Each of these areas will be discussed in the text below. The guidelines given come from the literature produced by the Plastics Industry. For specific questions about any one of the many grades of commercially available plastic resin, contact the resin manufacturer for details.

SYSTEM DESIGN:

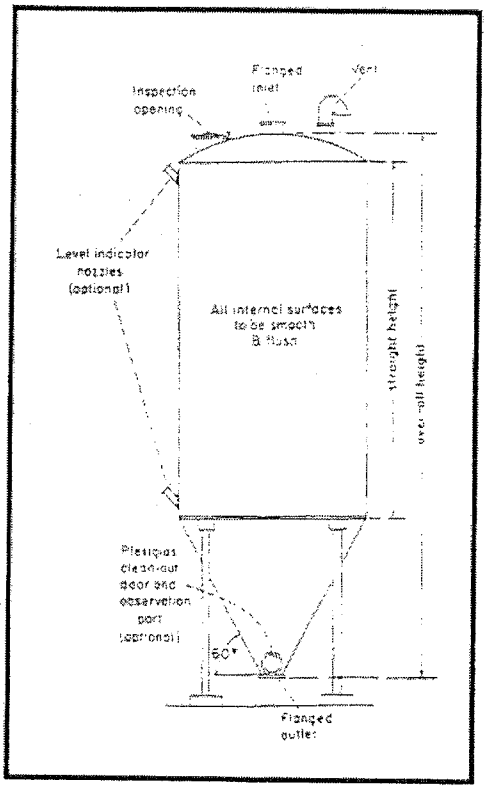
A number of factors go into the design of systems for pneumatically handling plastic resins. The number of grades of plastic resins to be handled, the geography of the particular site at which the transfer is to take place and the rate of usage of the plastic resin are some of the more important factors. It would be impossible to have a design that would fit every situation. This guide will cover the things that are important considerations for each of the key components of the system. The manufacturer of the plastic resin(s) being handled is the best source of advice regarding a particular handling system design.

The major components of a plastic resin handling system are the silos, bins or product receivers, bag houses and filters, transfer piping and transfer blowers. Each area is discussed below with guidelines that should be considered when developing a system for handling plastic resins.

Silos, Bins and Product Receivers:

Almost any transfer system will have some point at which plastic resin is held for some period of time. The following items should be kept in mind when developing a system for handling plastic resins:

Figure 6. *Storage silo*



1.Com monly used materials of construction are:

- Steel coated with an epoxy resin or similar coating.
- Aluminum
- Stainless Steel

2. No matter what the material of construction, achieving a smooth internal finish is important to the flow of the product.
   - Riveted construction is usually combined with the use of caulking or other sealants, which are used to fill the gaps between the plates. This sealant can be a serious contaminant in most plastic resin applications.
   - Flanged areas can also be a source of leakage. Deterioration of gasket material that comes into contact with the plastic resins may be a source of contamination in most plastic resin applications.
   - Any ledge or area that can trap plastic resin should be avoided.
3. Stor age vessel size should take into account delivery increments and usage rates of plastic resins.
4. Cone angles on the bottom of all storage vessels should be designed to accommodate the particular flow characteristics of the products being handled. Contact your supplier to determine the optimal cone angle for your application.

5.Pressure/vacuum relief systems for storage vessels should be designed with the following in mind:

- All connections should be airtight.
- Vents should be sized to accommodate the conveying air without a build-up of pressure in the vessel.
- Vents should be designed to contain fines, streamers and dust particles conveyed with the process air.
- If fine particles or dust particles are involved, (i.e., less than 40 mesh, 420 micron particle size as defined by the Bureau of Mines and the National Fire Protection Association (NFPA)), consideration should be given to adding explosion relief devices that can handle the pressure rise from a dust explosion. In addition, a bag house might be required to eliminate atmospheric pollution.

6.If multiple grades of plastic resins are being handled, consideration should be given to cleaning of the system between grades of plastic resins. Not all grades of plastic resin are compatible and even small amounts of cross contamination will have serious consequences for some applications. Contact the manufacturer of the plastic resin(s) to discuss this issue.

Addressing the above items will help reduce the probability of negatively impacting the quality of plastic resins in storage vessels.

Bag Houses and Filters:

In most transfers of plastic resin conveying air is usually drawn into the system from the atmosphere and exhausted once the transfer is complete. To prevent contamination of the plastic resin, any source of conveying air should be filtered to remove dirt and debris. Care should be taken to avoid drawing moisture into the system. In addition, the following should be considered for filters:

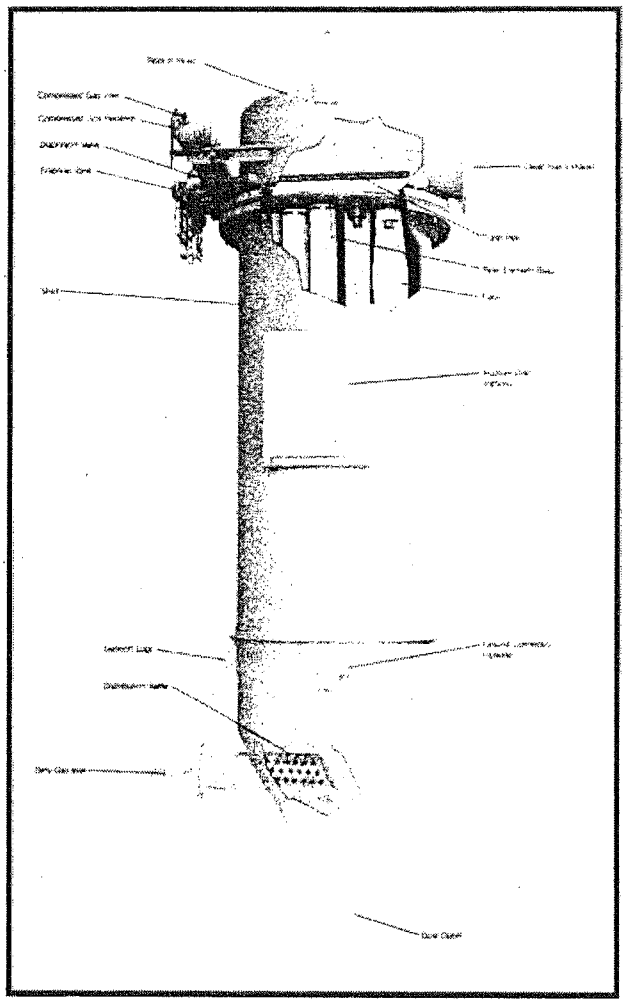
1. 1. Filter media commonly used will not pass particles that are greater than 1 micron. For some applications of plastic resins, even smaller filter media is required. Contact the manufacturer of the plastic resins you are handling for advice in this area.
2. If multiple grades of plastic resins are being handled, removal and cleaning of the filters is important. The specifics of how this is done will depend on the grades of plastic resin being handled. The manufacturer(s) of the plastic resin(s) is the best source of advice on this issue.
3. The material of construction of the filter media should be consistent with the end use application.

Once conveying air is drawn into the system it must also be exhausted; in this case confinement of fines, streamers and dust created in the handling process is the key issue. In most cases bag houses are used to cleanse the air before it is vented to the atmosphere or perhaps passed to the suction side of a transfer air blower. Some considerations for bag houses are:

1. The air to cloth ratio is normally between 3 and 7. This is measured in ft^3 per minute of conveying air per ft^2 of cloth.
2. The superficial upward air velocity between the bags usually does not exceed 250 feet per minute.
3. A pulse jet of air is normally used to remove entrapped particles from the filter bags. Typically, 90 psig of pressure in the air manifold is used.
4. Careful consideration should be given to grounding the bag house to insure continuity between the bags, the bag cages and the remainder of the equipment.
5. Again, if multiple grades of plastic resins are being handled in this system, careful attention must be given to cleaning of the bag house between the different grades of plastic resin. The manufacturer(s) of the plastic resin(s) is the best source of advice on this issue.

Attention to the above areas will produce a system that will reduce the chance of quality, safety or environment problems with handling systems.

Figure 7. *Dust Collector*



Transfer Piping and Hoses:

With the pneumatic transfer of plastic resins the piping or hoses used can be the most critical part of maintaining resin quality. Contact of the plastic resin with the walls of hose or piping is inevitable. The consequences of this contact are all negative and everything possible should be done to minimize this contact. The following are guidelines, which should be carefully considered for any transfer system for plastic resins:

Piping

1. Distance is critical in the pneumatic transfer of plastic resins. Where possible the distances over which the resin is transferred should be minimized.
2. Pipi ng should be either vertical or horizontal.
3. Any 90° bends should be wide radius. Wide radius conventionally means a bend radius of 6 to 12 pipe diameters.
4. E xternally gasketed coupling joints should generally be used to minimize contact with gasketing material and prevent leakage of air into the system.
5. Scor ed, shot peened, or roughened piping is preferred over smooth piping.

Hoses (In contact with plastic resin):

1.Minim ize the length of product transfer hose required to make the delivery connection.

2.Hoses are generally of spiral wound metal with either directional or bi-directional flow design. If directional flow hoses are used, the flow direction should be clearly marked.

3.Sm ooth wall plastic hoses are generally avoided because of potential pellet damage as described earlier and to avoid creation of static electricity.

4.Hoses should be routed to minimize sharp bends or sudden turns. When turns need to be made, they should generally have a radius that ranges between 6 and 12 times the diameter of the transfer hose.

5.Hoses should be supported off the ground to avoid damage to the outer windings and to prevent the introduction of contaminates into the system.

Figure 12. Hose Support



6.Hoses should be stored in racks and capped when not in use.

7.Dam aged hoses should be removed from service immediately.

This is probably the most critical part of any transfer system. Attention to the items above will help improve the chance of successfully transferring plastic resin.

Transfer Blowers:

Whether pressure or vacuum, air blowers are part of any transfer system. When considering a blower for pneumatic transfer of plastic resins, the following should be taken into consideration:

1.T he blower should be designed for the lowest practical operating temperature. Generally speaking, conveying air should be delivered at temperatures not exceeding 100°C (212°F). Confer with the plastic resin manufacturer for the recommended operating temperature for each grade of plastic resin being handled.

2.T he kind of system will be dictated by piping size, distance and transfer rate.

3.Any atmospheric air pulled into a blower should be filtered to remove dust and debris. The filter media should generally be capable of removing any particles greater than 30 microns in size.

4.T he use of heat exchanger can assist in minimizing the temperature of the conveying.

Since the transfer blower is a source of heat, it is an important part of any transfer system. Care should be taken to use a blower, which fits into the total system and minimizes the heat input to the transfer process.

By following the above guidelines, a transfer system can be developed which will handle the movement of plastic resins from one point to another with a minimum of problems. Good maintenance practices for all of the above components are critical in maintaining plastic resin integrity.

PRODUCT CONTAMINATION:

External Sources:

Just as it is important to protect the environment from plastic resins, it is also important to protect plastic resins from the environment. Is it critical that a means of filtering any external opening be installed where air can enter the plastic resin handling system. The filtering should generally be capable of blocking any particles which are 30 microns and larger in size. The hopper car inlet(s) opposite the unloading hose connection and the top hatch(s) of the hopper car are critical places where dust, dirt and debris can be pulled into the plastic resin during transfer. Dust, dirt and debris can have a major impact on the processing of plastic resins causing both operating problems and rejected product as well as potential equipment damage.

Figure 13. Top hatch filter

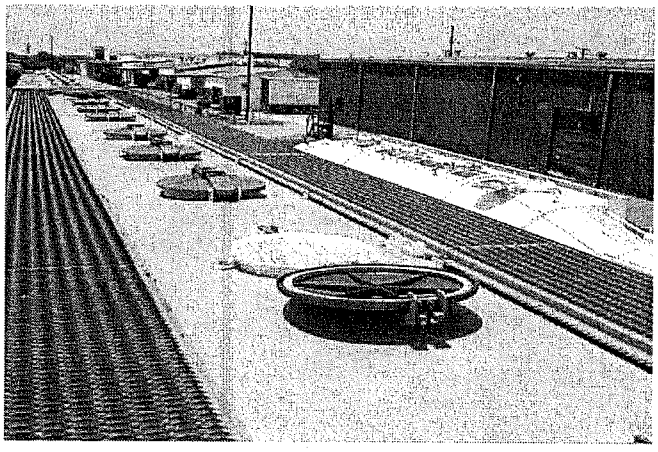
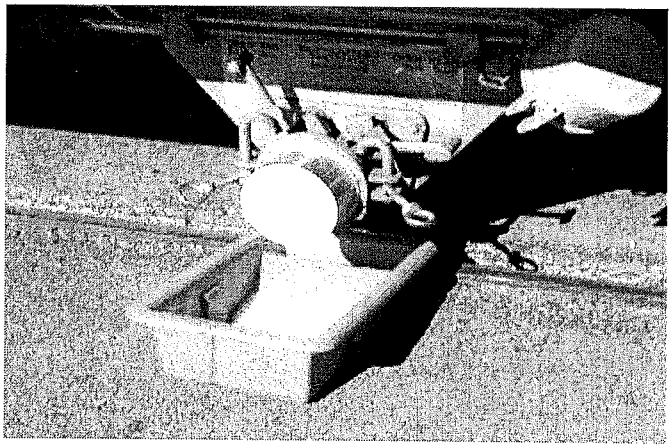


Figure 14. Bottom spout insert filter



A second major source of contamination is moisture. Most plastic resins have a very low water sorption. However, the water will cling to the surface of the pellet and will cause problems in the processing of the plastic resins.

Internal Sources:

Product contamination can occur from within systems as well. One source of contamination is gasket material. Where possible, couplings should be used in a manner that minimizes the contact of the plastic resin with gasket material during transfer. The plastic resin pellets can be abrasive and could break pieces of the gasket material off introducing this into the resin stream as a contaminant. Similarly, metal particles can be picked up in plastic resins due to wear on systems. When transfer lines are scored or shot peened, they must be

carefully cleaned prior to use in the transfer of plastic resins. When mechanical repairs are made on a transfer system, the system should be cleaned carefully prior to returning the transfer system to service.

A second possible source of internal contamination occurs when transfer and handling systems are used for multiple grades of plastic resins. There are many grades of plastic resin and they are not all compatible. When considering the use of a system for multiple grades of plastic resins, the following issues should be considered:

- The density of each grade of resin and the relative difference in the densities.
- The melt characteristics (melt index) of each grade of plastic resin to be handled needs to be considered.[1] This is important because:
  - Most plastic resins are melted before they are formed into the final product. The viscosity of the melt and its consistency is very important.
  - Two resins with similar densities but different melt characteristics can cause very poor performance of a final product.
- A plastic resin is not like a liquid. Small quantities of one liquid in another (assuming they are mutually soluble), can blend together and the performance of the resultant liquid is not impacted significantly. With a plastic resin, each particle must be melted and mixed before passing into an extruder, injection molding or whatever the final forming process. The important thing to remember is that the process for forming the final product really does see each particle or pellet of a plastic resin and will recognize differences between them.
- Certain plastic resins have additives that cause chemical reactions during processing. This is known as cross-linking or vulcanization. Mixing grades of plastic resins that do not have these additives with those that do have these additives can cause very serious problems in the manufacture of the final product and potentially cause major damage to processing equipment.
- Various colors of plastic resins are produced, but colors should not be mixed. A very small amount of color contaminant goes a long way in causing color rejections in a final product.

[1] The melt index (defined by ASTM 1248) is a test that determines the viscosity of a resin. A high melt index value means a low viscosity and a low molecular weight of the plastic resin. A low melt index value means just the opposite.

All of the points made above should be given very careful consideration when handling multiple grades of plastic resin within a single system.

The best source of information about the compatibility of various plastic resins is the manufacturer(s) of the various grades of plastic resin(s). In general, each manufacturer can provide guidance as to what density and melt characteristic differences can be tolerated for the grades of plastic resins it supplies.

When handling multiple grades of plastic resins in a system, some thought should be given to cleaning between grades. The cleaning required will be dictated by the following factors:

- The differences in properties between the grades of plastic resin.
- The design of the system.

The differences in the grades of plastic resins have been discussed previously. The design of the handling system then becomes the concern. A "clean system" means that there are no particles or pellets of the previous grade in the system and that any coating on walls, piping, filters (filter bags), rotary valves or other equipment has been removed. The best source of information on cleaning a handling system is the supplier(s) of the various grades of plastic resins.

OPERATING CONDITIONS:

Transfer of plastic resins pneumatically has two control variables which can have a major impact on successfully transferring the plastic resin while maintaining the "as manufactured" quality of the resin. These two variables are temperature and pressure of the conveying air and they are directly tied to the velocity of the conveying air during transfer. The management of transfer velocity is critical to maintaining the integrity of plastic resins.

Most pneumatic transfer systems for plastic resins are considered to be a dilute phase transfer system.[2] In a dilute phase transfer system operating under static conditions increasing the air pressure through injection of more product actually results in a drop in product velocity. Reducing line pressure will typically result in an increase in product velocity. Product velocity above reasonable ranges will increase the number of high-speed interactions between the plastic resin and the walls of the transfer piping. This will damage the plastic resin by reducing the plastic pellet to a fine particle or causing the pellets to deposit a small particle of plastic on the pipe. Numerous pellets impacting the pipe will accumulate small deposits over time and gradually coat the interior of the pipe with a fine layer of plastic. This plastic will eventually peal off in what we call a streamer or a snakeskin. This can cause difficulties in the processing of the plastic resin into a final product. The "right" operating pressure is a function of the transfer system design. The pressure should be just sufficient to overcome the pressure drop from the point of resin introduction into the system and the discharge of the transfer system. Temperature is the second variable. Above 100°C (212°F) most plastic resins will be begin to soften and become more susceptible to damage in a transfer system when the pellet interacts with the walls of transfer piping. For these reasons holding the temperature as low as practical is the best operating practice. In Table I are some typical values for the various categories of plastic resins.

For more information on both these areas, contact the manufacturer of the plastic resins being handled.

[2] Dilute phase systems typically have a ratio of 10 pounds of plastic resin per pound of conveying air. Systems with as little as 1 pound of plastic resin per pound of conveying air are also considered "dilute phase" systems.

Guideline for Dense Phase Unloading of Bulk Hopper Trucks

Introduction:

In recent years the hopper truck industry and the producers of certain types of resins have been faced with the difficult task of transferring new softer materials while avoiding the problems that occur from such transfers. Much work has been done in an attempt to develop more efficient methods of product transfer, which minimize product degradation and still accomplish reasonable unloading times. The utilization of "dense phase" unloading is one such effort. "Dense phase" unloading is a process that involves conveying high concentrations of plastic pellets at a low velocity. The actual unloading of the truck is a combination of dense and dilute phase conveying. While numerous technical publications are available on the subject, the following is a basic explanation of the process. The extent to which the process can be followed will vary according to the specific unloading conditions.

Since all unloading systems are different in design and the specific equipment used, the unloading recommendations in this Guide may need to be modified to conform to the operating conditions that exist in each individual facility.

Dense Phase Product Transfer:

For dense phase product transfer, there is an inverse relationship between pressure on the product delivery line and the product speed in the delivery line. When delivering product in conditions where blower speed is constant; the more pressure, the slower the product moves, the less pressure, the faster the product moves. In situations where blower speeds are variable, like with hopper truck deliveries, a good general rule of thumb is to run the blower at the lower end of the operating range and increase line pressure by increasing product flow. You must do both!

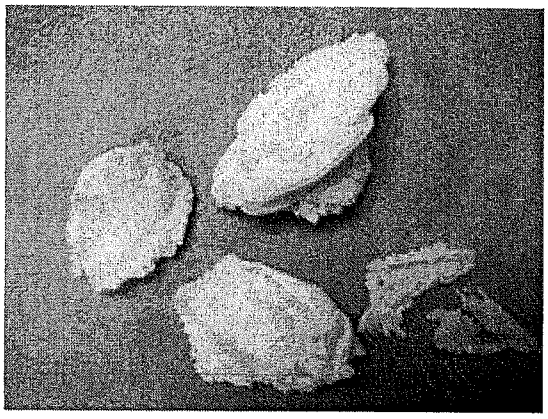
Following these unloading recommendations accomplishes the primary objective of maintaining product integrity (minimizing angel hair, fines and clump formation). Because of the lower tractor engine speeds and higher line pressures, more product is placed into the delivery pipe. This increases line loading and slows the pellet velocity. The reduction in pellet velocity minimizes the generation of angel hair, fines & clumps. At the same time, the increase in the amount of product in the line increases the product per minute to the silo and in most cases the total delivery is faster. This process meets all of the delivery objectives.

Hopper Truck Delivery Objectives:

Maintain product integrity by minimizing or eliminating the generation of clumps, angel hair/streamers and fines.

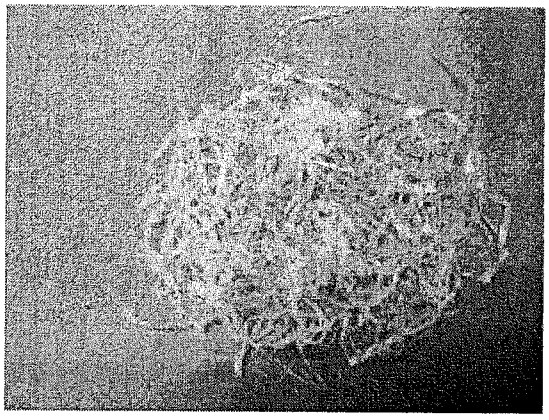
Product Delivery Degradation Issues:





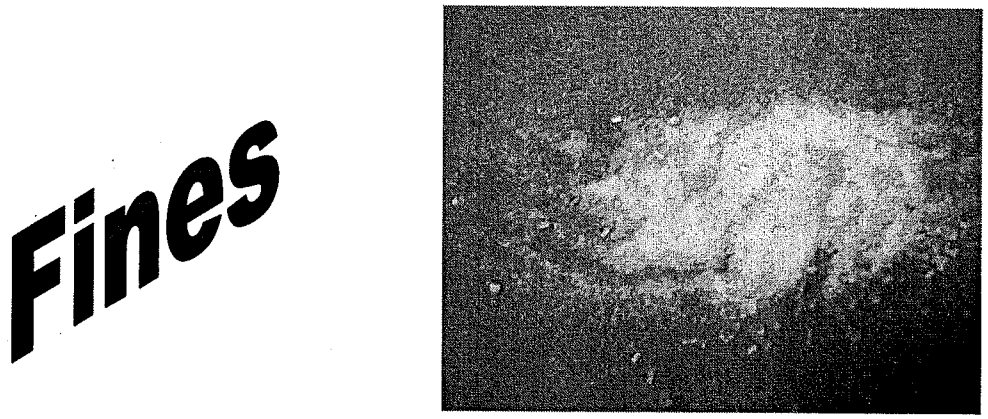
A **clump** is usually formed by pellets moving through the delivery line becoming lodged in a sharp corner, rough surface, or in a pipe or compression coupling separation or misalignment. This phenomenon is aggravated when the pellets are warm or hot. Other pellets strike the lodged pellet creating a small mass, which gradually builds up over time. They will continue to grow to a point where they block the pipe completely, or they may cool off and become dislodged and move through the system along with the pellets. A clump will eventually (days, months, sometimes years) surface in another spot, where it will block a pipe downstream from its original starting point or at an inlet line feeding a machine.





Angel hair is the caused by the repeated contact of pellets against the walls of the conveying pipe. Each pellet deposits a very tiny piece of polymer on the wall, which subsequently fuses with other small pieces into very long strings. Eventually, the string breaks away from the wall and moves along with the product streams and

clogs a line on a machine or other collection point. Most angel hair/streamers are formed in bends (high centrifugal forces) and in the straight portion of pipe following bends. The amount of angel hair generated is dependent upon the type of plastic being handled. Typically the softer the plastic is the higher the generation rate becomes. Angel Hair has been experienced with all types of polyethylene (HDPE, LDLPE, LLDPE), polypropylene, styrene butadiene copolymer, etc.



Pellets striking the pipe surface and chipping off a part of the pellet create **fines**. Pellets moving at sufficiently high velocity will have sufficient energy to break off a portion of the pellet when it strikes the pipe, particularly the bends. There are a number of conditions that will promote fines generation. The situation is worsened by pipe layouts with lots of bends, misaligned pipes or flanges, poor pipe surface finish, poor pellet cutting (lots of tails on the pellets), to name just a few. The faster the velocity in the pipe the greater the rate of generation of fines. Product velocity in the pipe is the largest single cause of fines generation. In general, if the product velocity doubles in the pipeline, the amount of fines generated would increase by a factor of ten. It is important not to confuse the terms, product velocity and product rate. The product velocity in the pipe is the actual speed of the pellets and the product rate is the transfer rate of pellets (usually in lb/hr) out of the truck.

Misperceptions Concerning Product Delivery Techniques:

In the past few years, many of the generally accepted operating practices regarding the unloading of dry plastic pellets have been recognized to not always be the best practices for avoiding product degradation. Beliefs we have found to be in error are:

1.

1. Low pressure in truck unloading lines is necessary to minimize speed or heat friction from pellets brushing against pipes,

2. High pressure in truck unloading lines increases the velocity of the pellet moving through the delivery line or creates heat,
3. High pressure on the delivery line will pressurize the silo and/or increase the volume of air going into the silo,
4. Moving the product through long or horizontal unloading lines does not degrade product,
5. Taking more time to deliver the product is better than less,
6. It is not important how fast you run the blower on the truck as long as you maintain low pressures.

Additional Concerns Regarding Hopper Truck Deliveries:

When unloading a hopper truck, it is very important to avoid creating excessive heat sources and to minimize product velocity. There are two primary sources for heat. The first is the blower on the tractor and the second is the friction created when moving plastic pellets through the unloading pipes. Blowing pellets through the delivery lines causes the pellets to brush against the sides of pipes or run into corners, which creates friction. This creates heat, warming the pellet. The faster the airflow through the pipes (velocity), the greater the speed and friction; hence the warmer the pellets get and the greater the potential for a pellet to become soft and start to melt, especially at bends where much of the pellet's kinetic energy is converted into heat. If the pellet is hard and has a high melt point the same action will cause fines.

In addition, moving the product through greater distances will produce more heat or create more fines. This occurs:

1. When there is a greater amount of pipe to blow the product through, which results in more pellet contact with the pipe wall:
2. As a result of more pipe joints, which can shave more of the pellets or create an impediment for the pellet to lodge itself on creating a clump or angel hair.
3. As a result of the longer distance, the blower must run faster, producing higher transfer velocity to move the product. Otherwise there is a risk of filling the lines up and blocking them.

Long horizontal piping causes special problems. In order to keep all the product suspended and not settling on the bottom of the pipe, the blower speed should be increased (velocity), potentially creating more opportunity for fines. This is particularly the case for dilute phase conveying because as the line length increases, the

pressure drop increases and the blower speed must be increased in order to maintain sufficient velocity at the pick up point.

In order to combat the formation of unwanted fines, clumps and streamers, it is advantageous to reduce the air velocity in the conveying pipe. This results in a conveying condition known as dense phase conveying. In this case sufficient product is allowed to flow into the conveying line with low conveying velocities. This causes plugs or slugs of pellets to be conveyed in the pipe (this can be seen in transparent unloading hoses or sightglasses). This results in a low velocity unload with high product discharge rates from the truck. In order to achieve a dense phase conveying unloading condition, the recommended process while unloading from a hopper truck is as follows:

1. Eliminate any unnecessary piping. Get the hopper truck right to the bottom of the silo. This permits a reduction in the operating speed of the blower and creates less surface area (piping) for the pellets to come in contact with.
2. Run the hopper truck motor more slowly, i.e.: run the blower at a slower speed-either by lower engine RPM's or changing PTO ratio (this may not be practical) to get air velocity to an acceptable range. Slowing the motor will run the blower more slowly, therefore slowing the product velocity down in the pipe. Again, reducing the speed at which the product hits the pipe walls minimizes heat friction and fines caused by the product impaling itself in corners or shaving itself on rough surfaces.
3. If the trailer has an "air cooler" the driver can put the maximum pressure required to create a dense phase environment (up to about 12 PSI of pressure) in the trailer and unload with approximately a pressure difference of 1 PSI between the trailer and the conveying line. To do this the driver puts a large amount of product in the unloading line. This creates more pressure, but it also slows the velocity of the product moving through the delivery line substantially. An "air cooler" eliminates the heat caused by the blower, which is the only other source of heat other than product friction.
4. If the trailer does not have an "air cooler", the increased blower discharge gas temperature will cause an even greater reduction in truck engine speed to keep the gas velocity in an acceptable range. However some product types may form "clumps" due to the higher air temperature in the pressurized trailer (pellets are exposed to high temperature air for extended periods of time). If this is the case, both lower line pressures and truck engine speed should be reduced. This will most likely result in longer unload times.

FURTHER SUGGESTIONS FOR UNLOADING INCLUDE:

1. Deliver into the unloading lines that run right down the side of the silo and have connections at the base for the trailer to unload. Try to avoid setting up delivery systems that have long lengths of piping with multiple elbows and or curves.
2. Generally avoid installing conveying piping that is not running either horizontally or vertically (minimize sloped lines).
3. Allow the driver to slow the blower down and create a high-pressure unloading situation.
4. If the blower is running at the rated speed and the pressures are high, the time it takes to deliver should not be a concern. Product will periodically sound like it is running through the pipes in slugs. This is totally normal.
5. Paint a marker on the pipes either side of each compression coupling on the delivery piping. This will determine if the coupling has started to separate and point out locations where a pellet can get caught or create air leaks in the system. (Note: On new installations, it is important that the piping be checked and retightened about 90 days after initial use, and again about 6 months after initial usage. It would not be unusual to find that a joint has slipped creating a void for pellets to accumulate and form clumps, or begin coming apart creating an environment for a spill, or air leak which also disrupts the flow of product.)

Following these suggestions the driver will unload the trailer quickly and the customer will not experience product contamination generated from the delivery process. The hopper truck will be in and out of the plant quickly, reducing both congestion and the time needed for monitoring the delivery process.

Common Abbreviation	General Product Nomenclature	Bulk Density, Pounds per cubic foot	Softening Point, °F
ABS	Acrylonitrile-Butadiene-Styrene	50 pcf	215
PC	Polycarbonate	45 pcf	315
HDPE	High Density Polyethylene	35 to 39 pcf	255
LDPE	Low Density Polyethylene	30 to 35 pcf	185
LLDPE	Linear Low Density Polyethylene	26 to 32 pcf	220
LLDPE Powder	Linear Low Density Polyethylene Powder	24 pcf	190
LDPE with EVA	Vinyl Acetate copolymer with Low Density Polyethylene	30 to 35 pcf	170
COPP	Copolymer Polypropylene	30 to 35 pcf	220
HOMO PP	Homopolymer Polypropylene	35 to 39 pcf	220
GPSS	General Purpose Polystyrene	38 to 40 pcf	220
HIPS	High Impact Polystyrene	40 to 42 pcf	220
PVC Resin	Polyvinylchloride Resin	32 to 35 pcf	200
PVC Compound	Polyvinylchloride Compound	40 to 50 pcf	220
SAN	Styrene-Acrylonitrile	45 pcf	230
PET	Polyethylene Terephthalate	49 pcf	280

Table I – Resin Properties, Bulk Density and Softening Point

UNLOADING HOPPER CARS AND HOPPER TRUCKS:

Most suppliers of plastic resins have detailed literature for handling the plastic resins they supply. Each individual company's specific requirements should be reviewed prior to developing guidelines for their own operation. Provided is a partial list of areas that need to be considered in developing procedures for a plastic resin handling system. These areas by receiving mode are:

Hopper Car: (Figure 16 – Unloading hopper car with hatch filter disc)

- Secure the track with a derailer and a "blue flag".
- Be sure the wheels of the hopper car are chocked.
- Ground the hopper car body to the transfer hose and to ground to protect against static discharge. **A hopper car sitting on a rail track is not grounded!**

Figure 16. *Unloading hopper car hatch filter disc*

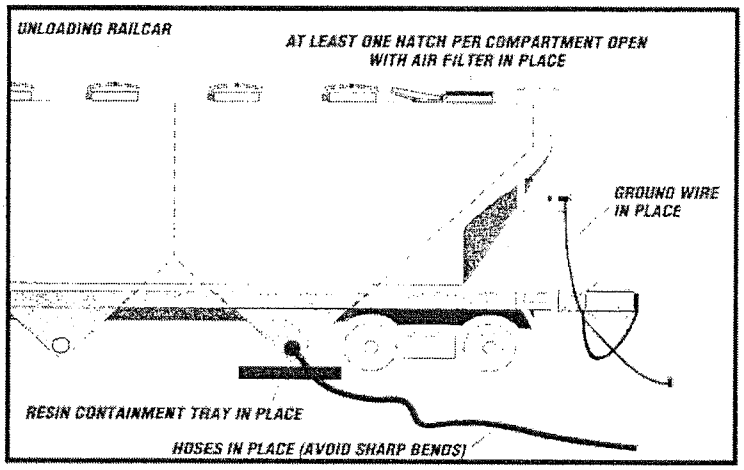


Figure 17. *Inserting 600 micron*



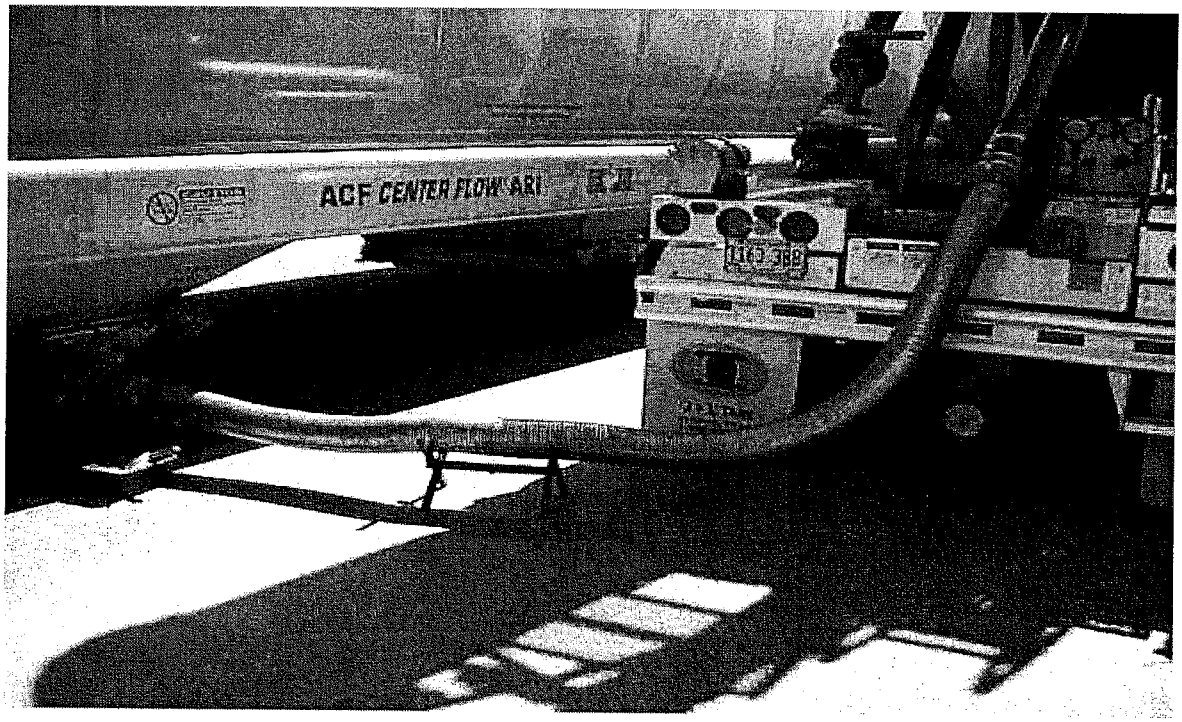
- Open the top hatch cover, remove plastic covers and attach a filter on the compartment to be unloaded. **(Figure 17 – Inserting 600 Micron (30 Mesh) hatch filter disc)**
- Place pellet retention devices (pans) below the outlet caps.
- Remove the outlet caps and remove the plastic dust caps on both sides of the hopper car outlet.
- Attach a clean filter to the side of the outlet opposite the transfer hose.
- Wipe the outlet valve and the adapter clean.
- Connect and support the unloading hose at the outlet adapter. Secure the hose to the hopper car.

- Begin the unloading and adjust the flow rate to the desired level.
- Complete the unloading and be sure the compartment is empty.
- Disconnect the unloading hose and remove the filter. Close and lock the outlet caps.
- Remove the hatch ring filter. Close and lock the top hatch covers.
- Prepare the hopper car for return shipment.

Hopper trucks:

- Be sure the wheels of the hopper truck are chocked.
- Ground the hopper truck body to the transfer hose and to ground to protect against static discharge.
- Insure the pellet retention devices (pans) are in place below the outlet cap.
- Remove the outlet cap on the hopper truck outlet.
- Wipe the outlet valve and the adapter clean.
- Connect and support the unloading hose at the outlet adapter.
- Begin the unloading and adjust the flow rate to the desired level.
- Complete the unloading and be sure the hopper truck is empty.
- Disconnect the unloading hose. Close and lock the outlet cap.
- Prepare the hopper truck for return shipment.

Figure 17. A hopper car is unloaded into a hopper truck



SAFETY:

Static Electricity:

The movement of plastic resins in a stream of conveying air generates static electricity. Plastic resins are, in general, non-conductive and the charge is carried on the surface of the particles. A portion of this charge may be lost when a pellet or particle of plastic resin strikes a grounded metal conductor such as the wall of a hose or transfer pipe or bin wall. Because of the high resistivity of the plastic resin, most of the charge remains on the particle. Therefore, a mass of resin in a bin or a silo will retain a high surface charge for an extended period of time. The total electrical energy stored in a mass of plastic resin after pneumatic conveying can be quite large. This is of little consequence from a safety standpoint because the high resistivity of the plastic resin prevents the discharging of large surface areas by a single spark. Such sparks from a bed of plastic resin to ground or between oppositely charged particles are very low energy levels and do not constitute a significant hazard. The total energy stored in a plastic resin bed is gradually dissipated over a long period of time depending on the plastic resin properties and the humidity of the air.

On the other hand, an ungrounded metal conductor such as a bin, a section of metal conveying pipe or a dust collector bag cage can be a significant hazard. Such a conductor becomes charged from the plastic resin to a voltage equal to that of the resin. When the voltage builds high enough to jump an air gap to ground, the entire metal surface is discharged in a single spark. The energy dissipated under such circumstances depends on the metal surface area and the magnitude of the charge. It can exceed the minimum ignition energy required to ignite a dust cloud of plastic resins or other materials such as pigments or additives. Therefore, proper grounding of all metal parts of any bulk handling system is essential to prevent ignition sources.

As indicated in the attached graphics all conveying equipment and lines, whether rigid or flexible, must be made of an electrically conductive material such as aluminum, stainless steel, conductive rubber or plastic. All conveying and storage components including bins, rotary valves, dust collectors including internal bag cages and conveying lines, both rigid and flexible, must be properly bonded together so that ungrounded sections do not act as a capacitor and develop a large static discharge. Hopper cars and hopper trucks must also be grounded. Care must be taken to maintain proper grounding.

The resistance to ground of each individual component must be less than 10^8 ohms. An exception is components subject to brush discharges from a bed of plastic resin. Because of the higher current carrying capacity in this case, resistance to ground must not exceed 10 ohms. If higher readings than these are obtained, corrective action should be taken to reduce the resistance to an acceptable level before use of the equipment. It should be noted that a piece of equipment, such as a bag house, can be comprised of multiple individual

components: bag cages, bag clamps, inspection doors, etc. Small components, such as bolts, are excluded from this requirement because capacitance is too low to cause an ignition source.

Explosion Hazards:

Plastic resin particles small enough to pass through 30 mesh screens are considered as fines and dust particles. Some plastic resin fines and dust are defined as a Class I dust i.e., lowest explosive level, by the Bureau of Mines and the National Fire Protection Association (NFPA) Standards. The following are important issues when dealing with plastic resin fines and dust:

1.T here are three important values to know when dealing with plastic resins fines and dust:

- The Kst is the maximum rate of pressure rise, which is a measure of explosion severity. There are different Kst values depending on the particle size.
- The MIE is the minimum ignition energy required to ignite a dust cloud.
- The explosive concentration range of the plastic fines and dust is related to particle size.

2.As part icle size decreases the hazard of a dust explosion becomes greater. As particle size gets small enough to pass through 200 mesh screens, the Kst values increase and the MIE values decrease.

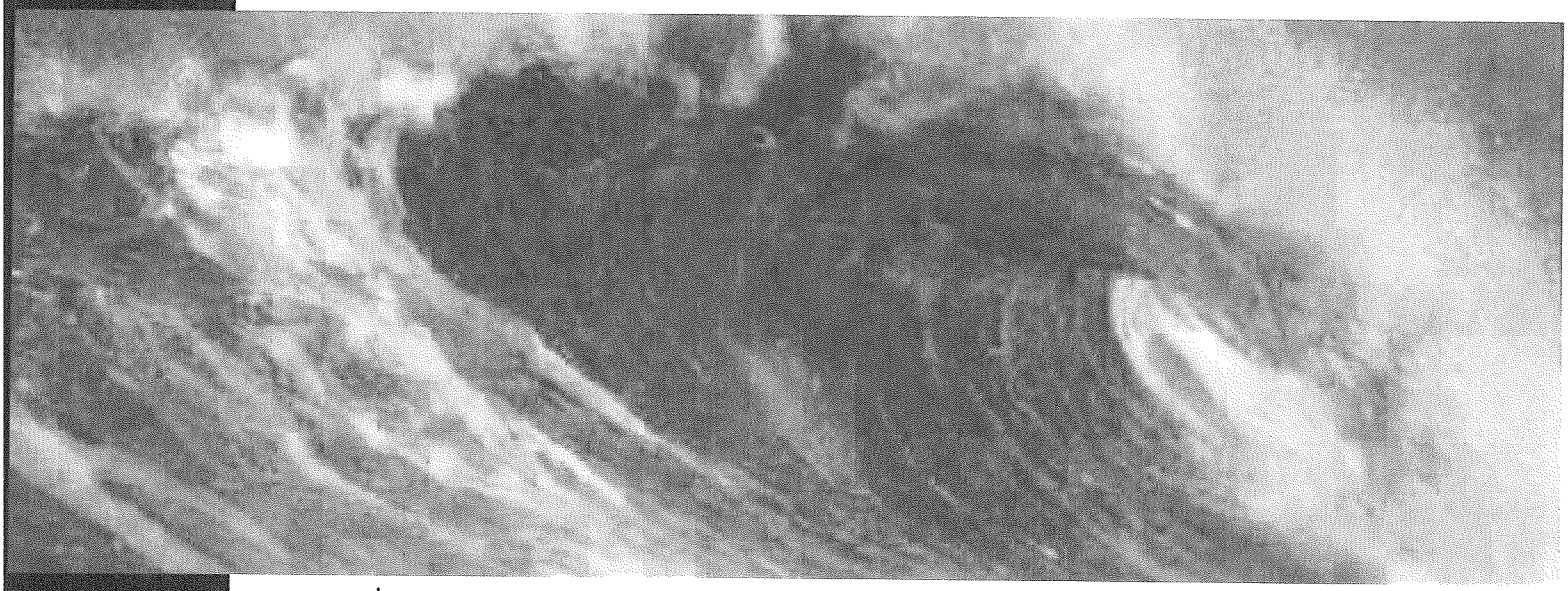
3.T he humidity of the air also plays a part. Drier air is more favorable to dust explosions than moist humid air. You should review the data with the resin manufacturer for the particular plastic resins being handled. Also avoiding concentrations of dust and fines is certainly desired.

For more information on this topic the NFPA Standards (Standards 68, 69 and 654) should be consulted. The Bureau of Mines is also a good reference source for information in this area.

Rebuttal Exhibit II-B- 16

Operation Clean Sweep®

Pellet Handling Manual



Make zero pellet loss your goal.

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Introduction

HOW TO USE THIS MANUAL

The Operation Clean Sweep (OCS) program and manual contains guidelines to help plastics industry operations managers reduce the loss of pellets to the environment. Each procedure contained herein may or may not be applicable to your specific operation. Manual users are free to implement the sections and steps that help achieve your company's specific goals. **None of the guidelines are intended as a mandate.** Compliance with state and local regulations are mandatory. These guidelines may help you to achieve compliance and avoid penalties.

There are many ways to work towards zero pellet loss.

The OCS materials are designed to provide maximum utility for all types of plastic handling and transporting operations. The online checklists have been created to facilitate customization for your company. For example, each checklist may incorporate a unique company logo and specific process steps may be added or removed to reflect those involved in a particular operation. These enhancements will make it easy to create and copy forms that have the greatest value for your company.

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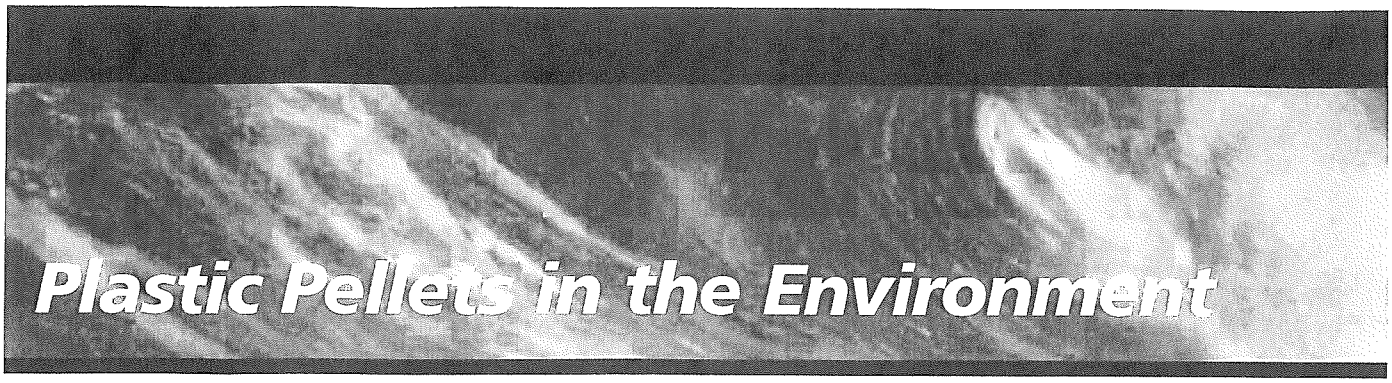
The OCS logo and name are copyrighted. These materials are intended for use within an individual company or facility. All companies that produce, process or otherwise handle plastic pellets may use the OCS materials, name and logo for the purpose of being a good environmental steward by working to contain and prevent the discharge of pellets. The materials may be freely shared with other individuals and companies with the intention of improving pellet retention. **No OCS materials may be copied for sale or any other use** beyond the specified use of improving an operation's containment of plastic pellets. Unauthorized use will be subject to fines and other penalties.

Acknowledgments

The American Plastics Council (APC) and The Society of the Plastics Industry (SPI) wish to thank all of the individuals, companies, government agencies and related industry associations (too numerous to name) who participated in the development and review of this manual.

Information

Questions about or suggestions to improve the OCS program or materials may be directed to APC at 1 800 2-HELP-90 (1-800-243-5790) or helpdesk@plastics.org or to SPI at 202-974-5200. For additional information, please use the links on www.opcleansweep.org.



Plastic Pellet Loss — Its Impact and Its Management

In recent years and with increasing frequency, researchers have reported that seabirds, turtles and fish are ingesting a wide variety of plastic items that are killing them or affecting their health. Most of these plastics are used consumer products (e.g. bottles, caps, containers, etc.) that have been carelessly discarded. Some of this litter is resin pellets that entered the waste stream and the oceans. When these pellets are eaten by wildlife they cannot be passed through their digestive tracts, leading to malnutrition and starvation.

While consumers are responsible for the proper disposal of the products they use, the plastics industry must focus on proper containment of the products we use – plastic pellets, the basic raw material of our industry. We must prevent the pellets from getting into waterways that eventually lead to the sea.

All employees in every aspect of the industry must be educated on how to properly handle and dispose of plastic pellets with the goal of zero pellet loss.

The OCS Program

The Society of the Plastics Industry (SPI) began an education effort twelve years ago to reduce pellet loss. A number of public service materials under the name of Operation Clean Sweep (OCS) were disseminated to companies throughout the country. The message was simple: Resin pellets should be contained, reclaimed and/or disposed of properly. It's now time to refocus our industry on this problem and to expand the OCS initiative to solve it.

The American Plastics Council (APC) and SPI are working together on a revitalized OCS program to strengthen efforts to educate and change behavior in the plastics industry with a goal of zero pellet loss. APC and SPI are strongly committed to this effort and are encouraging plastics companies to participate in the OCS program, which includes the practices and tools outlined in this manual.

How You Can Help

Each segment of the industry, including resin producers, transporters, bulk terminal operators and plastics processors, has a role to play in eliminating resin pellet loss. It's the little things that count. A few pellets here. A handful there. They all add up when you consider the thousands of facilities in the industry and the many times resin is handled.

Commitment by everyone in every company, from top management to the shop floor employees, is essential to eliminating pellet loss.

Pellet containment is good for the environment. It's good for business. And, it's the law.

With your help and cooperation, we can make great strides to help our industry protect the environment. APC and SPI look forward to working with you on Operation Clean Sweep to accomplish this important goal.

The Value of Operation Clean Sweep

If you could take a simple step to help strengthen your company's:

- contribution to preserving water quality and wildlife;
- compliance with federal and state regulations and avoidance of fines;
- safety/housekeeping program;
- employees' well-being;
- operational efficiency;
- financial bottom line; and
- reputation in the community.

...would you take it?

That step is Operation Clean Sweep (OCS), a product stewardship program of the American Plastics Council and The Society of the Plastics Industry, Inc.

The campaign's goal is: to help every plastic resin handling operation implement good housekeeping and pellet containment practices to work towards achieving zero pellet loss.

Pellet loss has many negative impacts on individual companies, on the plastics industry as a whole and on the environment.

- Slips and falls are a major cause of plastics industry accidents.
- Accidents mean lost time, higher worker compensation costs and lower employee morale.
- Violations of storm water regulations in states like California can result in civil penalties of up to $10,000 per incident (e.g., Cal. Code. Regs. title 23 § 13385). Any person discharging unauthorized waste in violation of CWC § 13264, could be found guilty of a misdemeanor and may be fined up to $1,000 a day.
- Spilled pellets eventually end up in our oceans. Whether they're handled in an Iowa plant or a seaside facility, pellets get to storm drains that lead to oceans — causing eyesores and a threat to marine life.

The Value of Operation Clean Sweep

When the industry handles pellets as responsibly as possible:

- Pellets are kept out of the natural environment including waterways and oceans;
- Companies enhance their reputations as good stewards of the environment — an increasingly important factor for attracting the investment community and high-quality employees; and
- More material becomes product rather than waste, improving efficiency.

OCS' ultimate goal is to help keep plastic pellets out of the environment, but these efforts can also help improve relations with stakeholder groups and community organizations that expect the industry to minimize its environmental footprint.

The industry needs every processor's help to get results.

This manual and its website, www.opcleansweep.org, provide the information and resources you need to either launch a new employee outreach program or to build on Operation Clean Sweep efforts you may have started.

If you are already following the OCS principles, or plan to, then take the Pledge (included in this manual on page 24) and be recognized for your commitment.

Please call with any input or questions:

Five Basic Steps for Management: Implementing Operation Clean Sweep

1. Commit to making zero pellet loss a priority.

- Sign the "Pledge to Prevent Resin Pellet Loss".(included on page 24)

2. Assess your company's situation and needs.

- Comply with all environmental laws and regulations that address pellet containment.
- Conduct a site audit.
- Determine if you have appropriate facilities and equipment.
- Determine if employees have and are following appropriate procedures.
- Identify problem areas and develop new procedures to address them.
- Communicate your experiences to peers in the industry.

3. Make needed upgrades in facilities and equipment as appropriate.

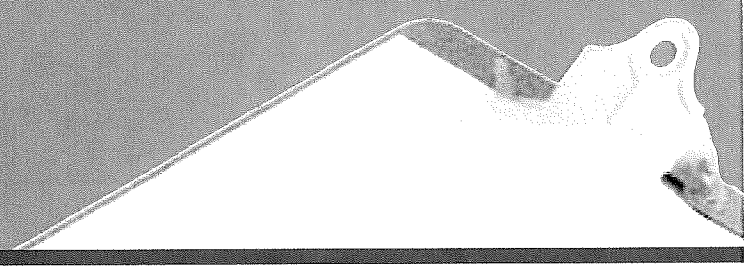
4. Raise employee awareness and create accountability.

- Establish written procedures (The procedures and checklists in this manual may be modified to suit your needs. They are available online at www.opcleansweep.org).
- Make certain the procedures are readily available to employees.
- Conduct regular employee training and awareness campaigns on Operation Clean Sweep.
- Assign employees the responsibility to monitor and manage pellet containment.
- Encourage each worker to sign the employee commitment pledge.
- Solicit employee feedback on your program.
- Use workplace reminders such as stickers, posters, etc.

5. Follow up and enforce procedures — when management cares, employees will, too.

- Conduct routine inspections of the facility grounds — production areas and parking lots, drainage areas, driveways, etc.
- Continuously look for ways to improve the program. Share best practices through the Operation Clean Sweep web site: **www.opcleansweep.org.**

Conducting a Site Audit



One of the most effective ways to improve your facility's containment of pellets is to identify the areas where spills/losses occur most frequently and fix them.

1. Use the site audit checklist to audit every transfer point at your site.

2. Identify the major spill areas.

3. Determine the cause of spills in each area.

4. Research/Brainstorm ways to solve each problem.

5. Implement the simplest effective solution.

6. Follow up to measure success.

7. Repeat if necessary.

Most companies may not perform all of the operations on the site audit checklist. Customize the checklist to suit your facility. Add any missing operations.



Worksite set-up

Ensure your worksite is properly set up to prevent loss and assist cleanup.

FACILITIES — take the following steps wherever possible and practical:

- To pave or not to pave — that is the question.
  - A paved area facilitates cleanup, but allows pellets to be carried into the environment by wind and water.
  - Unpaved areas are more difficult to clean, but pellets tend to stay where they fall and can be recovered.

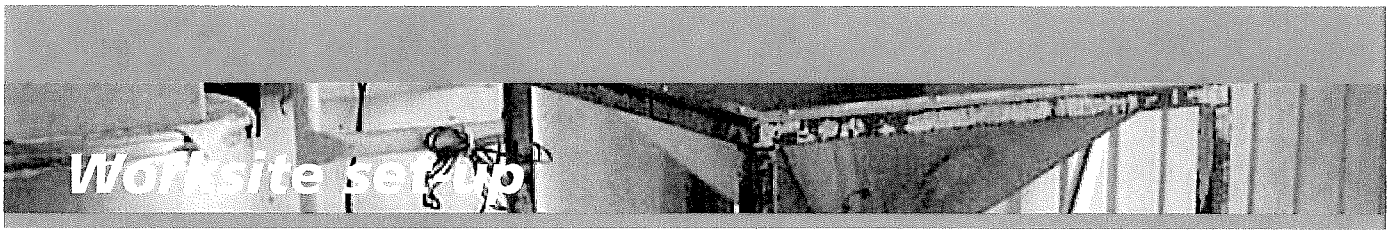
  Choose the solution that is best for your facility.
- Pave loading/unloading areas where unavoidable spills occur to facilitate cleanup
  - Include a slope or a berm to contain pellets on paved areas.
  - Equip areas with vacuums or brooms.
  - Cordless vacuums may be best suited for outdoor cleanup.
- For cleanup in gravel yards, consider fitting vacuums with screen or mesh on intake hoses to collect pellets without disturbing gravel.
- Provide catch trays for use at all car/truck unloading valves.
- Use bulk-handling equipment that is designed to minimize pellet leakage.
- Install central vacuum systems where practical.
- Install connecting hoses equipped with valves that will close automatically when the connection is broken.
- Properly empty and seal bulk containers (rail or truck) prior to shipment. Loss of residual pellets from unsealed "empty" bulk cars and trucks is a significant problem.

EPA Regulations

EPA regulates the discharge of storm water effluents via the National Pollutant Discharge Elimination System (NPDES) permitting program (40 C.F.R. §122)

Prepare for Flooding

Make sure the containment system can handle heavy rains and flooding. The system should be capable of handling 100-year flood conditions.



- Place pellet disposal cans at rail yards for loading and unloading.
- Assure proper handling when storing and removing waste pellets. All vendors should follow "no loss to the environment" procedures.
- Assure proper handling when storing and removing waste pellets. All vendors should follow "no loss to the environment" procedure.
- Seal expansion joints in concrete floors with flexible material to avoid pellet accumulation in hard to clean spaces.
- Conduct routine inspections and maintenance of equipment used to capture and contain pellets.

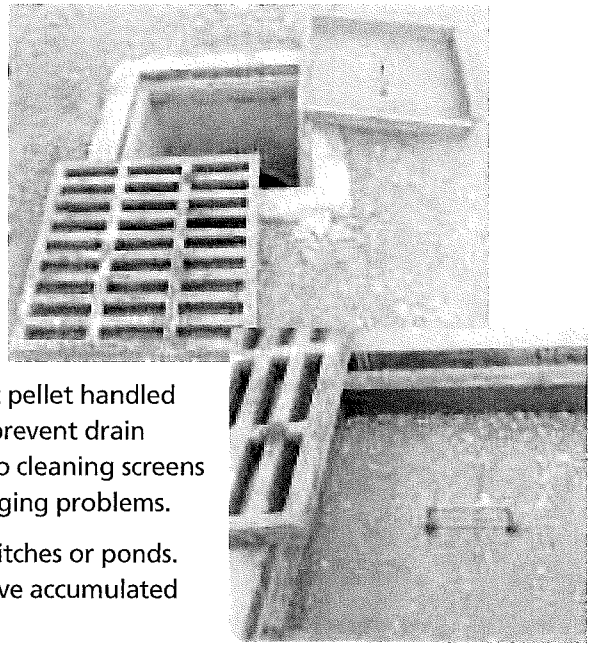
Anticipate Rain

Design systems to handle 100-year flood conditions.

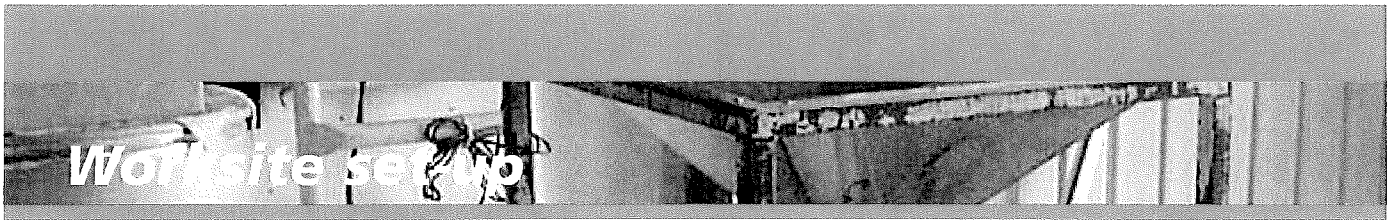
Use a collector grate and filtered storm drain system with a screen consistent with the range of pellet size handled.

Containment Systems

- Storm drain screens are the last line of defense against accidental pellet release. They should be every facility's number one priority for installation.
- Install zero loss containment systems (such as storm drain screens) wherever necessary to prevent pellets from escaping plant boundaries. There are two possible containment systems that could be installed:
  - Area-specific containment systems in each pellet handling area. Area-specific containment systems would be the primary pellet containment systems and the facility-wide system would serve as a backup.
  - Facility-wide containment systems, which are effective in controlling pellet releases from facilities covering a large area and handling large volumes of pellets.



- Place screening in all storm drains. The mesh of the screening should be smaller than the smallest pellet handled at the facility. Clean the storm drains weekly to prevent drain clogging and overflow. Pay particular attention to cleaning screens after every rain. Two-stage screens minimize clogging problems.
- Install baffles, skirts and booms in containment ditches or ponds. Use surface skimmers or vacuum systems to remove accumulated pellets.
- To prevent storm drain contamination, employ dry cleanup methods whenever possible. Dry cleanup procedures also prevent pellets from being further contaminated by compounds in the storm water.



Employee Equipment — ensure that employees have ready access to:

- Brooms, dustpans, rakes, etc.
- Heavy-duty shop vacuums for inside use
- Portable shop vacuums for outside use
- Catch trays or tarps
- Wide-mouth sample collection jars or poly-bags
- Tape for repairing bag or box damage
- Scrap pellet containers (drums, bulk boxes, etc.)
- Procedures you expect them to undertake and checklists to assist in follow-through. (Checklists are available to customize. Click on checklists at www.opcleansweep.org).
- Forklift cleanup kit (see page 19)
- Assure that employees have ready access to the proper cleanup equipment at all locations where spills might occur.

Last Resort

Using compressed air as a method of pellet cleanup is a last resort to be used under unique circumstances. "Blowing" frequently moves the debris to another area rather than contains it.

Slips and Falls

Slips and falls are the number one cause of plastics industry accidents.

A Clean Work Area

A clean work area reduces slips and falls and improves employee morale.

Designing a Training Program

Designing a training program involves a sequence of steps that can be grouped into five phases: conducting a needs assessment, defining training objectives, detailing program specifics, implementing the training and evaluating its effectiveness.

1. Needs assessment — conduct a site audit (pages 8 and 29–31) and determine if employees have and are following appropriate procedures. Make needed site improvements and write/modify procedures prior to launching a training program.

2. Instructional objectives — identify what training is needed to ensure procedures are being followed.

3. Details — determine how, who, where and when you will train. Consider the following areas: explaining the environmental impact of pellet loss, defining the role each individual plays in affecting change and ensuring knowledge of appropriate procedures.

    a. Use OCS to design and develop training program and program content.
    b. Select the techniques used to facilitate learning (crew meetings, handouts, video, website, etc.).
    c. Select the appropriate setting for your meetings.
    d. Prepare materials.
    e. Identify and train the instructors.
    f. Create department goals.

4. Implementation — Schedule classes, facilities, participants and instructors, deliver materials, conduct training.

5. Evaluation — Determine participant reaction to the training, how much they learned and to what degree the department goals were met.



Employee Participation and Accountability

Ensure employees are aware of and accountable for pellet loss prevention, containment, cleanup and disposal.

Establish written procedures. (The procedures and checklists in this manual may be modified to suit your needs. They are available online at www.opcleansweep.org)

Make certain the procedures are easily available.

Conduct regular employee training and awareness campaigns on the Operation Clean Sweep program.

- Explain the impact of pellet loss on the environment and the company.
- Make spill prevention, cleanup and containment a company philosophy and priority.
- Promote that philosophy daily.
- Assign specific employees the responsibility to monitor and manage pellet containment. If it gets assigned as a regular part of employee jobs, it gets done.
- Consider hiring a full-time housekeeping/warehouse sweeper, if appropriate. Having one person assigned this job improves the efficiency of other workers.
- Stress the importance of immediate cleanup of any spills by the person associated with the spill.
- Review current procedures and identify whether there has been a history of problems in a certain area.
- Reaffirm existing, or develop new, procedures.
- Use workplace reminders such as stickers, posters, etc.
- Encourage teamwork and employee feedback.
- Conduct regular inspections of the entire facility to assure compliance with OCS principles.
- Reward and/or recognize milestones and significant achievements of the crew or crews that achieve designated goals of the pellet loss prevention program.

Spills Will Happen

Ensure that employees:

- Take ownership by taking the pledge.
- Immediately clean up the spill.
- Recycle or dispose of loose pellets properly.

Acknowledge Hard Work

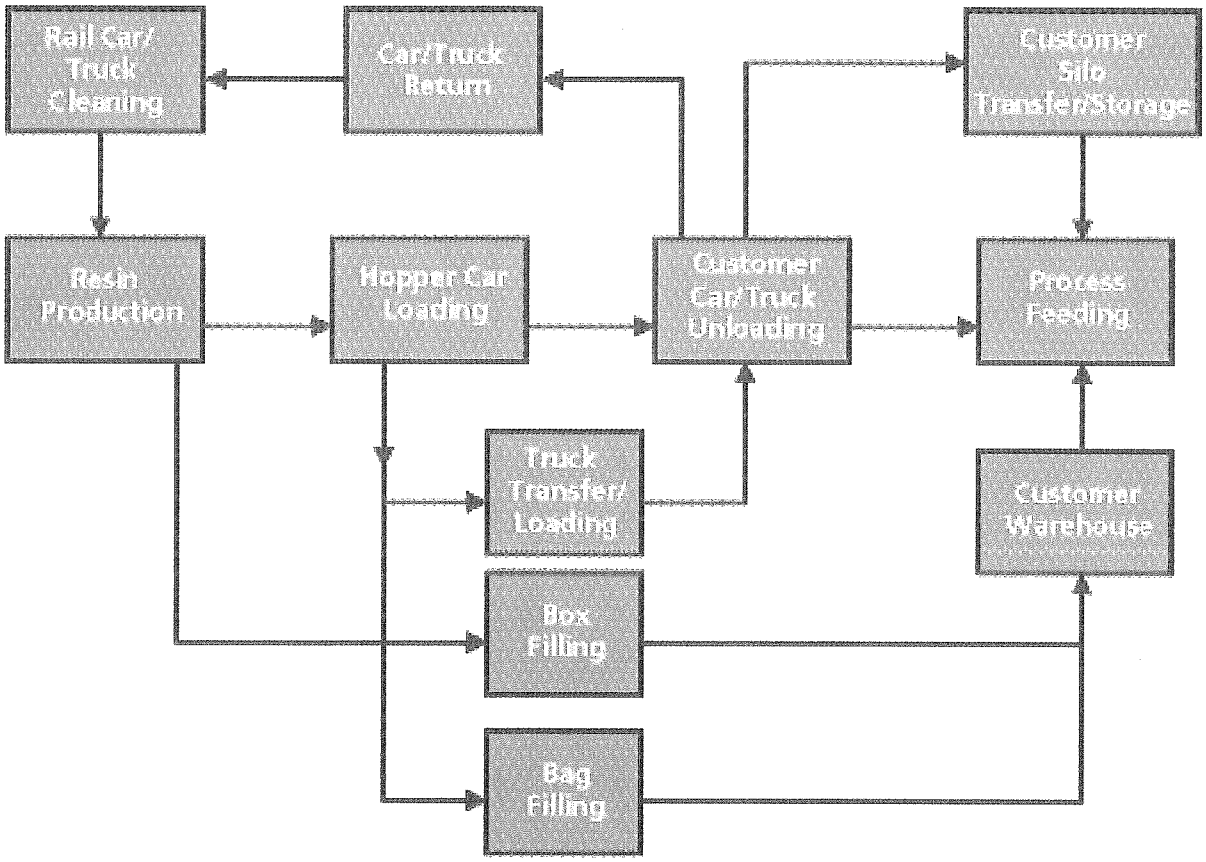
Simple steps, like bringing in a special lunch, to acknowledge employees' hard work to prevent loss can go a long way in keeping your company's commitment front and center.

Prevention, Containment and Cleanup Procedures

There are many steps involved in the movement of plastic pellets from the resin production facility, through the distribution network, to the processor. Spills and pellet loss to the environment can occur at any step. The procedures in this section provide best practices for each handling step. Making employees aware of and holding them accountable for these prevention, containment, cleanup and disposal procedures, is the way to zero pellet loss.

Resin Handling Flow Cart

There are many steps in the transport/handling process. Spills may occur at any point.



Pellet Transport and Packaging

Hopper car and hopper truck cleaning, loading, storage and unloading present special resin handling challenges.

Cleaning Empty Hopper Cars and Trucks

- Use air lance to make total pellet removal easier.
- Ensure hopper car and truck cleaning areas have wastewater collection and pellet filtration systems installed.
- Recover all pellets from wash water.
- Recycle, resell or dispose of collected pellets properly.

Cleaning Cars & Trucks

Ensure proper handling of residual materials.

Top Loading Hopper Car and Trucks

- Operate the conveying system properly to avoid clogging and necessitating the opening of lines.
- If a line must be opened to clear blockage, anticipate the potential for pellet loss and always place a catch pan or tarp under the connection.
- Remove any spilled pellets from the top of the car/truck before leaving the containment area — residual pellets will fall to the ground as cars are moved outside the plant.

Sealing Loading Cars/Trucks

- Close all outlet caps properly before cars/trucks are moved (and request customers to do the same when returning empties).
- Apply seals on all outlet caps (1/8" stranded steel cable or its equivalent).
- Design or modify loading systems so that transfer lines can be completely emptied, with any residual resin being discharged into a container after loading is completed.

Storing at Intermediate Sites

- Consider exposure to vandalism when selecting sites.
- Establish security procedures as necessary (e.g. fencing and lighting).
- Advise companies to report any incidents (e.g. shippers, railroads, trucking companies and processors).

Prevention, Containment and Cleanup Procedures

Unloading Hopper Cars and Trucks

Valve Opening

- Contain any possible spill during hook-up by placing a catch pan under the unloading valve before opening.
- Purge unloading tubes within containment area.
- Keep area swept up or vacuumed.
- Consider installing connecting hoses equipped with valves that will close automatically when the connection is broken. Clogged hoses, material bridging in outlets, etc., can require unloading lines to be opened, which presents the risk of spillage.
- Anticipate the potential for pellet loss before opening the line.
- Place pellet disposal cans at rail yards for loading and unloading.
- Have a catch pan or tarp ready to catch pellets.
- Immediately clean up and properly dispose of any spilled pellets.
- Surges in unloading lines can cause pellets to be vented into the environment. To prevent this, install a bag house, filter bag assembly or other control device at the unloading system vent.

Be Vigilant

Pellet loss can occur at any stage of operations. Be vigilant to ensure that pellets don't escape into the environment.

Completing Unloading

- Ensure that the car/truck is thoroughly unloaded.
- Cycle the outlet valve while air is flowing.
- Visually confirm that each compartment is empty.
- Purge the line before disconnecting.

Sealing Valves

- Close all valves.
- Secure outlet caps and top hatches.

The "Usual Suspects"

Open valves, outlet caps and top hatches are frequent causes of material spills. Make sure to close off all pellet "escape routes" once the car is unloaded.

Sampling

- Conduct sampling only in areas protected by containment equipment.
- Review procedures for taking samples to eliminate any possible spillage.
- Use wide-mouth containers or poly-bags for samples.
- Use a funnel collection system to effectively channel pellets into containers.

- Sampling from unloading tubes:
  - Place a catch pan or heavy duty tarp under outlet before opening to catch any spills. (Several commercial devices have been developed specifically for preventing spills during sampling.)
- Sampling from top hatches:
  - Exercise extra caution to avoid spillage, which can also pose a slipping hazard.
  - Close hatches and apply cable seals to prevent access by vandals.

Spills

- Exercise caution to avoid spillage.
- Clean up any spills immediately.

Packaging

Using the proper packaging, filling and material-handling procedures can go a long way in minimizing pellet loss.

Hierarchy of cleanup methods

- Vacuum it.
- Sweep it.
- Wash it down (only with appropriate containment systems in place).
- Blow it (only as a last resort).

Selecting Packaging Materials

- Use packaging designed to minimize the possibility of breakage and pellet leakage. Use puncture-resistant shipping containers where possible.
- Use reinforced bags, such as woven polypropylene bags, and line larger containers with puncture-resistant material.
- Minimize the use of valved bags, or seal valved bags immediately after filling.

Collecting spilled pellets

Collecting spilled pellets reduces contamination, permitting normal usage rather than requiring disposal.

Prevention, Containment and Clean Up Procedures

Bags: Filling and Handling

- Inspect all pallets for protruding nails or broken boards.
- Use bags that are not easily punctured.
- Use a heavier weight container/bag if breakage is a recurring problem.
- Move and stack bags immediately after filling to avoid seepage.
- Tape leaks or replace leaking bags.
- Regularly clean up pellets spilled during the filling process. Where possible, select filling equipment designed to prevent pellet loss.
- Implement warehouse and handling procedures that minimize the chance of pellet spillage.
- Dispose of collected pellets properly.

Caution

Shipping bags often use a mechanical closure that does not provide a positive seal against leakage once the bag is filled.

Bags: Emptying and Disposal

- Thoroughly empty bags.
- Collect, handle, store and transport the empty bags to avoid/contain the escape of pellets.
- Recycle plastic resin bags, shrink-wrap and stretch-wrap, whenever possible. For more information please go to www.plasticbagrecycling.org.
- Dispose of packaging by incineration or in a well-managed landfill.
  - Stress the need for "no loss to the environment" procedures.

Bulk Boxes

- Use bulk boxes that are not easily punctured.
- Tape leaks or replace leaking boxes.
- Regularly clean up pellets spilled during the filling process.
- Dispose of collected pellets properly.

Caution

Some loss also occurs during the filling process.

Improve Palletizing Methods

- Move and stack bags immediately after filling to avoid seepage from valves.
- Stack bags on pallet in tight, interlocking patterns.
- Shrink or stretch-wrap pallet to stabilize stacks and help contain lost pellets.
- Use corrugated cardboard caps on the top and bottom of pallets to minimize puncturing or tearing bags and to contain loose pellets.
- Block and brace outbound loads to avoid broken bags in transit.

Handling Materials

- Forklift operators must be trained and skilled in damage prevention as well as proper cleanup.
- Institute handling procedures that minimize puncture of bags and boxes with forklift tines.

Select Proper Bags and Pallets

Bags typically are stacked 40 to 50 per pallet, and pallets are usually stored at least two high. Both individual and palletized bags are subject to the rigors of warehouse movement and storage. Proper bag and pallet selection can help reduce damage.

- Repair or replace punctured packages and cleanup any spills immediately to prevent loss of pellets. Sealing a leak when it occurs is much easier than sweeping 100 yards of warehouse.
- Consider outfitting all forklifts with a Cleanup Kit.
- Place catch trays between the dock and trailer at shipping and receiving bays.
- Inspect pellet packaging before offloading, particularly pellets bagged in unreinforced paper or corrugated bulk boxes. This will prevent pellet release through the gap between the vehicle and the loading dock.

Storage

- Consider covering all packaging resin stored outside (gaylords, supersacks, etc.) to prevent photo degradation of the containers.

Forklift Cleanup Kit

Broom

Long-handled dust pan

Repair tape

Bucket for collection/disposal

Select these items to fit together in the bucket. Secure the bucket to the forklift using elastic cords. Situate the kit so as not to interfere with the safe operation of the forklift.

Other Transport Vehicle Concerns

Container Trucks

- Shipping
  - Sweep or vacuum any loose pellets in the truck/container.
  - Carefully inspect empty trailers for damaged interior walls or defective floors that can tear bags. Consider refusing to use such containers or cover problem areas with corrugated liner board.
  - Block and brace outbound loads to avoid broken bags in transit.
- Receiving
  - Inspect truck and rail shipments containing palletized bags of pellets and document the condition of bags and pallets received. If the shipment is significantly damaged, notify the transporter and manufacturer. Consider refusing to accept delivery.

Hopper Cars and Trucks — Repairs

- Work in a paved area to facilitate containment and cleanup.
- Properly contain, handle or recycle small quantities of residual pellets. If larger quantities are involved, contact the shipper.

Transport Accidents

- Contact the shipper for assistance/advice if a derailment or highway accident results in a spill of resin pellets.

Marine Transport

Marine transport of pellets requires special attention due to the high potential for release into the environment. Because of the close proximity to water, loose pellets in and around water-front warehouses, docks, ocean-going containers and on ships themselves must receive extra attention.

Anyone handling pellets directly or managing their shipment must be well-informed about the importance of spill prevention, the need for prompt cleanup and proper disposal practices.

- Do NOT sweep pellets into the water.
- Properly contain and handle any pellets from previous shipments when cleaning ship holds or ocean containers.
- Keep ocean containers in good repair — eliminate protrusions that could tear bags and boxes.
- Avoid stowing resin containers on deck. Place resin containers in ship holds.
- Do NOT jettison containers of resin.

Waste Recycling and Disposal

Ensure pellets are properly disposed of to avoid contaminating the environment.

- Store waste pellets in properly labeled containers.
  - Do not permit loose pellets to accumulate on the ground or floors.
  - Install a minimum of one pellet-specific waste container in each pellet-handling area.
  - Routinely check that there is adequate waste storage capacity.
- Use separate containers for recyclable and non-recyclable pellets.
- Use only covered containers or vehicles without leaks.

Preferred Disposal Methods

- Recycle
- Resale
- Approved incineration (where available)
- Controlled landfill
- Fuel-blending program

- Inspect and confirm proper handling and storage procedures if an outside vendor is used for waste removal.
  - Stress the need for "no loss to the environment" procedures.
- Preferred disposal methods are:
  - Recycle or resell waste pellets.
  - Approved incineration of waste pellets in properly licensed and operated incinerators.
  - Deposit in a controlled landfill only after confining pellets in such a manner that prevents their loss due to rain, wind, flooding, etc.
  - Consider using waste pellets in a fuel-blending program.
- Include pellet retention capabilities and practices in criteria for selecting waste disposal companies.

Final Step

Careful disposal is the final step to ensuring that pellets do not affect the environment.

Methods to Help Minimize Generation and Release of Plastic Dust and Powder

This specifically focuses on methods to help minimize generation and release of plastic dust and powder. There are several approaches that can be taken. You may wish to consider whether other ways are more appropriate for your operations. Consult with the manufacturer of the resin you are handling for specific handling, containment and disposal information.

For purposes of this discussion:
Plastic Dust is particulate matter that may be formed when plastics are handled, conveyed and/or processed. One of the most common means of generation is via abrasion during the air conveying of plastic pellets. In addition to conveying, plastic dust may be generated when plastic raw materials or finished products are:

- Granulated;
- Pelletized;
- Cut;
- Machined;
- Filed; or
- Transported.

Plastic Powder is a form of plastic raw material used in operations where a fine particle size is critical for processing. Plastic powder can escape plastic handling or processing equipment. If that occurs; handling, containment and recovery considerations are similar to plastic dust. Typically powders may escape through:

- leaks in storage silos, tanks and containers;
- leaks in pneumatic or mechanical conveyors;
- leaks in blenders or other processing equipment; or
- during loading/unloading operations or transfer operations.

Methods to Consider for Minimizing the Generation of Plastic Dust

The best way to control dust is to minimize its creation in the first place. There are several approaches that can be taken to help minimize the generation of plastic dust. For example:

- When pelletizing, keep cutting equipment in good condition with sharp blades;
- Design conveying systems to treat the plastic gently and take other steps to help avoid collisions and impacts with hard surfaces and other pellets, thereby avoiding plastic fracture. Methods to consider, can include, use of long sweep elbows and avoid having the plastic pass through a blower;
- Use appropriately sized granulators;
- When machining plastics, use an appropriate machine set up for the material and provide appropriate waste collection equipment;
- Store plastics and additives in appropriate containers maintained in good condition; and
- Promote awareness to employees of methods of handling and processing of the plastic to help minimize dust creation.

Methods to Consider for Minimizing the Release of Plastic Dust and Powder

There are several approaches that can be taken to help minimize the release of plastic dust and powder. For example:

- Keep storage silos, tanks and containers in good condition, to help avoid holes, cracks or leaks;
- Maintain loading/unloading and transfer equipment with good seals to help avoid leaks;
- Conveying equipment should be appropriate for the task and maintained in good condition;
- Place collection trays under discharge/loading valves and connection points when making or breaking connections;
- Use processing equipment (and the equipment that feeds it) that helps minimize the release of dust/powder;
- Clean up all spills promptly; wind and traffic can quickly disperse dusts and powders;
- Encourage employees and/or contractors to look for dust/powder leaks and to correct any that occur; and
- Promote employee awareness of training and reminders regarding the need to prevent dust/powder from escaping into the environment.

Methods to Consider for the Capture and Containment of Plastic Dust

Plastic dust creation can be minimized but not eliminated entirely. There are several approaches that can be taken to help in the capture and containment of plastic dust.[1] For example:

- Use properly designed and sized dust collection equipment in all operations that generate or liberate plastic dust;
- Maintain the dust collection equipment according to manufacturers' recommendations;
- Use the recommended filters for the type and amount of dust generated;
- Clean or replace filters or other collection equipment as needed;
- Promote awareness of procedures for clean-up of plastic dust spills, or plastic dust that has settled on surfaces in and around the plant;
- Promote maintenance/housekeeping procedures that minimize dust accumulation around the facility;
- Store captured plastic dust in containers that are designed to help minimize leaks;
- Promote employee awareness in procedures for handling plastic dust, including industrial hygiene considerations; and
- Comply with applicable federal, state and local regulations for containment systems.

[1] Dust from plastics may combine with dust from other materials within the plant site. Review MSDS for information on the proper capture, containment and disposal equipment and procedures.

Any dust, no matter what the material, can be explosive if in the proper concentration in air. When handling dusts take precautions not to aerate it and to keep ignition sources away.

Disposal

Proper disposal of plastic dust and powder can be critical to help minimize the amount released to the environment. Choosing a disposal method involves considering the materials that constitute the dust /powder and the disposal requirements of those materials.

- Review the MSDS for each type of plastic used in the process.
- Dispose of dust or powder using a method that complies with all federal, state and local regulations and guidelines and/or applicable codes and standards.

Disclaimer: *Methods to Help Minimize the Generation and Release of Plastic Dust and Powder* is a part of The Operation Clean Sweep® (OCS) program, a joint program of the American Plastics Council and the Society for the Plastics Industry, Inc. (collectively, "OCS Sponsors"). The OCS program and manual contains guidelines to help plastics industry operations managers reduce the loss of pellets to the environment. Each procedure contained herein may or may not be applicable to your specific operation. Manual users are free to implement the sections and steps that help achieve your company's specific goals. None of the guidelines are intended as a mandate. Compliance with state and local regulations are mandatory. These guidelines may help you to achieve compliance and avoid penalties. OCS Sponsors do not make any warranty or representation either express or implied, with respect to the accuracy or completeness of the information contained in this document nor do OCS Sponsors assume any liability of any kind resulting from the use or reliance upon anything contained in this document. Compliance with applicable laws and regulations remains the full responsibility of the parties to which the law or regulation applies.

Pledge To Prevent Resin Pellet Loss

Take the Pledge for Your Company

To demonstrate your commitment to a clean environment, please complete the "Pledge to Prevent Resin Pellet Loss" and fax a copy to APC/SPI at 202-296-7218.

The pledge must be signed by an officer of the company.

In return, your company will receive a certificate suitable for display affirming your commitment to being an Operation Clean Sweep Partner.

Signing this pledge will qualify your company's name to be added (unless otherwise specified) to the list of OCS Program Partners on the Operation Clean Sweep (www.opcleansweep.org) website. Listed partner company names may be used in publicity for the program.

Pledge To Prevent Resin Pellet Loss

Operation Clean Sweep®
www.opcleansweep.org

Company Pledge to Prevent Resin Pellet Loss

Our company recognizes the importance of preventing the loss of resin pellets into the environment and we are committed to implementing the Operation Clean Sweep program.

We will be an OCS Program Partner, strive towards zero pellet loss and:

- Make changes wherever possible and practical to:
  - Improve our worksite set-up to prevent and address spills;
  - Create and publish internal procedures to achieve zero pellet loss goals;
  - Provide employee training and accountability for spill prevention, containment, cleanup and disposal;
- Audit our performance regularly; and
- Comply with all applicable state and local regulations governing pellet containment.

Company name: _____

Address: _____
Street or PO Box City State Zip

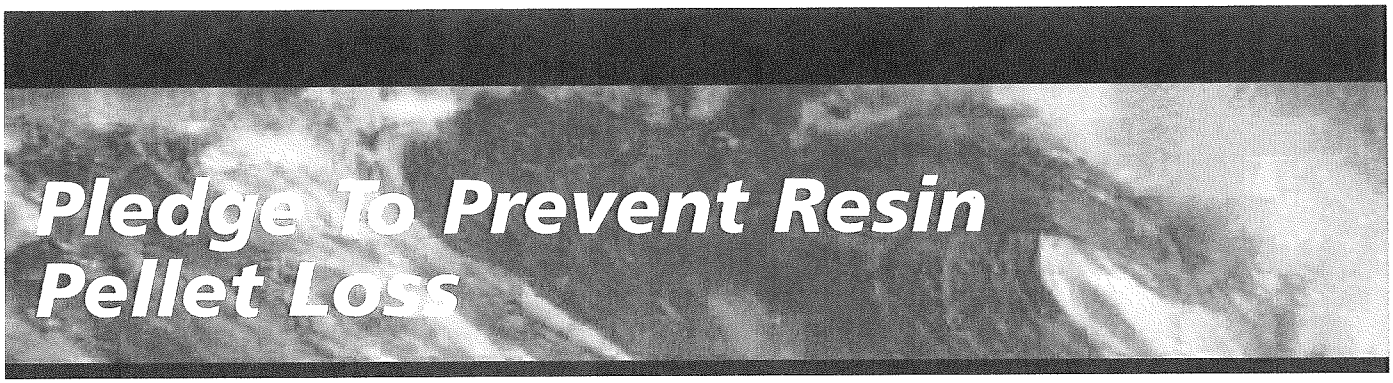
Company Officer Name and Title: _____

Signature: _____ Date: _____

Email Address: _____ Phone: _____

Fax to APC/SPI at 202-296-7218

☐ Please do not include my company on the website listing of OCS partners.



Pledge To Prevent Resin Pellet Loss

Have Your Employees Take the Pledge

- Individual personal commitment of every employee is the key to success.
- Encourage every employee to be fully engaged and committed to following the OCS principles every day.
- Having each employee sign a personal pledge is an effective way to gain that commitment.

Pledge To Prevent Resin Pellet Loss

Operation Clean Sweep®
www.opcleansweep.org

Employee Pledge to Prevent Resin Pellet Loss

I recognize our company's commitment to Operation Clean Sweep and the goal of preventing pellet loss into the environment. I will do my daily job in a manner that strives to:

- prevent pellet loss;
- contain spills;
- cleanup swiftly and effectively; and
- dispose of pellets appropriately.

Company name: _____

Department/Crew: _____

Employee Name: _____

Signature: _____ Date: _____

CHECKLISTS

CHECKLISTS PROVIDED:

Management Checklists

- Implementation and Training
- Site Audit
- Facility Equipment
- Employee Equipment

Employee Checklists

- Processor Operations
- Warehouse
- Car Cleaning / Loading
- Railroad
- Transloader

Implementation and Training
Management

Company _____ Department _____

Procedures

☐ Sign the "Pledge"

☐ Conduct site audit

☐ Review or create written procedures

☐ Assign responsibility for each crew/individual

☐ Put management inspection program in place

☐ Plan followup and review

Training

☐ Crew training meetings conducted

☐ Shift #1 _____ date

☐ Shift #2 _____ date

☐ Shift #3 _____ date

☐ Shift #4 _____ date

Manager _____

Signature/Date _____

Site Audit
Management

Company _____ Department _____

Bulk hopper car/truck unloading area

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Receiving dock — bags and boxes

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Silo area

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Transfer equipment — blower

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Audited by _____

Audit Date ___/___/___

Site Audit
Management

Company _____ Department _____

Transfer equipment — bag house

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Transfer equipment — line connectors

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Box/Bag handling

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Blending equipment

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Processing line — extrusion feed hoppers

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Audited by _____

Audit Date ___/___/___

Site Audit
Management

Company _____ Department _____

Sampling areas

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Packaging Areas — bulk box

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Packaging Areas — bag

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Warehouse/storage

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Shipping dock

Spill problem yes ☐ no ☐

Cause of spill _____

Solution _____

Implementation date ___/___/___

Audited by _____

Audit Date ___/___/___

Facility Equipment Management

Company _____ Department _____

Storm drain screens

- ☐ Number of drains _____
- ☐ Number of drains with screens _____
- ☐ Target date to complete screen installation _____
- ☐ Drain screen inspection/cleaning frequency _____
- ☐ Screen repairs required _____

Unloading areas _____

- ☐ Paved
- ☐ Unpaved
  - ☐ Tarps/catch pans available in area
  - ☐ Disposal receptacles in area

Transfer systems

- ☐ Bag House/filters OK
- ☐ Pipe, hoses and connections leak free
- ☐ Disconnects with auto closing valves

Sweepings Disposal

- ☐ Contractor agrees to zero loss disposal procedures
- ☐ Proper interim storage containers available

Inspected by _____

Inspection Date ___/___/___

Employee Equipment Management

Company _____ Department _____

Employee Equipment

Available for use:

- ☐ Brooms
- ☐ Dust pans
- ☐ Repair tape
- ☐ Vacuum system
  - ☐ Central
  - ☐ Portable
- ☐ Catch pans
- ☐ Sample containers
- ☐ Scrap pellet container
- ☐ Elastic cord
- ☐ Buckets for forklift cleanup

Inspected by _____

Inspection Date ___/___/___

Processor Operations
Employee

Company _____ Department _____

Operation _____

Crew/Shift _____

Inspector _____

Date _____

	Condition at start of shift			Condition at end of shift		
	Excellent	Good	Unacceptable	Excellent	Good	Unacceptable
Silos	☐	☐	☐	☐	☐	☐
Transfer lines	☐	☐	☐	☐	☐	☐
Bag/Box feeding	☐	☐	☐	☐	☐	☐
Dryer	☐	☐	☐	☐	☐	☐
Extruder Hoppers	☐	☐	☐	☐	☐	☐

Problem areas _____

Spills recovered? Yes _____ No _____

If not, why _____

Sweepings properly disposed? Yes _____ No _____

If not, why _____

Samples Taken: Number _____

Inspected by _____

Inspection Date ___/___/___

Warehouse
Employee

Company _____ Department _____

Operation _____

Crew/Shift _____

Inspector _____

Date _____

Receiving area

☐ Loading dock catch pans in place for receipt of container shipments

☐ Rail truck unloading valve catch pans in place before opening

☐ Samples collected in approved containers

☐ Container trucks cleaned after unloading

☐ Hopper car/truck valve covers in place before moving

- ☐ Full walk around conducted
- ☐ Transfer lines flushed and clean

☐ Dock area swept clean

☐ Car/Truck unloading area clean

☐ Raw Material Storage area clean

☐ Aisles in clean condition

☐ No leaking boxes

☐ No leaking bags

☐ Waste collection containers emptied

☐ Boxes cleaned and flattened

☐ Bags fully emptied prior to disposal

☐ Broken pallets repaired or replaced

Inspected by _____

Inspection Date ___/___/___

Car Cleaning/Loading
Employee

Company _____ Department _____

Car Cleaning/Loading

Operation _____

Crew/Shift _____

Inspector _____

Date _____

Car Cleaning

☐ Containment for wash area operational

☐ Compartments empty and clean

- ☐ Air lance operational
- ☐ Unloading outlet tubes totally clean
- ☐ Pellet recovery from wash water 100%

Car Loading

☐ No line blockages or clogging

☐ Catch pans in place for connections

☐ Transfer lines flushed after each car loading completed

☐ All outlets secure and sealed after filling (Seals are all 1/8" braided steel or stronger)

- ☐ Top
- ☐ Bottom

☐ Top of car clean before release

Inspected by _____

Inspection Date ___/___/___

Railroad
Employee

Company _____ Department _____

Operation _____

Crew/Shift _____

Inspector _____

Date _____

Storage in Transit areas:

Secure

☐ Fenced

☐ Adequate lighting

Regular inspections

☐ Car valve covers and seals in place or shipper notified

Inspected by _____

Inspection Date ___/___/___

Transloader
Employee

Company _____ Location _____

Operation _____

Crew/Shift _____

Inspector _____

Date _____

Truck Cleaning

☐ Wash system containment operational

☐ Compartments empty and clean

#1 __ #2 __ #3 __ #4 __

☐ Unloading outlet tubes totally clean

Transfer (Transfer area: Gravel _____ Asphalt _____)

☐ Car seals in place before start of transfer

☐ Catch pans in place prior to valve opening

☐ Transfer lines flushed and clean after transfer

☐ All outlets secure and sealed at completion and prior to moving

Car

☐ Top

☐ Bottom

Truck

☐ Top

☐ Bottom

☐ Spills cleaned and disposed of properly

☐ Samples taken without material loss

☐ Unloading problems experienced _____

Inspected by _____

Inspection Date ___/___/___

Rebuttal Exhibit II-B- 17

highly confidential information redacted

Rebuttal Exhibit II-B- 18

highly confidential information redacted

Rebuttal Exhibit II-B- 19

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Rebuttal Exhibit II-B- 20

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Rebuttal Exhibit II-B- 30

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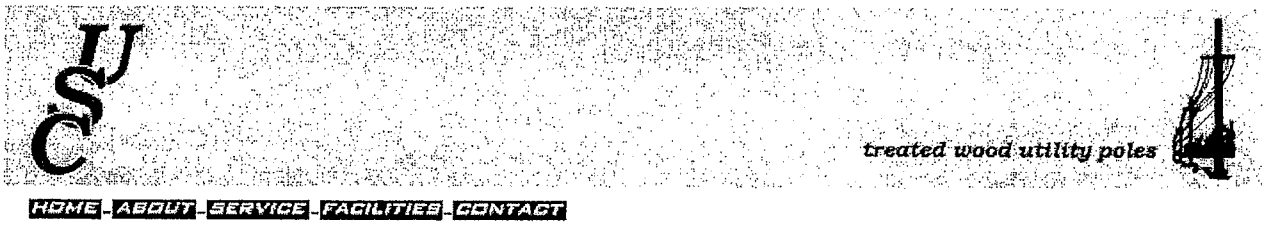
Rebuttal Exhibit II-B- 31



Facilities

Many utility companies are requiring utility poles to be stored in close proximity to their service areas. USC's locations meet this requirement in the PA, MD, NJ, DE, and VA marketplace. Both USC locations are close to the I-70 & I-81 interstate hub, permitting outbound trucks to reach service destinations quickly. The company is currently capable of handling 1.5 million cubic feet of utility poles annually and stocking in excess of 6,000 poles at any given time.

USC's St. James facility (home of USC Corporate offices) is comprised of 6.1 acres. Serviced by Norfolk Southern Railroad, it has been a pole warehousing and distribution facility for more than 25 years. St. James has serviced Verizon, PPL, Alltel, and others.

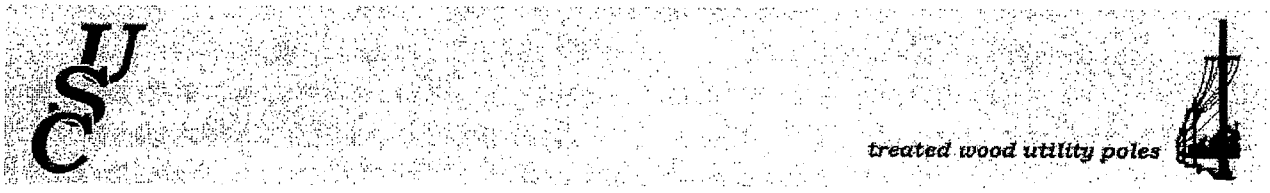


Utility Supply Company, Inc.

Utility Supply Company, Inc. is a service-oriented company providing direct sales and distribution services of treated wood utility poles to major utility companies, REA's and independent contractors in the northeast United States.

Storage & Distribution: Our facility can store in excess of 6,000 poles at any given time. We will store your poles at our yard and ship to your location in the northeast within days.

USC offers direct sales of standard size Penta-treated poles from our stock. We offer sale of one pole or annualized procurement.



About

Utility Supply Company, Inc. (USC) was incorporated in the state of Maryland in 1992 for the purpose of providing warehousing and distribution services of pressure-treated wood utility poles.

USC is a "C" corporation and wholly owned by Douglas Mills who is active in the day-to-day operations. The company is strategically located at St. James, MD for servicing all major utility companies within a 200-mile radius of Hagerstown, MD.

~next

Rebuttal Exhibit II-B- 32

QUALITATIVE MARKET DOMINANCE DETERMINATION

I. INTRODUCTION

In Exhibit II-B-23 of M&G's Opening Evidence, M&G's experts demonstrated that in spite of similarly-priced transportation alternatives for 25 of the 69 issue movements, CSXT has market dominance over M&G's traffic moving in these 25 lanes, because the transportation alternatives do not provide economically *effective* competition. CSXT's market dominance is evidenced by its ability to capture the majority of M&G traffic in these lanes and at rates that significantly exceed its cost of providing the service. Further, CSXT's costs are far less than that of its competitors, which provides CSXT the ability to lower its rates to less than its competitor's costs while earning a contribution from the traffic at issue. Stated differently, CSXT can lower its rates to such an extent that it can force its competitor out of business and still make a profit.

In Reply, CSXT attempted to respond to M&G's arguments and evidence of ineffective competition but they ignored precedents included in previous ICC and STB decisions and instead relied on economically invalid and inconsequential arguments. In addition, CSXT, through its Witness Mr. Gordon Heisler, presented information related to 50 alternatives which it argues provide viable transportation options for 43 of the 69 origin/destination pairs at issue in this proceeding.[1]

In this Rebuttal, each of CSXT's arguments related to quantitative market dominance is addressed and M&G demonstrates that not one of Mr. Heisler's transportation alternatives

[1] Seven of the transportation alternatives presented by Mr. Heisler provide two alternatives for one origin/destination pair. CSXT's Reply states there are six origin/destination pairs with two alternatives (*See* CSXT Reply at II-36, however, review of CSXT's Exhibits and workpapers show 50 alternatives for 43 origin/destination pairs.

represent *effective* competition as the alternative carriers' cost of providing service far exceeds CSXT's cost of providing service to the issue traffic.

Rebuttal Exhibit II-B-32 is organized under the following topical headings:

II. CSXT's Reply Evidence Fails to Recognize that Market Dominance Can Exist Even if Alternative Transportation as Similar or Lower Rates

III. CSXT's Claims that M&G's Cost Analysis is Flawed are Inconsequential and Economically Invalid

IV. The Transportation Alternatives Presented by CSXT Do Not Provide Effective Competition

V. Conclusion

QUALITATIVE MARKET DOMINANCE DETERMINATION

II. CSXT's REPLY EVIDENCE FAILS TO RECOGNIZE THAT MARKET DOMINANCE CAN EXIST EVEN IF ALTERNATIVE TRANSPORTATION HAS SIMILAR OR LOWER RATES

CSXT claims that truck or rail/truck transload alternatives provide physically feasible options for transporting M&G's PET and therefore CSXT cannot have market dominance over this traffic. CSXT's position ignores the precedent set forth in previous ICC and STB proceedings which hold that for a finding of market dominance competition must be *effective*.

In Opening, M&G quoted the ICC as stating: "The existence of intermodal competition is not enough to establish a lack of market dominance."[2] In *McCarty Farms*, the ICC determined that "truck and truck/barge service competes to some extent with BN rail service for carriage of wheat and barley from Montana to the PNW." Id. at 831. But, the ICC also found that "BN lacks *effective* competition, *i.e.*, competition adequate to restrain its rates at or below a maximum reasonable level. Id. at 831 (italics in original). The ICC found that, "even with truck and truck/barge competition, BN has been able to capture the vast majority of the total transportation market" and "its rates have significantly exceeded...the BN's costs of providing service." Id. at 831-32.

Moreover, in *FMC*, 4 STB at 717-18, the STB concluded that a transload alternative with comparable rates to the defendant railroad's rates did not provide *effective* competition, because the transload option operates at a large cost disadvantage compared to rail. That caused the STB to conclude that UP's ability to match prices set by the higher-cost transload alternative, while

[2] 3 I.C.C. 2d 832.

maintaining a dominant market share, could not demonstrate *effective* competition for the issue traffic.

In its Opening Evidence, M&G examined 25 of the 69 lanes at issue in this proceeding, and demonstrated that the competing carriers' cost of providing alternative service in each of these lanes is substantially higher than CSXT's cost of service and therefore the alternative transportation does not provide *effective competition.*

III. CSXT's CLAIMS THAT M&G'S COST ANALYSIS IS FLAWED ARE INCONSEQUENTIAL AND ECONOMICALLY INVALID

CSXT critiques M&G's showing that transportation alternatives to CSXT have much higher costs than CSXT.[3] CSXT contends that, even if a carrier's costs are relevant to the market dominance inquiry, M&G's attempt to compare costs across modes in its Opening Exhibit II-B-23 is flawed for several reasons.[4]

A. Comparing URCS Costs with Costs of Other Modes

CSXT asserts that, in the absence of an URCS-equivalent for alternative modes, no reliable analysis is possible. That simply is not true. URCS calculates long-run variable costs for individual railroads. Long-run variable costs are costs which change with a change in output over the long term. Long-term costs assume that a company has the flexibility to change production inputs over time.

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[3] CSXT Reply at II-79-82.
[4] Id. at II-80-82.

QUALITATIVE MARKET DOMINANCE DETERMINATION

Long-run variable cost for railroads can be determined through various formulas whether it be the STB's Uniform Railroad Costing System ("URCS"), Rail Form A (historically used by the ICC) or an individual rail carrier's internal management costing systems. The intent of each of these formulas is the same, i.e. to measure the change in a railroad's cost with a change in output. These variable costs are used as a tool to set the floor for transportation rates.

Other transportation modes and other industries also calculate long-run variable cost. For example, the ICC used a Highway Form B to calculate motor carrier costs. The intent of Highway Form B cost and Rail Form A costs were the same, i.e., to calculate long-run variable costs of the carriers in the respective industries. The level of these costs may be different among carriers, modes and industries but the intent is identical, i.e. to calculate a carrier's costs associated with handling traffic.

CSXT's position also ignores the fact that comparisons of such analyses have been accepted in prior proceedings. In *McCarty Farms*, for example, the ICC determined that truck direct and truck/barge service did not provide *effective* competition to rail based on the fact that these alternatives were high cost alternatives using the cost studies presented by Complainants.[5] Similarly, in *FMC* the STB concluded that a truck/rail transload alternative with comparable rates did not provide effective competition because the transload option operates at a large cost disadvantage.[6] In both instances, the costs of the non-rail alternative was not determined using an URCS analysis and yet the ICC and the STB found that the costs were comparable to the railroad's costs for market dominance determinations.

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[5] See *McCarty Farms* at 831-832.
[6] See *FMC* at 717-718.

QUALITATIVE MARKET DOMINANCE DETERMINATION

B. Comparing Motor Carrier Variable Cost with Rail Fully Allocated Cost

CSXT claims that a cost comparison across modes is not reliable because "there are significant differences between the cost structure of the rail industry and that of the motor carrier industry."[7] Specifically, CSXT asserts that "a study purporting to show that the variable costs of trucking are higher than the variable costs of rail transportation is meaningless in the absence of a showing that trucking costs are higher than the fully allocated cost of rail transportation, including all necessary infrastructure maintenance and capital improvements."[8] CSXT claims that motor carrier and rail costs are not comparable due to the extent that motor carriers do not incur capital or operating costs related to the highway infrastructure, and railroads do incur capital and operating expenses related to infrastructure. CSXT's solution to this alleged mismatch in costs is to compare motor carrier long-run average costs with railroad fully allocated costs.

CSXT's position that long-run average cost of trucking should be compared with fully allocated cost of the rail industry is non-sensical for at least four reasons. First, fully allocated cost can only be determined for an entity as a whole and not for specific movements. Fully allocated costs are comprised of variable costs that are directly attributable to a specific movement and an arbitrary allocation of fixed costs. In *Guidelines*,[9] the ICC recognized that any attempt to develop fully allocated costs were arbitrary and therefore adopted "Constrained Market Pricing" to set maximum rates. This eliminated prior rate making approaches used by the ICC based on a railroad's so called full costs, i.e., it eliminated the use of the ratio method

[7] CSXT Reply at II-80.
[8] Id. at II-80-81.
[9] Ex Parte No. 347 (Sub-No. 1), *Coal Rate Guidelines, Nationwide*, 1 I.C.C. 2d, 522 ("*Guidelines*")

and the "ton and ton-mile methodology to allocate fixed costs as well as the ICC's "7% solution."[10]

Second, even if fully allocated costs could be determined for a specific movement, comparing long-run average costs of the motor carrier industry with fully allocated cost of the rail industry for specific moves is incorrect as the two cost methodologies, by definition, are different measures of cost levels. Long-run average cost varies with a change in output over the long term, whereas fully allocated cost has a component of cost which does not change with changes in volume, but rather is arbitrarily assigned to a movement of traffic, thus the two cost methods cannot be used for comparison purposes.[11]

Third, CSXT would have the STB consider costs incurred by entities other than the two competitors in the market place, such as the Federal government or various state or local governments which provide capital and operating expenses in building the infrastructure used by motor carriers in its determination of market dominance. As these costs are not incurred by the motor carrier, they are not relevant to the motor carrier's or the railroad's ability to set prices for provision of a specific service (only a carrier's variable costs of service are relevant for a market dominance analysis, as this cost level sets the floor for rate setting purposes). Highway trucks pay numerous fees, tolls and taxes that support the construction and maintenance of highway infrastructure. For example, highway trucks pay: 1) federal heavy vehicle use tax, 2) federal excise fuel tax, 3) excise taxes on tractors, trailers and tires, 4) operating taxes to support the

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[10] The "7% solution" based rates on fully allocated costs plus a seven percent additive. The U.S. Court of Appeals concluded that this methodology was "arbitrary and capricious". See Docket No. 78-2051, decided June 9, 1980).

[11] *Guidelines* defined fully allocated costs as: The sum of the variable costs of a transportation movement and an arbitrary apportionment of constant costs..." (1 I.C.C. 2d, 553).

Federal Highway Trust Fund, and, 5) state tolls and fees for over-the-road use.[12] These payments are used to provide funds for construction or reconstruction, rehabilitation, maintenance and operations and administration.[13]

Finally, were CSXT's positions correct, which they are not, the roadway capital and maintenance costs should be removed from the calculation of CSXT's cost of providing service, which would only serve to increase the cost advantage enjoyed by the railroad.

C. Inclusion of Transload Fees and Storage Charges

CSXT criticizes the M&G analysis for treating the full price of transloading facility fees and storage charges as the costs of those fees and charges.[14] M&G included transloading facility and storage charges in its analysis as a surrogate for the cost of providing these services. CSXT did not present an alternative or identify the difference between fees and costs. The level of these fees and charges is a small part of the overall cost of providing the alternative service.[15] In fact, removal of the transload facility fee and storage charges from the analysis altogether, which unquestionably understates the costs for the alternative transportation service of the alternative mode, still results in costs that far exceed CSXT's costs.

D. Calculation of Motor Carrier Costs

CSXT criticizes the source and application of M&G's motor carrier costs. As discussed below, each of CSXT claims are ill-founded and or insignificant.

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[12] See, "Facts about Trucking in Georgia", Georgia Trucking Association, www.gmta.org/industrylinks.asp.
[13] "Highway Cost Allocation Study, 2009-2011 Biennium", Oregon Department of Administrative Services, Office of Economic Analysis, www.oregon.gov/das/oea/doc/highwaycost/2009report.pdf.
[14] CSXT Reply at II-81.
[15] Combined the transload facility fees and storage charges for the individual alternatives examined in M&G's opening evidence ranges from ${{[redacted]}} to ${{[redacted]}} per rail carload or no more than {{[redacted]}} percent of the total amount associated with any given alternative.

QUALITATIVE MARKET DOMINANCE DETERMINATION

First, CSXT claims that the motor carrier variable cost study relied upon by M&G, performed by the American Transportation Research Institute ("ATRI") was funded by the trucking industry and were developed as an advocacy tool to convince policymakers that they were understating truck costs. CSXT's argument is ill-founded for two reasons. First, assuming CSXT is correct and the costs in the ATRI report are somewhat high, the fact remains that they are developed for the industry as a whole and understate the cost incurred by specialized carriers like those which operate self-loading and unloading pneumatic/vacuum trailers required to transport M&G's PET. As discussed in M&G's Opening Evidence specialized carriers incur driver's wages that are 28 percent higher than the industry average, the specially engineered equipment is more expensive than the industry average equipment with higher repair and maintenance costs, insurance costs are 30 percent higher than truckload carriers and permitting costs are higher than that for the average carrier.[16] To the extent that the ATRI overstated the average cost of motor carrier industry as a whole, it substantially *understated* the average cost of specialized carriers like those the CSXT proposes would haul M&G's PET.

Further, Attachment No. 1 to Exhibit II-B-23 of M&G's Opening Evidence shows that the cost of providing service by the alternative carriers exceeds that of CSXT's cost of serving the existing traffic by up to a factor of 4.5 times and only part of this cost is attributable to the motor carrier portion of the move. Stated differently, the average cost in the ATRI report would have to be overstated by more than 400 percent before it would alter the conclusion that CSXT's costs are lower than those of providing the alternative service.

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[16] M&G Opening Evidence, Exhibit II-B-23, pp 8-9.

QUALITATIVE MARKET DOMINANCE DETERMINATION

Next, CSXT states that M&G doubles the truck costs by assuming a 100 percent empty return ratio, i.e., M&G assumes that every truck that carries a M&G shipment will be unable to find any other shipments or backhaul after delivery of M&G's shipment. CSXT argues that this assumption does not comport with reality and yet it provides no evidence to the contrary. CSXT's argument is ill-founded for two reasons. First, it assumes that a specialized carrier operating a self-loading and unloading pneumatic/vacuum trailer can use this equipment for nearly any purpose. This is clearly not the case. This specialized equipment was designed and engineered for moving PET and has little to no alternative application.

Moreover, CSXT assumes that substantial quantities of M&G's product would be moved by these specialized carriers, which, given the extraordinary volume of truck traffic that this would create, all but requires dedicated truck service and 100 percent empty backhaul. For example, according to CSXT's Reply Exhibit II-B-2, page 26, {{[redacted]}} truck shipments per week would be required to move 100 percent of M&G's PET shipments from Apple Grove, WV to Franklin, IN. Round trip travel time for {{[redacted]}} trips, including load and unload time equals {{[redacted]}} hours per week.[17] Providing this level of service would require {{[redacted]}}[18] dedicated trucks providing around the clock service, i.e., a 100 percent empty backhaul just to keep up with the proposed service.

CSXT admits that the motor carriers would provide dedicated equipment in its Reply filing when it states that both {{[redacted]}}

[17] Googlemaps.com shows estimates one-way travel time from Apple Grove to Franklin to equal 4 hour, 52 minutes. Rounding this to 5 hours each way plus {{[redacted]}} hours for loading and {{[redacted]}} hours for unloading equals total round trip time of 16 hours, time {{[redacted]}} trips equals {{[redacted]}} hours.

[18] {{[redacted]}} hours/(7days x 24 hours) = {{[redacted]}} trucks, excluding any time for servicing, maintenance, meals or delays due to traffic.

QUALITATIVE MARKET DOMINANCE DETERMINATION

[redacted].}}[19] By definition, this dedicated equipment would be used for no other purpose than to haul M&G product thus resulting in a virtual 100 percent empty return ratio. CSXT's argument that motor carrier equipment in this service is flexible and can pick up opportunities wherever they arise is clearly refuted by its own evidence.

IV. THE TRANSPORTATION ALTERNATIVES PRESENTED BY CSXT DO NOT PROVIDE EFFECTIVE COMPETITION

As discussed in M&G's Opening Evidence, Exhibit II-B-23 and in the previous section of this Rebuttal Exhibit, a determination of market dominance requires an examination of the economics underlying both the rates at issue and those of the alternative transportation and the margins that can be earned by the defendant carrier. For an effective competitive constraint to exist, CSXT's cost of providing the service must be comparable to or greater than that of the cost of providing the alternative service by all carriers and service providers in that supply chain. Stated differently, if CSXT's margin from the rates at issue, minus the difference between the CSXT rail rate and the cost of providing the alternative service is substantially positive, then the alternative is not an effective constraint on CSXT's pricing and CSXT does possess market dominance.

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[19] CSXT Reply at pp. II-68 to 69. In addition, CSXT's Reply evidence also demonstrates that the specialized motor carriers must travel from 36 to 68 miles from various terminals just to reach M&G's Apple Grove production facility. Id at II-69 to 70. These empty miles from or to the motor carriers' terminals are not included in M&G's calculation of truck loaded and empty truck miles and the associated motor carrier cost.

QUALITATIVE MARKET DOMINANCE DETERMINATION

To demonstrate CSXT's market dominance for each of the 43 origin/destination pairs where CSXT alleges M&G has an effective competitive alternative,[20] we: 1) determined the CSXT margin for each origin/destination pair; 2) determined the cost of providing the alternative service[21]; 3) subtracted the cost of the alternative service from the CSXT rail rate; and 4) compared the rail margin to the rail rate, less the alternative cost of providing the service. This analysis demonstrates that CSXT's margin from the rates at issue for the 43 lanes identified by CSXT exceed the difference between CSXT's rate on the issue movement and the cost of the alternative service by a substantial margin. Thus, CSXT has sufficient market power to force the competitor out of the market place. The net result is that CSXT is market dominant in each of the 43 issue lanes where CSXT claims that an effective competitive alternative exists.

The procedures and methodology used in this analysis are the same as those presented in Exhibit II-B-23 of M&G's Opening Evidence, with one minor modification.[22] This section addresses our procedures and methodology by topic, i.e., revenue, rail costs, truck costs, transload facility fee and other costs. Our overall methodological discussion is followed by a discussion of the four groups of transportation alternatives proposed by CSXT which are:

1. Truck direct from Apple Grove or Belpre to customer;
2. Truck from Apple Grove or Belpre to a rail transload at the current interchange point with the existing connecting rail carrier;

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[20] CSXT witness Gordon Heisler submits evidence allegedly demonstrating effective competition from alternative service providers for 43 of the 69 origin/destination pairs at issue in this proceeding. See CSXT Reply, pp II-36 through II-45.

[21] CSXT's claims on numerous occasions that the "cost" of the alternative service is the same or lower than that of CSXT, however, CSXT is referring to the rates charged for the alternative service and CSXT's rates, not the competing carrier(s)' alternative service or CSXT's cost of providing service to the issue traffic. *See* for example, CSXT Reply at I-4, II-37, II-38 and II-41.

[22] In response to a criticism raised in CSXT's Reply evidence, transload facility fees and storage charges have been excluded from our analysis.

3. Truck from Apple Grove or Belpre to a rail transload at Lima, Ohio on the Chicago, Fort Wayne and Eastern Railroad ("CFER") for delivery to interchange in Chicago with the existing connecting carrier; and

4. Movement by an alternative rail carrier from an interchange location where CSXT currently receives issue shipments to a truck transload facility and delivery by truck to destination.

A. OVERALL METHODOLOGY

1. Rail Revenue

Rail revenue in our analysis is based on the CSXT rates at issue, including the average fuel surcharge applied by CSXT during 1Q2011. This differs slightly from the rail revenues in Mr. Heisler's analysis in that Mr. Heisler includes the rail carrier's fuel surcharge as of May 2011.

Connecting carrier revenues are included in our analysis in two circumstances. First, for origin/destination pairs where Mr. Heisler has proposed a truck direct to customer alternative, and the existing move includes both CSXT and a connecting carrier, the revenue for the connecting carrier is included in order that a comparison between revenues for the entire move and cost for the entire move can be made. For example, the existing shipment from Apple Grove to Franklin, IN originates on CSXT and is interchanged to the LIRC at Louisville, KY for delivery to Franklin, IN. In order for revenues to be compared with the cost of providing the alternative service from origin to the customer, both CSXT and LIRC revenues must be considered.

Second, in those instances where Mr. Heisler has proposed an alternative that would change a connecting carrier's cost of providing service, this change in cost must be accounted for and compared with the revenues associated with that change in cost. For example, Mr. Heisler proposes a truck/rail alternative for the Apple Grove to Fremont, OH origin/destination pair, which currently moves from Apple Grove to Columbus, OH where it connects with Norfolk Southern Railway ("NS") for delivery to Freemont. Mr. Heisler's proposed alternative changes NS' operation from an "interchange received and terminated" shipment to an "originated and terminated" shipment. The originated and terminated shipment is a more costly service for NS to provide. In performing our analysis, we have incorporated NS' revenue and its cost of service under both the existing movement and the alternative scenarios in order to accurately reflect the costs of providing the service and the margins realized from providing the service.

2. Rail Costs

For each of the 43 origin/destination pairs we developed CSXT's URCS Phase III costs of providing service based on the STB's 2009 URCS unit costs. In addition, to CSXT variable cost, URCS Phase III costs were developed for connecting railroads included in the analysis where appropriate. URCS costs for NS are based on the STB's 2009 URCS unit costs for NS. URCS costs for Class II and Class III carriers are based on the STB's 2009 URCS regional costs. All URCS costs were indexed to 1Q2011 levels.

Connecting railroad variable costs were included in our analysis in three circumstances. First, when Mr. Heisler's alternative is a truck direct to customer shipment and the existing rail shipment includes both the CSXT and a connecting railroad, that railroad's costs are calculated.

Second, when Mr. Heisler's proposed alternative changes a connecting railroad's operation and thereby its cost of providing service, the connecting railroad's cost of providing service is calculated (e.g. the Apple Grove to Fremont, OH move via a Columbus, OH transload discussed above). Finally, the alternative railroad's cost is calculated for all origin/destination pairs where Mr. Heisler has proposed a railroad other than CSXT be included in the shipment, i.e., all shipments which involve movement by CFER between Lima, OH and Chicago, IL.

3. Truck Costs

Marginal truck costs were developed for each of Mr. Heisler's alternatives based on the truck cost per mile found in the December 2008 report titled *An Analysis of the Operational Costs of Trucking*, by ATRI. This report provides a marginal cost per mile for the motor carrier industry of $1.73 per loaded or empty mile for truckload, less-than-truckload and specialty carriers combined.

PET is typically transported in pellet form. To transport pellets by motor carrier, specialized carriers operating self-loading and unloading pneumatic/vacuum trailers are utilized. The ATRI Report states that the $1.73 marginal cost per mile understates the actual cost incurred by specialized motor carriers. The ATRI Report indicates at several locations that costs for specialty carriers are greater than the industry average. For instance at page 16, the Report indicates that wages for drivers of specialty carriers are paid 28 percent more than the compensation for the average carrier. In addition, at page 13, the Report acknowledges that specialized carriers operate more expensive, specially-engineered equipment and have a significantly higher cost per mile than the truckload and less-than-truckload sectors. Further, at

page 14, the Report indicates that specialized carriers have the highest repairs and maintenance; and insurance premiums for specialized carriers are 130 percent higher than truckload carriers.[23] At page 15 the Report states that permitting costs for specialized carriers are considerably higher than for the average carrier.

For reasons cited above, the $1.73 marginal cost per mile understates the actual cost incurred by the specialized motor carriers that would move M&G's pellets. Based on these statements from the ATRI Report, we increased the driver wage related costs by 28 percent to more accurately reflect the wages of specialty carriers.[24] This adjustment to the $1.73 average truck cost results in a specialty carrier 2008 cost per mile of $1.899,[25] which was then indexed to 1Q2011 levels using the Producer Price Index for "Truck Transportation". This produces a specialty carrier cost per mile of $1.905 at 1Q2011 wage and price levels.

The $1.905 marginal cost per mile was applied to the truck miles from transload to destination provided by M&G for each origin/destination pair and increased to reflect a 100 percent empty backhaul.[26]

In addition, motor carrier costs for transload from rail to truck and for truck cleaning are included in this analysis. To estimate the transload cost, we accepted the driver's wage cost for

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[23] As shown on page 9 of the Report, truckload carriers comprise 51 percent of the survey responses on which the average cost per mile is based.

[24] The resulting motor carrier cost per mile remains understated to the extent that it does not reflect the higher costs for equipment capital and maintenance, insurance and permitting costs.

[25] Messers Burris and Nolan submitted Reply evidence similar to that presented in Exhibit II-B-23 on February 18, 2011 in this proceeding. In that evidence Messers Burris and Nolan relied on the motor carrier industry cost per mile of $1.73. As explained above, in this Rebuttal Exhibit the motor carrier industry cost per mile has been adjusted to reflect an increase in driver wages of 28 percent to reflect those of specialty carrier based on adjustments referred to in the ATRI Report.

[26] Specialized carriers such as those operating self-loading and unloading pneumatic/vacuum trailers have little to no opportunity for loaded backhaul shipments and as a result typically operate with a 100 percent empty backhaul.

specialty carriers including benefits, and bonuses per hour from the ATRI Report, indexed to 1Q2011 wage and price levels, multiplied by two hours for transload activities.[27] This yields a railcar equivalent cost of $270.75 per carload.

Truck cleaning costs are based on the labor costs for "cleaners of vehicles and equipment" as reported by the Bureau of Labor statistics, and an assumption that two persons working two hours are required to clean a self-loading and unloading pneumatic/vacuum trailer. The cost of labor for cleaning equals $68.00 per trailer, and is applied to each truckload based on {{[redacted]}}

4. Other Costs

Mr. Heisler proposes to divert shipments moving to and from interchange in Chicago between CSXT and connecting carriers to a connection between the CFER and connecting carriers in Chicago. These connecting carriers include BNSF Railway Company ("BNSF"), Union Pacific Railroad Company ("UP"), Canadian National Railway Company ("CN") and Canadian Pacific "(CP").

The CFER destination in Chicago is Indiana Harbor Belt's ("IHB") Blue Island yard. CFER does not directly interchange with any of CSXT connecting carriers for shipments of M&G PET, instead IHB provides an intraterminal switch effecting this interchange within the Chicago switching district. For this service, IHB charges a $138 switch fee for loaded or empty cars. Mr. Heisler's workpapers indicate that the {[redacted]} However, close examination of the

[27] The two hours for transload activities is based on the time used by CSXT Witness Gordon R. Heisler in his January 27, 2011verified statement in this proceeding.

workpapers supporting Mr. Heisler's January 27, 2011 verified statement in this proceeding reveals {[redacted]} As a result, our analysis adds the {[redacted]} to the movements with required connection between CFER and {[redacted]} or {[redacted]} in Chicago.

B. SPECIFIC APPLICATION TO INDIVIDUAL ORIGIN/DESTINATION PAIRS

The specific application of our methodology to individual origin/destination pairs is discussed below and is organized under each of the four categories of transportation alternatives proposed by Mr. Heisler.

1. Truck Direct to Customer

Mr. Heisler proposes that shipments for 21 origin/destination pairs can be moved by truck from origin to destination.[28] Of these 21 origin/destination pairs, 16 originate at Apple Grove, four originate at the Belpre rail storage facility and one originates at the Parkersburg, WV storage facility. The highway distance for these twelve origin/destination pairs range from 67 miles to 492 miles, and according to Mr. Heisler's workpapers these origin/destination pairs represent {{[redacted]}} rail car shipments in 2009 or the equivalent of {{[redacted]}} truckloads.[29] The

[28] There is an inconsistency between CSXT's Reply text and its Exhibit and workpapers. In CSXT's Reply text at pages II-38 through II-41, CSXT describes alternatives for 20 of the issue traffic origin/destination pairs, yet in Exhibit II-B-3, II-B-4 and its workpapers CSXT performs it's direct truck competitive analysis for 21 origin/destination pairs.

[29] For purposes of our analysis we accept Mr. Heisler's assumption that four truckloads are equal to one railcar equivalent.

rail route of movement for 13 of these origin/destination pairs involves CSXT and a connecting carrier.

Mr. Heisler contends that a truck direct to customer movement is a "logistically feasible and economically competitive" alternative for the existing rail movement for each of these twelve origin/destination pairs. Further, Mr. Heisler contends that for 14 of the origin/destination pairs the truck direct rate is less than the current rail rate and for six origin/destination pairs the truck rate is only slightly higher than the rail rate. Mr. Heisler therefore concludes that the truck alternative acts as a competitive constraint on CSXT's rail rates.

Attachment No. 1, Section 1, lists each of the 21 origin destination pairs for which Mr. Heisler alleges a viable and economically competitive truck direct move exists. Attachment No. 1 also shows the existing rail rates and costs for the issue movements to destination and the costs of the direct truck alternative. As shown in Attachment No. 1 the cost of the truck alternative is up to 4.7 times higher than that of the rail alternative. Most importantly, Attachment No. 1 shows that the margin from the rail rate is substantially greater than the rail rate, less the cost of the truck alternative.

The rail cost associated with each origin/destination pair is significantly less than the alternative cost of providing service; and the difference between the rail margin and the rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

QUALITATIVE MARKET DOMINANCE DETERMINATION

As discussed in the previous section, all the rates and costs are shown at 1Q2011 levels. Rail shipments to 13 of the 21 origin/destination pairs are joint line moves, where CSXT is the originating carrier. As the truck rates proposed by Mr. Heisler are rates to destination, not interchange, the rail revenues and rail costs shown in the table above include both CSXT and the connecting carriers' data.

The rail costs are based on the STB's 2009 URCS unit costs and its Phase III cost program. Costs for the alternative transportation include truck cost, truck transload and truck cleaning costs, and the incremental CSXT switch fees at Apple Grove discussed in the previous section.

Two of Mr. Heisler's proposed alternatives are 67-mile and 68-mile truck direct moves from Apple Grove to the rail storage facilities at Belpre, OH and Parkersburg, WV, respectively. While both of these moves are a relatively short distance, they represent moves to rail storage facilities where M&G stores PET in railcars until the customer requires order fulfillment. From Belpre PET is shipped either by rail or truck, from Parkersburg all outbound shipments are by rail. Mr. Heisler fails to recognize that his proposed truck moves to Belpre and Parkersburg require PET to be loaded into railcars at Apple Grove, transloaded to truck at Apple Grove, moved by truck to either Belpre or Parkersburg and then *reloaded* into railcars for storage until such time as the customer requires delivery. Mr. Heisler also fails to account for the fact that M&G would have to position empty railcars at Belpre and Parkersburg to receive the product shipped by truck to these storage facilities.

QUALITATIVE MARKET DOMINANCE DETERMINATION

2. Truck to Current Interchange Location for Transload

Mr. Heisler claims that M&G has competitive alternatives to CSXT's rail rates for seven origin/destination pairs by moving product by truck from either Apple Grove or Belpre to transload facilities located where CSXT currently connects with the delivering carrier. Specifically, Mr. Heisler claims M&G could move PET from Apple Grove and Belpre by truck to Hagerstown, MD for transload to NS for delivery to the customer, and from Apple Grove and Belpre to Columbus, OH for transload to NS for delivery to the customer. Mr. Heisler concludes that in all seven instances the rate for the alternative service is competitive with the existing service and therefore the alternative service effectively constrains CSXT's pricing.

As with the truck direct to customer alternatives proposed by Mr. Heisler the truck to transload at existing interchange locations is not economically feasible as the cost of providing the alternative service far exceeds the cost of providing the existing rail service.

Attachment No. 1, Section 2 summarizes the comparative economics of the existing rail service and Mr. Heisler's proposed truck transload alternatives for each of these seven origin/destination pairs.

Mr. Heisler's proposed alternatives require a change in operations for NS at both the existing interchange locations, i.e., under the proposed alternative, rather than receiving loaded railcars from CSXT in interchange, NS will originate railcars at the transload facilities. Because of this change in the cost of providing service, our analysis includes both the rail rate from origin to destination and the rail cost from origin to destination for both the existing rail service and the proposed alternative service.

QUALITATIVE MARKET DOMINANCE DETERMINATION

As shown in Attachment No. 1, the rail cost associated with each origin/destination pair is significantly less than the alternative cost of providing service. Further, the difference between the rail margin and the rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

In addition to CSXT having a significant economic advantage over Mr. Heisler's proposed alternatives for these seven origin/destination pairs, several of Mr. Heisler's assumptions regarding the Hagerstown transload alternative are ill-founded and incorrect.[30] First, Mr. Heisler proposes that Utility Supply Company, a utility pole transload facility, provide the necessary facility for transload of M&G's PET from truck to railcar on NS' rail line. {{ [redacted] }}

Second, Mr. Heisler incorrectly assumes that NS will move a railcar of M&G's PET which originates at the St. James transload facility to destination for the same rate that it would move a railcar it receives in interchange from CSXT at Hagerstown. However, Mr. Heisler admits that the NS Rule 11 rate that applies to railcars received from CSXT at Hagerstown would not cover rates from the Utility Supply facility. Mr. Heisler states that in his experience, it is *extremely likely* that M&G would be able to secure the same or a very similar contract rate for railcars originating at a transload facility located just 1.5 miles away from Vardo.[31] The fact is,

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[30] These include the Apple Grove and Belpre to Allentown, PA and Apple Grove to Havre de Grace, MD and Hazelton. PA origin/destination pairs.

[31] Heisler VS at p. 12, note 8. (Emphasis added). Mr. Heisler indicates that Utility Supply Company's transload facility is located in Hagerstown, MD where the existing interchange between CSXT and NS takes place. In actuality Utility Supply Company is located six miles south of Hagerstown in St. James, MD.

however, that NS is not willing to provide M&G with the same rate for cars originating at Utility Supply Company in St. James. As indicated in M&G Reb. Ex. II-B-29, NS has provided a quote for moving railcars from the Utility Supply Company in St. James equal to {{[redacted]}} more per carload than its existing rate for moving M&G's PET from interchange with CSXT in Hagerstown. Mr. Heisler's conclusion that the truck transload/NS rate for moving M&G's PET via the Hagerstown transload is less than the existing rail rate is incorrect.

3. Truck from Origin to Lima, OH Transload to CFER

Thirteen of the issue origin/destination pairs originate at Apple Grove or Belpre and move via CSXT to interchange with Western carriers in Chicago. Mr. Heisler proposes a truck/rail alternative for the CSXT portion of the move which assumes shipments will originate by truck at Apple Grove and move a highway distance of 220 miles to Lima, OH where M&G PET would transload to railcars on the CFER. CFER would then transport the railcars to connection with the same Western carriers in Chicago that currently participate in the issue movements. Attachment No. 1, Section 3 summarizes the comparative economics of the CSXT move from Apple Grove and Belpre to connection with the Western carriers in Chicago and Mr. Heisler's proposed truck/CFER move through the Lima, OH transload. As shown in Attachment No. 1, CSXT's cost associated with each origin/destination pairs is significantly less than the cost of Mr. Heisler's proposed alternative service. Further, the difference between the rail margin and the CSXT rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

QUALITATIVE MARKET DOMINANCE DETERMINATION

As discussed earlier, the CFER operations terminate at the IHB Blue Island yard in Chicago and the CFER does not directly interchange with BNSF, UP, CP or CN. Instead, IHB provides interchange services between CFER and these Western carriers. Per CFER's email to Mr. Heisler, CFER's rate for shipments from the Lima transload to Chicago include the {[redacted]} for connections with {[redacted]}, but there is no mention of the rate including the switch charge for interchange with {[redacted]}. We have added this switch charge to the issue origin/destination pairs that connect with these two carriers, i.e., shipments terminating at University Park, Champaign and Rockford, IL.

It should also be noted that CFER leases its right-of-way from CSXT for approximately {{[redacted]}} annually.[32] In addition, {{[redacted]}}. Neither of these costs are reflected in the URCS costs attributed to the CFER alternatives in our analysis.

4. Alternative Rail Carrier from Existing CSXT Interchange to Truck/Transload to Destination

Nine of the issue origin/destination pairs originate on Western carriers and connect with CSXT in Chicago or New Orleans for furtherance to destination.[33] For these movements, Mr. Heisler proposes that a different rail carrier move the issue traffic from the existing CSXT interchange location to a truck transload facility, then move to destination by truck. As shown in

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[32] This amount is comprised of two components, an annual rental payment of $1.7 million and an allocation of a $10 million upfront advance rental payment applied in equal payments to each of the 20 year term of the CSXT/CFER lease agreement.

[33] There is yet another inconsistency between CSXT's Reply text and its Exhibit and workpapers. In CSXT's Reply text at pages II-44 to II-45, CSXT describes alternatives for six of the issue traffic origin/destination pairs, yet in Exhibit II-B-3, II-B-4 and its workpapers CSXT performs it's competitive analysis for nine origin/destination pairs. We have include each of the nine origin/destination pairs in our analysis.

QUALITATIVE MARKET DOMINANCE DETERMINATION

Attachment No. 1, Section 4, CSXT's cost associated with each origin/destination pair is significantly less than the cost of the alternative service. Further, the difference between the rail margin and the CSXT rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

V. CONCLUSION

Our analysis of the economics of the issue traffic rates and CSXT's existing operations with those of Mr. Heisler's proposed alternatives, demonstrate that CSXT's margin from the rates at issue exceed the difference between CSXT's rate on the issue movement and the cost of the alternative service by a substantial margin. Thus, CSXT has sufficient market power to force the competitor out of the market place. The net result is that CSXT is market dominant in each of the 43 issue lanes where CSXT claims that an effective competitive alternative exists.

Attachment No. 1
Rebuttal Exhibit II-B-32

Determination of CSXT Rail Market Dominance
CSXT Rail Margin, less Difference Between Rail Rate and Cost of Providing Alternative Service

Exhibit / Lane	Current Applicable Delivered Rail Rates & Charges	Current Delivered Rail Cost	Alternative Cost	Alt Cost / Rail Cost 1/	Current CSXT Margin 2/	Current Rates Less Alt. Cost 3/	Current CSXT Rail Margin Less Alt Margin 4/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

PUBLIC VERSION

1/ Column (4) / Column (3).
2/ Column (2) - Column (3).
3/ Column (2) - Column (4).
4/ Column (6) - Column (7).

Rebuttal Exhibit II-B- 33

highly confidential information redacted

Rebuttal Exhibit II-B- 34

highly confidential information redacted

Rebuttal Exhibit II-B- 35

highly confidential information redacted

Rebuttal Exhibit II-B- 36

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QUALITATIVE MARKET DOMINANCE DETERMINATION

I. INTRODUCTION

In Exhibit II-B-23 of M&G's Opening Evidence, M&G's experts demonstrated that in spite of similarly-priced transportation alternatives for 25 of the 69 issue movements, CSXT has market dominance over M&G's traffic moving in these 25 lanes, because the transportation alternatives do not provide economically *effective* competition. CSXT's market dominance is evidenced by its ability to capture the majority of M&G traffic in these lanes and at rates that significantly exceed its cost of providing the service. Further, CSXT's costs are far less than that of its competitors, which provides CSXT the ability to lower its rates to less than its competitor's costs while earning a contribution from the traffic at issue. Stated differently, CSXT can lower its rates to such an extent that it can force its competitor out of business and still make a profit.

In Reply, CSXT attempted to respond to M&G's arguments and evidence of ineffective competition but they ignored precedents included in previous ICC and STB decisions and instead relied on economically invalid and inconsequential arguments. In addition, CSXT, through its Witness Mr. Gordon Heisler, presented information related to 50 alternatives which it argues provide viable transportation options for 43 of the 69 origin/destination pairs at issue in this proceeding.[1]

In this Rebuttal, each of CSXT's arguments related to quantitative market dominance is addressed and M&G demonstrates that not one of Mr. Heisler's transportation alternatives

[1] Seven of the transportation alternatives presented by Mr. Heisler provide two alternatives for one origin/destination pair. CSXT's Reply states there are six origin/destination pairs with two alternatives (*See* CSXT Reply at II-36, however, review of CSXT's Exhibits and workpapers show 50 alternatives for 43 origin/destination pairs.

represent *effective* competition as the alternative carriers' cost of providing service far exceeds CSXT's cost of providing service to the issue traffic.

Rebuttal Exhibit II-B-32 is organized under the following topical headings:

II. CSXT's Reply Evidence Fails to Recognize that Market Dominance Can Exist Even if Alternative Transportation as Similar or Lower Rates

III. CSXT's Claims that M&G's Cost Analysis is Flawed are Inconsequential and Economically Invalid

IV. The Transportation Alternatives Presented by CSXT Do Not Provide Effective Competition

V. Conclusion

QUALITATIVE MARKET DOMINANCE DETERMINATION

II. CSXT's REPLY EVIDENCE FAILS TO RECOGNIZE THAT MARKET DOMINANCE CAN EXIST EVEN IF ALTERNATIVE TRANSPORTATION HAS SIMILAR OR LOWER RATES

CSXT claims that truck or rail/truck transload alternatives provide physically feasible options for transporting M&G's PET and therefore CSXT cannot have market dominance over this traffic. CSXT's position ignores the precedent set forth in previous ICC and STB proceedings which hold that for a finding of market dominance competition must be *effective*.

In Opening, M&G quoted the ICC as stating: "The existence of intermodal competition is not enough to establish a lack of market dominance."[2] In *McCarty Farms*, the ICC determined that "truck and truck/barge service competes to some extent with BN rail service for carriage of wheat and barley from Montana to the PNW." Id. at 831. But, the ICC also found that "BN lacks *effective* competition, *i.e.*, competition adequate to restrain its rates at or below a maximum reasonable level. Id. at 831 (italics in original). The ICC found that, "even with truck and truck/barge competition, BN has been able to capture the vast majority of the total transportation market" and "its rates have significantly exceeded…the BN's costs of providing service." Id. at 831-32.

Moreover, in *FMC*, 4 STB at 717-18, the STB concluded that a transload alternative with comparable rates to the defendant railroad's rates did not provide *effective* competition, because the transload option operates at a large cost disadvantage compared to rail. That caused the STB to conclude that UP's ability to match prices set by the higher-cost transload alternative, while

[2] 3 I.C.C. 2d 832.

maintaining a dominant market share, could not demonstrate *effective* competition for the issue traffic.

In its Opening Evidence, M&G examined 25 of the 69 lanes at issue in this proceeding, and demonstrated that the competing carriers' cost of providing alternative service in each of these lanes is substantially higher than CSXT's cost of service and therefore the alternative transportation does not provide *effective competition*.

III. CSXT's CLAIMS THAT M&G'S COST ANALYSIS IS FLAWED ARE INCONSEQUENTIAL AND ECONOMICALLY INVALID

CSXT critiques M&G's showing that transportation alternatives to CSXT have much higher costs than CSXT.[3] CSXT contends that, even if a carrier's costs are relevant to the market dominance inquiry, M&G's attempt to compare costs across modes in its Opening Exhibit II-B-23 is flawed for several reasons.[4]

A. Comparing URCS Costs with Costs of Other Modes

CSXT asserts that, in the absence of an URCS-equivalent for alternative modes, no reliable analysis is possible. That simply is not true. URCS calculates long-run variable costs for individual railroads. Long-run variable costs are costs which change with a change in output over the long term. Long-term costs assume that a company has the flexibility to change production inputs over time.

[3] CSXT Reply at II-79-82.
[4] Id. at II-80-82.

QUALITATIVE MARKET DOMINANCE DETERMINATION

Long-run variable cost for railroads can be determined through various formulas whether it be the STB's Uniform Railroad Costing System ("URCS"), Rail Form A (historically used by the ICC) or an individual rail carrier's internal management costing systems. The intent of each of these formulas is the same, i.e. to measure the change in a railroad's cost with a change in output. These variable costs are used as a tool to set the floor for transportation rates.

Other transportation modes and other industries also calculate long-run variable cost. For example, the ICC used a Highway Form B to calculate motor carrier costs. The intent of Highway Form B cost and Rail Form A costs were the same, i.e., to calculate long-run variable costs of the carriers in the respective industries. The level of these costs may be different among carriers, modes and industries but the intent is identical, i.e. to calculate a carrier's costs associated with handling traffic.

CSXT's position also ignores the fact that comparisons of such analyses have been accepted in prior proceedings. In *McCarty Farms*, for example, the ICC determined that truck direct and truck/barge service did not provide *effective* competition to rail based on the fact that these alternatives were high cost alternatives using the cost studies presented by Complainants.[5] Similarly, in *FMC* the STB concluded that a truck/rail transload alternative with comparable rates did not provide effective competition because the transload option operates at a large cost disadvantage.[6] In both instances, the costs of the non-rail alternative was not determined using an URCS analysis and yet the ICC and the STB found that the costs were comparable to the railroad's costs for market dominance determinations.

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[5] See *McCarty Farms* at 831-832.
[6] See *FMC* at 717-718.

QUALITATIVE MARKET DOMINANCE DETERMINATION

B. Comparing Motor Carrier Variable Cost with Rail Fully Allocated Cost

CSXT claims that a cost comparison across modes is not reliable because "there are significant differences between the cost structure of the rail industry and that of the motor carrier industry."[7] Specifically, CSXT asserts that "a study purporting to show that the variable costs of trucking are higher than the variable costs of rail transportation is meaningless in the absence of a showing that trucking costs are higher than the fully allocated cost of rail transportation, including all necessary infrastructure maintenance and capital improvements."[8] CSXT claims that motor carrier and rail costs are not comparable due to the extent that motor carriers do not incur capital or operating costs related to the highway infrastructure, and railroads do incur capital and operating expenses related to infrastructure. CSXT's solution to this alleged mismatch in costs is to compare motor carrier long-run average costs with railroad fully allocated costs.

CSXT's position that long-run average cost of trucking should be compared with fully allocated cost of the rail industry is non-sensical for at least four reasons. First, fully allocated cost can only be determined for an entity as a whole and not for specific movements. Fully allocated costs are comprised of variable costs that are directly attributable to a specific movement and an arbitrary allocation of fixed costs. In *Guidelines*,[9] the ICC recognized that any attempt to develop fully allocated costs were arbitrary and therefore adopted "Constrained Market Pricing" to set maximum rates. This eliminated prior rate making approaches used by the ICC based on a railroad's so called full costs, i.e., it eliminated the use of the ratio method

[7] CSXT Reply at II-80.
[8] Id. at II-80-81.
[9] Ex Parte No. 347 (Sub-No. 1), *Coal Rate Guidelines, Nationwide*, 1 I.C.C. 2d, 522 ("*Guidelines*")

and the "ton and ton-mile methodology to allocate fixed costs as well as the ICC's "7% solution."[10]

Second, even if fully allocated costs could be determined for a specific movement, comparing long-run average costs of the motor carrier industry with fully allocated cost of the rail industry for specific moves is incorrect as the two cost methodologies, by definition, are different measures of cost levels. Long-run average cost varies with a change in output over the long term, whereas fully allocated cost has a component of cost which does not change with changes in volume, but rather is arbitrarily assigned to a movement of traffic, thus the two cost methods cannot be used for comparison purposes.[11]

Third, CSXT would have the STB consider costs incurred by entities other than the two competitors in the market place, such as the Federal government or various state or local governments which provide capital and operating expenses in building the infrastructure used by motor carriers in its determination of market dominance. As these costs are not incurred by the motor carrier, they are not relevant to the motor carrier's or the railroad's ability to set prices for provision of a specific service (only a carrier's variable costs of service are relevant for a market dominance analysis, as this cost level sets the floor for rate setting purposes). Highway trucks pay numerous fees, tolls and taxes that support the construction and maintenance of highway infrastructure. For example, highway trucks pay: 1) federal heavy vehicle use tax, 2) federal excise fuel tax, 3) excise taxes on tractors, trailers and tires, 4) operating taxes to support the

[10] The "7% solution" based rates on fully allocated costs plus a seven percent additive. The U.S. Court of Appeals concluded that this methodology was "arbitrary and capricious". See Docket No. 78-2051, decided June 9, 1980).
[11] *Guidelines* defined fully allocated costs as: The sum of the variable costs of a transportation movement and an arbitrary apportionment of constant costs…" (1 I.C.C. 2d, 553).

Federal Highway Trust Fund, and, 5) state tolls and fees for over-the-road use.[12] These payments are used to provide funds for construction or reconstruction, rehabilitation, maintenance and operations and administration.[13]

Finally, were CSXT's positions correct, which they are not, the roadway capital and maintenance costs should be removed from the calculation of CSXT's cost of providing service, which would only serve to increase the cost advantage enjoyed by the railroad.

C. Inclusion of Transload Fees and Storage Charges

CSXT criticizes the M&G analysis for treating the full price of transloading facility fees and storage charges as the costs of those fees and charges.[14] M&G included transloading facility and storage charges in its analysis as a surrogate for the cost of providing these services. CSXT did not present an alternative or identify the difference between fees and costs. The level of these fees and charges is a small part of the overall cost of providing the alternative service.[15] In fact, removal of the transload facility fee and storage charges from the analysis altogether, which unquestionably understates the costs for the alternative transportation service of the alternative mode, still results in costs that far exceed CSXT's costs.

D. Calculation of Motor Carrier Costs

CSXT criticizes the source and application of M&G's motor carrier costs. As discussed below, each of CSXT claims are ill-founded and or insignificant.

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[12] See, "Facts about Trucking in Georgia", Georgia Trucking Association, www.gmta.org/industrylinks.asp.
[13] "Highway Cost Allocation Study, 2009-2011 Biennium", Oregon Department of Administrative Services, Office of Economic Analysis, www.oregon.gov/das/oea/doc/highwaycost/2009report.pdf.
[14] CSXT Reply at II-81.
[15] Combined the transload facility fees and storage charges for the individual alternatives examined in M&G's opening evidence ranges from ${{[redacted]}} to ${{[redacted]}} per rail carload or no more than {{[redacted]}} percent of the total amount associated with any given alternative.

QUALITATIVE MARKET DOMINANCE DETERMINATION

First, CSXT claims that the motor carrier variable cost study relied upon by M&G, performed by the American Transportation Research Institute ("ATRI") was funded by the trucking industry and were developed as an advocacy tool to convince policymakers that they were understating truck costs. CSXT's argument is ill-founded for two reasons. First, assuming CSXT is correct and the costs in the ATRI report are somewhat high, the fact remains that they are developed for the industry as a whole and understate the cost incurred by specialized carriers like those which operate self-loading and unloading pneumatic/vacuum trailers required to transport M&G's PET. As discussed in M&G's Opening Evidence specialized carriers incur driver's wages that are 28 percent higher than the industry average, the specially engineered equipment is more expensive than the industry average equipment with higher repair and maintenance costs, insurance costs are 30 percent higher than truckload carriers and permitting costs are higher than that for the average carrier.[16] To the extent that the ATRI overstated the average cost of motor carrier industry as a whole, it substantially *understated* the average cost of specialized carriers like those the CSXT proposes would haul M&G's PET.

Further, Attachment No. 1 to Exhibit II-B-23 of M&G's Opening Evidence shows that the cost of providing service by the alternative carriers exceeds that of CSXT's cost of serving the existing traffic by up to a factor of 4.5 times and only part of this cost is attributable to the motor carrier portion of the move. Stated differently, the average cost in the ATRI report would have to be overstated by more than 400 percent before it would alter the conclusion that CSXT's costs are lower than those of providing the alternative service.

[16] M&G Opening Evidence, Exhibit II-B-23, pp 8-9.

QUALITATIVE MARKET DOMINANCE DETERMINATION

Next, CSXT states that M&G doubles the truck costs by assuming a 100 percent empty return ratio, i.e., M&G assumes that every truck that carries a M&G shipment will be unable to find any other shipments or backhaul after delivery of M&G's shipment. CSXT argues that this assumption does not comport with reality and yet it provides no evidence to the contrary. CSXT's argument is ill-founded for two reasons. First, it assumes that a specialized carrier operating a self-loading and unloading pneumatic/vacuum trailer can use this equipment for nearly any purpose. This is clearly not the case. This specialized equipment was designed and engineered for moving PET and has little to no alternative application.

Moreover, CSXT assumes that substantial quantities of M&G's product would be moved by these specialized carriers, which, given the extraordinary volume of truck traffic that this would create, all but requires dedicated truck service and 100 percent empty backhaul. For example, according to CSXT's Reply Exhibit II-B-2, page 26, {{ }} truck shipments per week would be required to move 100 percent of M&G's PET shipments from Apple Grove, WV to Franklin, IN. Round trip travel time for {{ }} trips, including load and unload time equals {{ }} hours per week.[17] Providing this level of service would require {{ }}[18] dedicated trucks providing around the clock service, i.e., a 100 percent empty backhaul just to keep up with the proposed service.

CSXT admits that the motor carriers would provide dedicated equipment in its Reply filing when it states that both {{

[17] Googlemaps.com shows estimates one-way travel time from Apple Grove to Franklin to equal 4 hour, 52 minutes. Rounding this to 5 hours each way plus {{ }} hours for loading and {{ }} hours for unloading equals total round trip time of 16 hours, time {{ }} trips equals {{ }} hours.

[18] {{ }} hours/(7days x 24 hours) = {{ }} trucks, excluding any time for servicing, maintenance, meals or delays due to traffic.

[redacted].}}[19] By definition, this dedicated equipment would be used for no other purpose than to haul M&G product thus resulting in a virtual 100 percent empty return ratio. CSXT's argument that motor carrier equipment in this service is flexible and can pick up opportunities wherever they arise is clearly refuted by its own evidence.

IV. THE TRANSPORTATION ALTERNATIVES PRESENTED BY CSXT DO NOT PROVIDE EFFECTIVE COMPETITION

As discussed in M&G's Opening Evidence, Exhibit II-B-23 and in the previous section of this Rebuttal Exhibit, a determination of market dominance requires an examination of the economics underlying both the rates at issue and those of the alternative transportation and the margins that can be earned by the defendant carrier. For an effective competitive constraint to exist, CSXT's cost of providing the service must be comparable to or greater than that of the cost of providing the alternative service by all carriers and service providers in that supply chain. Stated differently, if CSXT's margin from the rates at issue, minus the difference between the CSXT rail rate and the cost of providing the alternative service is substantially positive, then the alternative is not an effective constraint on CSXT's pricing and CSXT does possess market dominance.

[19] CSXT Reply at pp. II-68 to 69. In addition, CSXT's Reply evidence also demonstrates that the specialized motor carriers must travel from 36 to 68 miles from various terminals just to reach M&G's Apple Grove production facility. Id at II-69 to 70. These empty miles from or to the motor carriers' terminals are not included in M&G's calculation of truck loaded and empty truck miles and the associated motor carrier cost.

QUALITATIVE MARKET DOMINANCE DETERMINATION

To demonstrate CSXT's market dominance for each of the 43 origin/destination pairs where CSXT alleges M&G has an effective competitive alternative,[20] we: 1) determined the CSXT margin for each origin/destination pair; 2) determined the cost of providing the alternative service[21]; 3) subtracted the cost of the alternative service from the CSXT rail rate; and 4) compared the rail margin to the rail rate, less the alternative cost of providing the service. This analysis demonstrates that CSXT's margin from the rates at issue for the 43 lanes identified by CSXT exceed the difference between CSXT's rate on the issue movement and the cost of the alternative service by a substantial margin. Thus, CSXT has sufficient market power to force the competitor out of the market place. The net result is that CSXT is market dominant in each of the 43 issue lanes where CSXT claims that an effective competitive alternative exists.

The procedures and methodology used in this analysis are the same as those presented in Exhibit II-B-23 of M&G's Opening Evidence, with one minor modification.[22] This section addresses our procedures and methodology by topic, i.e., revenue, rail costs, truck costs, transload facility fee and other costs. Our overall methodological discussion is followed by a discussion of the four groups of transportation alternatives proposed by CSXT which are:

1. Truck direct from Apple Grove or Belpre to customer;
2. Truck from Apple Grove or Belpre to a rail transload at the current interchange point with the existing connecting rail carrier;

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[20] CSXT witness Gordon Heisler submits evidence allegedly demonstrating effective competition from alternative service providers for 43 of the 69 origin/destination pairs at issue in this proceeding. See CSXT Reply, pp II-36 through II-45.

[21] CSXT's claims on numerous occasions that the "cost" of the alternative service is the same or lower than that of CSXT, however, CSXT is referring to the rates charged for the alternative service and CSXT's rates, not the competing carrier(s)' alternative service or CSXT's cost of providing service to the issue traffic. *See* for example, CSXT Reply at I-4, II-37, II-38 and II-41.

[22] In response to a criticism raised in CSXT's Reply evidence, transload facility fees and storage charges have been excluded from our analysis.

QUALITATIVE MARKET DOMINANCE DETERMINATION

3. Truck from Apple Grove or Belpre to a rail transload at Lima, Ohio on the Chicago, Fort Wayne and Eastern Railroad ("CFER") for delivery to interchange in Chicago with the existing connecting carrier; and

4. Movement by an alternative rail carrier from an interchange location where CSXT currently receives issue shipments to a truck transload facility and delivery by truck to destination.

A. OVERALL METHODOLOGY

1. Rail Revenue

Rail revenue in our analysis is based on the CSXT rates at issue, including the average fuel surcharge applied by CSXT during 1Q2011. This differs slightly from the rail revenues in Mr. Heisler's analysis in that Mr. Heisler includes the rail carrier's fuel surcharge as of May 2011.

Connecting carrier revenues are included in our analysis in two circumstances. First, for origin/destination pairs where Mr. Heisler has proposed a truck direct to customer alternative, and the existing move includes both CSXT and a connecting carrier, the revenue for the connecting carrier is included in order that a comparison between revenues for the entire move and cost for the entire move can be made. For example, the existing shipment from Apple Grove to Franklin, IN originates on CSXT and is interchanged to the LIRC at Louisville, KY for delivery to Franklin, IN. In order for revenues to be compared with the cost of providing the alternative service from origin to the customer, both CSXT and LIRC revenues must be considered.

Second, in those instances where Mr. Heisler has proposed an alternative that would change a connecting carrier's cost of providing service, this change in cost must be accounted for and compared with the revenues associated with that change in cost. For example, Mr. Heisler proposes a truck/rail alternative for the Apple Grove to Fremont, OH origin/destination pair, which currently moves from Apple Grove to Columbus, OH where it connects with Norfolk Southern Railway ("NS") for delivery to Freemont. Mr. Heisler's proposed alternative changes NS' operation from an "interchange received and terminated" shipment to an "originated and terminated" shipment. The originated and terminated shipment is a more costly service for NS to provide. In performing our analysis, we have incorporated NS' revenue and its cost of service under both the existing movement and the alternative scenarios in order to accurately reflect the costs of providing the service and the margins realized from providing the service.

2. Rail Costs

For each of the 43 origin/destination pairs we developed CSXT's URCS Phase III costs of providing service based on the STB's 2009 URCS unit costs. In addition, to CSXT variable cost, URCS Phase III costs were developed for connecting railroads included in the analysis where appropriate. URCS costs for NS are based on the STB's 2009 URCS unit costs for NS. URCS costs for Class II and Class III carriers are based on the STB's 2009 URCS regional costs. All URCS costs were indexed to 1Q2011 levels.

Connecting railroad variable costs were included in our analysis in three circumstances. First, when Mr. Heisler's alternative is a truck direct to customer shipment and the existing rail shipment includes both the CSXT and a connecting railroad, that railroad's costs are calculated.

Second, when Mr. Heisler's proposed alternative changes a connecting railroad's operation and thereby its cost of providing service, the connecting railroad's cost of providing service is calculated (e.g. the Apple Grove to Fremont, OH move via a Columbus, OH transload discussed above). Finally, the alternative railroad's cost is calculated for all origin/destination pairs where Mr. Heisler has proposed a railroad other than CSXT be included in the shipment, i.e., all shipments which involve movement by CFER between Lima, OH and Chicago, IL.

3. Truck Costs

Marginal truck costs were developed for each of Mr. Heisler's alternatives based on the truck cost per mile found in the December 2008 report titled *An Analysis of the Operational Costs of Trucking*, by ATRI. This report provides a marginal cost per mile for the motor carrier industry of $1.73 per loaded or empty mile for truckload, less-than-truckload and specialty carriers combined.

PET is typically transported in pellet form. To transport pellets by motor carrier, specialized carriers operating self-loading and unloading pneumatic/vacuum trailers are utilized. The ATRI Report states that the $1.73 marginal cost per mile understates the actual cost incurred by specialized motor carriers. The ATRI Report indicates at several locations that costs for specialty carriers are greater than the industry average. For instance at page 16, the Report indicates that wages for drivers of specialty carriers are paid 28 percent more than the compensation for the average carrier. In addition, at page 13, the Report acknowledges that specialized carriers operate more expensive, specially-engineered equipment and have a significantly higher cost per mile than the truckload and less-than-truckload sectors. Further, at

page 14, the Report indicates that specialized carriers have the highest repairs and maintenance; and insurance premiums for specialized carriers are 130 percent higher than truckload carriers.[23] At page 15 the Report states that permitting costs for specialized carriers are considerably higher than for the average carrier.

For reasons cited above, the $1.73 marginal cost per mile understates the actual cost incurred by the specialized motor carriers that would move M&G's pellets. Based on these statements from the ATRI Report, we increased the driver wage related costs by 28 percent to more accurately reflect the wages of specialty carriers.[24] This adjustment to the $1.73 average truck cost results in a specialty carrier 2008 cost per mile of $1.899,[25] which was then indexed to 1Q2011 levels using the Producer Price Index for "Truck Transportation". This produces a specialty carrier cost per mile of $1.905 at 1Q2011 wage and price levels.

The $1.905 marginal cost per mile was applied to the truck miles from transload to destination provided by M&G for each origin/destination pair and increased to reflect a 100 percent empty backhaul.[26]

In addition, motor carrier costs for transload from rail to truck and for truck cleaning are included in this analysis. To estimate the transload cost, we accepted the driver's wage cost for

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[23] As shown on page 9 of the Report, truckload carriers comprise 51 percent of the survey responses on which the average cost per mile is based.

[24] The resulting motor carrier cost per mile remains understated to the extent that it does not reflect the higher costs for equipment capital and maintenance, insurance and permitting costs.

[25] Messers Burris and Nolan submitted Reply evidence similar to that presented in Exhibit II-B-23 on February 18, 2011 in this proceeding. In that evidence Messers Burris and Nolan relied on the motor carrier industry cost per mile of $1.73. As explained above, in this Rebuttal Exhibit the motor carrier industry cost per mile has been adjusted to reflect an increase in driver wages of 28 percent to reflect those of specialty carrier based on adjustments referred to in the ATRI Report.

[26] Specialized carriers such as those operating self-loading and unloading pneumatic/vacuum trailers have little to no opportunity for loaded backhaul shipments and as a result typically operate with a 100 percent empty backhaul.

specialty carriers including benefits, and bonuses per hour from the ATRI Report, indexed to 1Q2011 wage and price levels, multiplied by two hours for transload activities.[27] This yields a railcar equivalent cost of $270.75 per carload.

Truck cleaning costs are based on the labor costs for "cleaners of vehicles and equipment" as reported by the Bureau of Labor statistics, and an assumption that two persons working two hours are required to clean a self-loading and unloading pneumatic/vacuum trailer. The cost of labor for cleaning equals $68.00 per trailer, and is applied to each truckload based on {{ }}

4. Other Costs

Mr. Heisler proposes to divert shipments moving to and from interchange in Chicago between CSXT and connecting carriers to a connection between the CFER and connecting carriers in Chicago. These connecting carriers include BNSF Railway Company ("BNSF"), Union Pacific Railroad Company ("UP"), Canadian National Railway Company ("CN") and Canadian Pacific "(CP").

The CFER destination in Chicago is Indiana Harbor Belt's ("IHB") Blue Island yard. CFER does not directly interchange with any of CSXT connecting carriers for shipments of M&G PET, instead IHB provides an intraterminal switch effecting this interchange within the Chicago switching district. For this service, IHB charges a $138 switch fee for loaded or empty cars. Mr. Heisler's workpapers indicate that the { } However, close examination of the

[27] The two hours for transload activities is based on the time used by CSXT Witness Gordon R. Heisler in his January 27, 2011verified statement in this proceeding.

workpapers supporting Mr. Heisler's January 27, 2011 verified statement in this proceeding reveals {[redacted]} As a result, our analysis adds the {[redacted]} to the movements with required connection between CFER and {[redacted]} or {[redacted]} in Chicago.

B. SPECIFIC APPLICATION TO INDIVIDUAL ORIGIN/DESTINATION PAIRS

The specific application of our methodology to individual origin/destination pairs is discussed below and is organized under each of the four categories of transportation alternatives proposed by Mr. Heisler.

1. Truck Direct to Customer

Mr. Heisler proposes that shipments for 21 origin/destination pairs can be moved by truck from origin to destination.[28] Of these 21 origin/destination pairs, 16 originate at Apple Grove, four originate at the Belpre rail storage facility and one originates at the Parkersburg, WV storage facility. The highway distance for these twelve origin/destination pairs range from 67 miles to 492 miles, and according to Mr. Heisler's workpapers these origin/destination pairs represent {{[redacted]}} rail car shipments in 2009 or the equivalent of {{[redacted]}} truckloads.[29] The

[28] There is an inconsistency between CSXT's Reply text and its Exhibit and workpapers. In CSXT's Reply text at pages II-38 through II-41, CSXT describes alternatives for 20 of the issue traffic origin/destination pairs, yet in Exhibit II-B-3, II-B-4 and its workpapers CSXT performs it's direct truck competitive analysis for 21 origin/destination pairs.

[29] For purposes of our analysis we accept Mr. Heisler's assumption that four truckloads are equal to one railcar equivalent.

rail route of movement for 13 of these origin/destination pairs involves CSXT and a connecting carrier.

Mr. Heisler contends that a truck direct to customer movement is a "logistically feasible and economically competitive" alternative for the existing rail movement for each of these twelve origin/destination pairs. Further, Mr. Heisler contends that for 14 of the origin/destination pairs the truck direct rate is less than the current rail rate and for six origin/destination pairs the truck rate is only slightly higher than the rail rate. Mr. Heisler therefore concludes that the truck alternative acts as a competitive constraint on CSXT's rail rates.

Attachment No. 1, Section 1, lists each of the 21 origin destination pairs for which Mr. Heisler alleges a viable and economically competitive truck direct move exists. Attachment No. 1 also shows the existing rail rates and costs for the issue movements to destination and the costs of the direct truck alternative. As shown in Attachment No. 1 the cost of the truck alternative is up to 4.7 times higher than that of the rail alternative. Most importantly, Attachment No. 1 shows that the margin from the rail rate is substantially greater than the rail rate, less the cost of the truck alternative.

The rail cost associated with each origin/destination pair is significantly less than the alternative cost of providing service; and the difference between the rail margin and the rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

QUALITATIVE MARKET DOMINANCE DETERMINATION

As discussed in the previous section, all the rates and costs are shown at 1Q2011 levels. Rail shipments to 13 of the 21 origin/destination pairs are joint line moves, where CSXT is the originating carrier. As the truck rates proposed by Mr. Heisler are rates to destination, not interchange, the rail revenues and rail costs shown in the table above include both CSXT and the connecting carriers' data.

The rail costs are based on the STB's 2009 URCS unit costs and its Phase III cost program. Costs for the alternative transportation include truck cost, truck transload and truck cleaning costs, and the incremental CSXT switch fees at Apple Grove discussed in the previous section.

Two of Mr. Heisler's proposed alternatives are 67-mile and 68-mile truck direct moves from Apple Grove to the rail storage facilities at Belpre, OH and Parkersburg, WV, respectively. While both of these moves are a relatively short distance, they represent moves to rail storage facilities where M&G stores PET in railcars until the customer requires order fulfillment. From Belpre PET is shipped either by rail or truck, from Parkersburg all outbound shipments are by rail. Mr. Heisler fails to recognize that his proposed truck moves to Belpre and Parkersburg require PET to be loaded into railcars at Apple Grove, transloaded to truck at Apple Grove, moved by truck to either Belpre or Parkersburg and then *reloaded* into railcars for storage until such time as the customer requires delivery. Mr. Heisler also fails to account for the fact that M&G would have to position empty railcars at Belpre and Parkersburg to receive the product shipped by truck to these storage facilities.

QUALITATIVE MARKET DOMINANCE DETERMINATION

2. Truck to Current Interchange Location for Transload

Mr. Heisler claims that M&G has competitive alternatives to CSXT's rail rates for seven origin/destination pairs by moving product by truck from either Apple Grove or Belpre to transload facilities located where CSXT currently connects with the delivering carrier. Specifically, Mr. Heisler claims M&G could move PET from Apple Grove and Belpre by truck to Hagerstown, MD for transload to NS for delivery to the customer, and from Apple Grove and Belpre to Columbus, OH for transload to NS for delivery to the customer. Mr. Heisler concludes that in all seven instances the rate for the alternative service is competitive with the existing service and therefore the alternative service effectively constrains CSXT's pricing.

As with the truck direct to customer alternatives proposed by Mr. Heisler the truck to transload at existing interchange locations is not economically feasible as the cost of providing the alternative service far exceeds the cost of providing the existing rail service.

Attachment No. 1, Section 2 summarizes the comparative economics of the existing rail service and Mr. Heisler's proposed truck transload alternatives for each of these seven origin/destination pairs.

Mr. Heisler's proposed alternatives require a change in operations for NS at both the existing interchange locations, i.e., under the proposed alternative, rather than receiving loaded railcars from CSXT in interchange, NS will originate railcars at the transload facilities. Because of this change in the cost of providing service, our analysis includes both the rail rate from origin to destination and the rail cost from origin to destination for both the existing rail service and the proposed alternative service.

QUALITATIVE MARKET DOMINANCE DETERMINATION

As shown in Attachment No. 1, the rail cost associated with each origin/destination pair is significantly less than the alternative cost of providing service. Further, the difference between the rail margin and the rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

In addition to CSXT having a significant economic advantage over Mr. Heisler's proposed alternatives for these seven origin/destination pairs, several of Mr. Heisler's assumptions regarding the Hagerstown transload alternative are ill-founded and incorrect.[30] First, Mr. Heisler proposes that Utility Supply Company, a utility pole transload facility, provide the necessary facility for transload of M&G's PET from truck to railcar on NS' rail line. {{ [redacted] }}

Second, Mr. Heisler incorrectly assumes that NS will move a railcar of M&G's PET which originates at the St. James transload facility to destination for the same rate that it would move a railcar it receives in interchange from CSXT at Hagerstown. However, Mr. Heisler admits that the NS Rule 11 rate that applies to railcars received from CSXT at Hagerstown would not cover rates from the Utility Supply facility. Mr. Heisler states that in his experience, it is *extremely likely* that M&G would be able to secure the same or a very similar contract rate for railcars originating at a transload facility located just 1.5 miles away from Vardo.[31] The fact is,

[30] These include the Apple Grove and Belpre to Allentown, PA and Apple Grove to Havre de Grace, MD and Hazelton. PA origin/destination pairs.

[31] Heisler VS at p. 12, note 8. (Emphasis added). Mr. Heisler indicates that Utility Supply Company's transload facility is located in Hagerstown, MD where the existing interchange between CSXT and NS takes place. In actuality Utility Supply Company is located six miles south of Hagerstown in St. James, MD.

however, that NS is not willing to provide M&G with the same rate for cars originating at Utility Supply Company in St. James. As indicated in M&G Reb. Ex. II-B-29, NS has provided a quote for moving railcars from the Utility Supply Company in St. James equal to {{ }} more per carload than its existing rate for moving M&G's PET from interchange with CSXT in Hagerstown. Mr. Heisler's conclusion that the truck transload/NS rate for moving M&G's PET via the Hagerstown transload is less than the existing rail rate is incorrect.

3. Truck from Origin to Lima, OH Transload to CFER

Thirteen of the issue origin/destination pairs originate at Apple Grove or Belpre and move via CSXT to interchange with Western carriers in Chicago. Mr. Heisler proposes a truck/rail alternative for the CSXT portion of the move which assumes shipments will originate by truck at Apple Grove and move a highway distance of 220 miles to Lima, OH where M&G PET would transload to railcars on the CFER. CFER would then transport the railcars to connection with the same Western carriers in Chicago that currently participate in the issue movements. Attachment No. 1, Section 3 summarizes the comparative economics of the CSXT move from Apple Grove and Belpre to connection with the Western carriers in Chicago and Mr. Heisler's proposed truck/CFER move through the Lima, OH transload. As shown in Attachment No. 1, CSXT's cost associated with each origin/destination pairs is significantly less than the cost of Mr. Heisler's proposed alternative service. Further, the difference between the rail margin and the CSXT rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

QUALITATIVE MARKET DOMINANCE DETERMINATION

As discussed earlier, the CFER operations terminate at the IHB Blue Island yard in Chicago and the CFER does not directly interchange with BNSF, UP, CP or CN. Instead, IHB provides interchange services between CFER and these Western carriers. Per CFER's email to Mr. Heisler, CFER's rate for shipments from the Lima transload to Chicago include the {[redacted]} for connections with {[redacted]}, but there is no mention of the rate including the switch charge for interchange with {[redacted]}. We have added this switch charge to the issue origin/destination pairs that connect with these two carriers, i.e., shipments terminating at University Park, Champaign and Rockford, IL.

It should also be noted that CFER leases its right-of-way from CSXT for approximately {{[redacted]}} annually.[32] In addition, {{[redacted]}}. Neither of these costs are reflected in the URCS costs attributed to the CFER alternatives in our analysis.

4. Alternative Rail Carrier from Existing CSXT Interchange to Truck/Transload to Destination

Nine of the issue origin/destination pairs originate on Western carriers and connect with CSXT in Chicago or New Orleans for furtherance to destination.[33] For these movements, Mr. Heisler proposes that a different rail carrier move the issue traffic from the existing CSXT interchange location to a truck transload facility, then move to destination by truck. As shown in

[32] This amount is comprised of two components, an annual rental payment of $1.7 million and an allocation of a $10 million upfront advance rental payment applied in equal payments to each of the 20 year term of the CSXT/CFER lease agreement.

[33] There is yet another inconsistency between CSXT's Reply text and its Exhibit and workpapers. In CSXT's Reply text at pages II-44 to II-45, CSXT describes alternatives for six of the issue traffic origin/destination pairs, yet in Exhibit II-B-3, II-B-4 and its workpapers CSXT performs it's competitive analysis for nine origin/destination pairs. We have include each of the nine origin/destination pairs in our analysis.

QUALITATIVE MARKET DOMINANCE DETERMINATION

Attachment No. 1, Section 4, CSXT's cost associated with each origin/destination pair is significantly less than the cost of the alternative service. Further, the difference between the rail margin and the CSXT rail rate minus the cost of providing the alternative service is significant. Thus CSXT has market dominance over each of these origin/destination pairs.

V. CONCLUSION

Our analysis of the economics of the issue traffic rates and CSXT's existing operations with those of Mr. Heisler's proposed alternatives, demonstrate that CSXT's margin from the rates at issue exceed the difference between CSXT's rate on the issue movement and the cost of the alternative service by a substantial margin. Thus, CSXT has sufficient market power to force the competitor out of the market place. The net result is that CSXT is market dominant in each of the 43 issue lanes where CSXT claims that an effective competitive alternative exists.

Attachment No. 1
Rebuttal Exhibit II-B-32

Determination of CSXT Rail Market Dominance
CSXT Rail Margin, less Difference Between Rail Rate and Cost of Providing Alternative Service

Exhibit / Lane	Current Applicable Delivered Rail Rates & Charges	Current Delivered Rail Cost	Alternative Cost	Alt Cost / Rail Cost 1/	Current CSXT Margin 2/	Current Rates Less Alt. Cost 3/	Current CSXT Rail Margin Less Alt Margin 4/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

PUBLIC VERSION

1/ Column (4) / Column (3).
2/ Column (2) - Column (3).
3/ Column (2) - Column (4).
4/ Column (6) - Column (7).

Washington State Transportation Commission

Statewide Rail Capacity and System Needs Study

Task 3 – Rail Capacity Needs and Constraints

Technical Memorandum

prepared for

Washington State Transportation Commission

by

HDR, Inc.
Transit Safety Management

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Task 3 – Rail Capacity Needs and Constraints

Summary

There is more to reliable rail transportation network than fixing current known bottlenecks. Fixing bottlenecks increases capacity only to the degree allowed by the next greater capacity limitation. If capacity limitations are not considered carefully when developing a solution, it is possible that the only achievement will be moving a "bottleneck" rather than fixing or removing it. It is important that the root cause of the problem be carefully explored in order to avoid treating the symptom versus the cause of the congestion. The capacity limit of a yard may manifest as a problem on the main line and main line capacity limitations may manifest as congestion and delay at some distant point. It is important to understand how the rail transportation network operates in order to identify infrastructure, operational, and institutional changes required to increase the network's capacity.

Objective

This objective of this technical memorandum is to document known as well as anticipated operational and capacity constraints of the current state of freight and passenger rail systems that may adversely impact the State's economy, environment, and/or quality of life.

Using available studies, railroad reports, and public data, this interim memorandum describes how rail capacity is determined, provides an overview of current freight and passenger rail train volumes and capacities, and summarizes the ability of the network to accommodate the projected growth in rail traffic.

Funded public and private sector rail improvements, such as siding extensions by the BNSF Railway along the Columbia River, and WSDOT passenger rail projects such as the Vancouver and Point Defiance Bypass projects designed to eliminate identified bottlenecks, also are described in this memorandum.

Washington State is undertaking a statewide review of the current state of the freight and passenger rail systems. The study investigates the State's projected rail needs, the capacity of the existing rail network to meets these needs, and the State's role in identifying and facilitating needed institutional, operational, and infrastructure improvements. The technical memorandum is one of a series of technical memoranda documenting the Washington State freight- and passenger-rail systems.

Methodology

What Is Meant by Rail Capacity?

If a train leaves Chicago at 12:00 a.m. traveling west at 50 mph and a train leaves Seattle at the same time traveling east at 50 mph, where will they meet?

In the real world of railroading the answer is "It depends." What is the capacity of Washington's railroad network? It depends on a complex set of interrelated factors that are described in the following sections.

Rail capacity is the number of trains that can occupy a given segment of track over a given period of time. Determining "the number of trains" is a complex mix of science and art. In general, the science part of capacity depends upon the length and speed of the trains in addition to the characteristics of the physical railroad network. The railroad network includes main lines, sidings, terminals, rail yards, locomotive and car maintenance facilities, fueling facilities, signal systems, and communications infrastructure. All components of the network must be functioning perfectly and managed perfectly to achieve the theoretical rail capacity (the capacity limit imposed by infrastructure). When every opportunity to operate a train has been used, capacity has been reached.

The art of calculating capacity is applying factors such as human decisions, weather, equipment failures, imbalances between supply and demand for labor and equipment across the network, and other common variables during normal operation to determine the realistic versus the theoretical capacity of a given rail network. This capacity is termed the practical capacity. In general, practical capacity is approximately one-half of theoretical capacity. As much as 80 percent of theoretical capacity may be used for short durations during normal operation and retain a good quality of operation

Congestion occurs when traffic exceeds theoretical capacity (the maximum amount of traffic that the infrastructure can accommodate). It continues until sometime after traffic is less than theoretical capacity (the time needed to move the accumulated traffic at the capacity rate). For example, on a line with a theoretical capacity of 24 trains per day (one per hour), a traffic flow of greater than one train per hour for any period will exceed capacity and cause congestion as trains accumulate while waiting to be accommodated on the capacity limiting segment. The congestion will end when the rate of flow has been reduced to less than one train per hour for a sufficient time to accommodate the approaching traffic as well as the accumulated traffic. Thus, a line with a capacity of 24 trains per day can experience severe congestion and extensive delay with a daily volume of eight trains per day. Congestion should not occur when traffic falls within the practical capacity range, but this is dependent upon operating practices as well as capacity.

How Is Rail Capacity Determined?

Main Line Capacity

Main line capacity is calculated using a two-step process. The theoretical capacity of the line is calculated based on a set of perfect assumptions and conditions. This represents the maximum density of trains that can operate over a given section of track at the highest speeds authorized for those trains.

The density or spacing of trains moving in the same direction is an important element of capacity on double track (each track generally assigned to a single direction of movement). Current rail signaling systems divide the track into sections or "blocks." Only one train can occupy a block of track at a time. Signals at the ends of the block tell the locomotive engineer if he can proceed into the next block. This is necessary because the stopping distance of a train greatly exceeds the sight distance of the locomotive engineer controlling it. Signal spacing defines the track occupancy because the train virtually occupies the block in front of it. The minimum distance between signals is equal to the length of the longest train plus the required stopping distance for the heaviest train at the highest authorized speed, plus a margin of safety. If the signals are spaced five miles apart, the maximum theoretical density is one train every five miles. The speed of the train and the spacing of the signals determine the minimum headway between trains that are moving at the normal speed for trains on the line. The minimum headway determines the theoretical capacity of the line.

Minimum headway traffic is similar to traffic on a freeway where all the vehicles are traveling at 70 mph and are spaced at exactly the safe following distance apart. In reality a freeway may actually operate like this for a very short period of time over a very short distance before something happens that impacts this perfect distribution of speed and density. The system then breaks down and a traffic jam forms.

Practical capacity is the percentage of theoretical capacity that provides reliable and predictable train operations. Generally, the rail industry considers this to be between 50 and 60 percent of the theoretical capacity. On rail lines operating at practical capacity, minor disruptions can be absorbed with only temporary localized deterioration in performance. The overall rail network will continue to function in a predictable and reliable manner. This is similar to a freeway operating at a level of service of C.

The system can continue to operate at levels up to 80 percent of the theoretical capacity, but any minor disruptions will result in severe disruptions to train operations systemwide. Operations over 80 percent of the theoretical capacity are not considered achievable except for very short segments over short periods.

Yards and Terminals

Rail yards and terminals serve as reservoirs for the main lines, absorbing and redistributing railcars to their final destinations. A terminal is a geographically defined area that may consist of one or more yards. The capacity of the terminal is generally an aggregate

of the capacity of the yards it encompasses. There are two aspects to the capacity of a terminal or yard: static and dynamic capacity.

Static capacity is the ability of a yard to accommodate standing equipment, i.e., cars that are stored, awaiting movement, or awaiting processing. It is related only to infrastructure. Static capacity is a simple measurement of the length of railroad cars against the trackage available for them. The static capacity may be broken into categories if portions of the yard trackage are designed for or assigned to a specific purpose. For example, if certain tracks are assigned to storage, classification, arriving trains, departing trains, repair, or trains that are stopping to set out or pick up, each has a separate capacity. These separate capacities form an aggregate capacity; however, the number of cars in each category cannot be exceeded regardless of the aggregate capacity and number of cars. The practical static capacity of a yard is considered to be between 60 and 80 percent of the theoretical static capacity. A yard must always have some open tracks available to receive, process, and dispatch cars.

Dynamic capacity is the ability of a yard to receive, process, and dispatch traffic, generally described in trains per hour for receiving and dispatching and cars per hour for switching. Static capacity is indirectly related to dynamic capacity. If traffic exceeds dynamic capacity, the number of cars in the yard may exceed static capacity. Dynamic capacity is dependent upon infrastructure, personnel, and equipment.

Classification yards have a special capacity limitation, the number of classifications into which cars must be sorted. For example, if a classification yard has five tracks, each with a capacity of 50 cars, the capacity is 50 cars for each of five destinations, not 250 cars. It is possible for six cars to exceed the capacity of the five tracks if each of the six has a separate destination (although this may be mitigated by the practice of double blocking, i.e., putting cars for more than one destination into each track and switching them again after the cars in one or more tracks have been removed from the classification yard for further movement on trains).

Intermodal yards also may have a pavement capacity limitation, i.e., a limitation imposed by the pavement surface area available on which to drive vehicles, load or unload rail cars, or store trailers and containers.

What Factors Have the Greatest Effect on Rail Capacity?

Main Line Infrastructure

The limitation of capacity on a single track section of a railroad is the longest running time between sidings (or other tracks on which trains in opposite directions can meet). It may be further affected if there also is a need for a faster moving train to pass a slower train on the same section of railroad. As siding spacing is decreased and/or speed increases, capacity increases.

On a multiple track railroad, the limitation on capacity is the longest time that a train occupies a block. As signal block spacing decreases capacity increases.

Yard Infrastructure

The number of operations that can occur simultaneously within a yard is directly related to the rail capacity of the yard and the main lines to which it is connected. For example, if switching must stop while a train is arriving or leaving a yard, those activities are limited by infrastructure. If the yard capacity to arrive and depart trains is less than the main line capacity then it may not be possible to fully utilize all of the main line capacity.

Speed

The capacity of a single track line can be increased by increasing the speed, both in main track operation and in entry and exit of sidings. An increase in speed on a multiple track line can increase capacity; however, it must be accompanied by a signal system design that will allow the increase to be utilized for additional capacity.

Signals

If there is a great speed differential among trains, signal system design can affect capacity. On a line that has heavy bulk commodity trains operating at 45 mph, light intermodal trains at 60 mph, and passenger trains at 79 mph, a signal system designed only for the stopping distance of the bulk commodity trains may unnecessarily increase the headways between trains. Signal system design can incorporate the differences in a number of (albeit more complex) ways. For example, instead of a series of three signals, the first indicating stop, the second indicating reduce speed and prepare to stop at the next signal, and the third indicating proceed at normal speed, the series might be more closely spaced signals indicating stop, proceed at 30 mph, proceed at 45 mph, proceed at 60 mph, proceed at normal speed.

The compensation for variation of speed limit is only effective when the speed limit affects all traffic. When the speed differential involves trains entering or leaving a route at a speed substantially less then the speed of through traffic, the speed differential cannot be compensated. In these situations, speed differential results in capacity loss.

Personnel

Insufficient personnel can affect dynamic yard capacity. For example, if a yard has several receiving tracks, one team of car inspectors, and the ability to switch inspected inbound trains faster than they can be inspected, the capacity is limited by the lack of car inspectors.

Equipment

Equipment affects dynamic yard capacity when there is sufficient infrastructure to support simultaneous activities, but insufficient equipment. If the design of the yard permits two engines to switch cars simultaneously, but only one engine is available, the capacity is limited by equipment. This limitation also extends to the operation of trains between

terminals. If the cars are available, made up, and ready to leave as a train, but there are no locomotives available, capacity is limited by equipment.

Traffic Demand

Traffic demand requirements are a nontechnical aspect of capacity. When capacity is described in terms of trains per day, the figure may include periods during which there is little traffic demand. A line with a capacity of 50 trains per day may be inadequate for commuter operations if the capacity available for commuter trains is at 3:00 a.m. Similarly capacity is of little value to a priority intermodal train that must leave at 3:00 p.m. to reach Chicago before the close of business four days later.

Track Maintenance

Track and signal maintenance also are a consumer of railroad capacity. If track and signals are not adequately maintained, speed restrictions may be imposed, diminishing capacity. When track or signal maintenance requires exclusive occupancy of a section of track, the capacity of the track is zero. To some extent, track maintenance can occur during the difference in time between theoretical capacity and practical capacity. When this is not possible, the track is assigned exclusively to maintenance personnel during a period known as a "work window."

Grade Crossings

Road crossings at-grade can have an effect on capacity by limiting the ability of trains to stop at key locations. For example, at Tokio on the Pasco-Spokane route, the siding can accommodate a train 8,100 feet long, but Klein Road crosses the tracks 3,802 feet from the east end of the siding. Thus, a train cannot stop and wait for a passing train legally for more than 10 minutes (or less if so directed by law enforcement or emergency services personnel, WAC 480-62-220).

How Was Rail Capacity Measured for This Study?

Capacity may be measured by analytical methods (hand calculation) or by simulation modeling and analysis of the output data. The capacity of a complex arrangement of rail lines and terminals is difficult to calculate, requiring careful dissection of the subject rail line and terminals into segments of similar capacity.

Simulation models may be used for capacity evaluation; however, evaluation of simulation input/output requires careful consideration. If trains are randomly added to a rail line without considering the limitations of the infrastructure, the travel time and delay may vary radically without a physical change in the infrastructure. Analysis of the simulation output requires the same careful attention. The output needs to be evaluated that the proposed train routing and schedules are reasonable given the capacity factors of the line.

Detailed rail simulation modeling is not within the scope of this study. The capacity numbers presented herein were compiled from previous studies and other readily available information, some simple calculation, and discussion with railroad operating personnel. The study team attempted to resolve discrepancies between conflicting capacity levels, where possible, using standard analytical methods.

Current typical running times (and/or roughly calculated running times) were used for determining corridor capacity based on continuous flow (east-west-east-west) on single track lines. Train volumes are expressed as the practical capacity of the line, which is defined as, in general, 50 percent of theoretical capacity.

In order to establish a uniform basis for comparison, the discussion of practical capacity of the network does not include the effects of overtaking, which can vary widely depending upon the number of overtakes and the way in which the traffic is managed. In general, however, overtaking consumes some of the capacity described for each of the primary routes. For a short duration, as much of 80 percent of theoretical capacity may be used while maintaining an acceptable quality of operation. Thus, with adequate planning, an aggregate utilization of approximately 57 percent may still produce acceptable results.

In some cases, the typical daily train volumes exceed the practical capacity. As a result, trains operating over these track segments experience a relatively high amount of congestion and delay.

Existing Rail Capacity and Constraints

What Are the State's Rail Lines Capacities and What Limits Their Capacity?

The theoretical and practical capacities of Washington State's rail network were calculated based on known running times or on calculated run times between sidings and/or terminal points when known run times where not available. On double track routes, the running times and associated speeds were compared with block signal spacing. The State's major rail lines were divided into geographical corridors. See Figure 3.1, Washington State Rail System Capacity and Current Traffic Demand. The practical capacity and known constrains for each corridor are described in the following sections. As described above, the discussed capacity does not consider the additional capacity consumed by overtaking. Overtaking can involve two passenger trains, a passenger train and a freight train, or two freight trains. The capacity consumed is situational, depending upon the number of trains of each speed and the order in which they are operated. Thus, there is no basis for general comparison or discussion. However, the capacity consumed in a limited amount of overtaking may be included in the short duration periods of capacity allocation that exceeds 50 percent. See Figure 3.2, Washington State Rail System Identified Bottlenecks.

Figure 3.1 Washington State Rail System Capacity and Current Traffic Demand

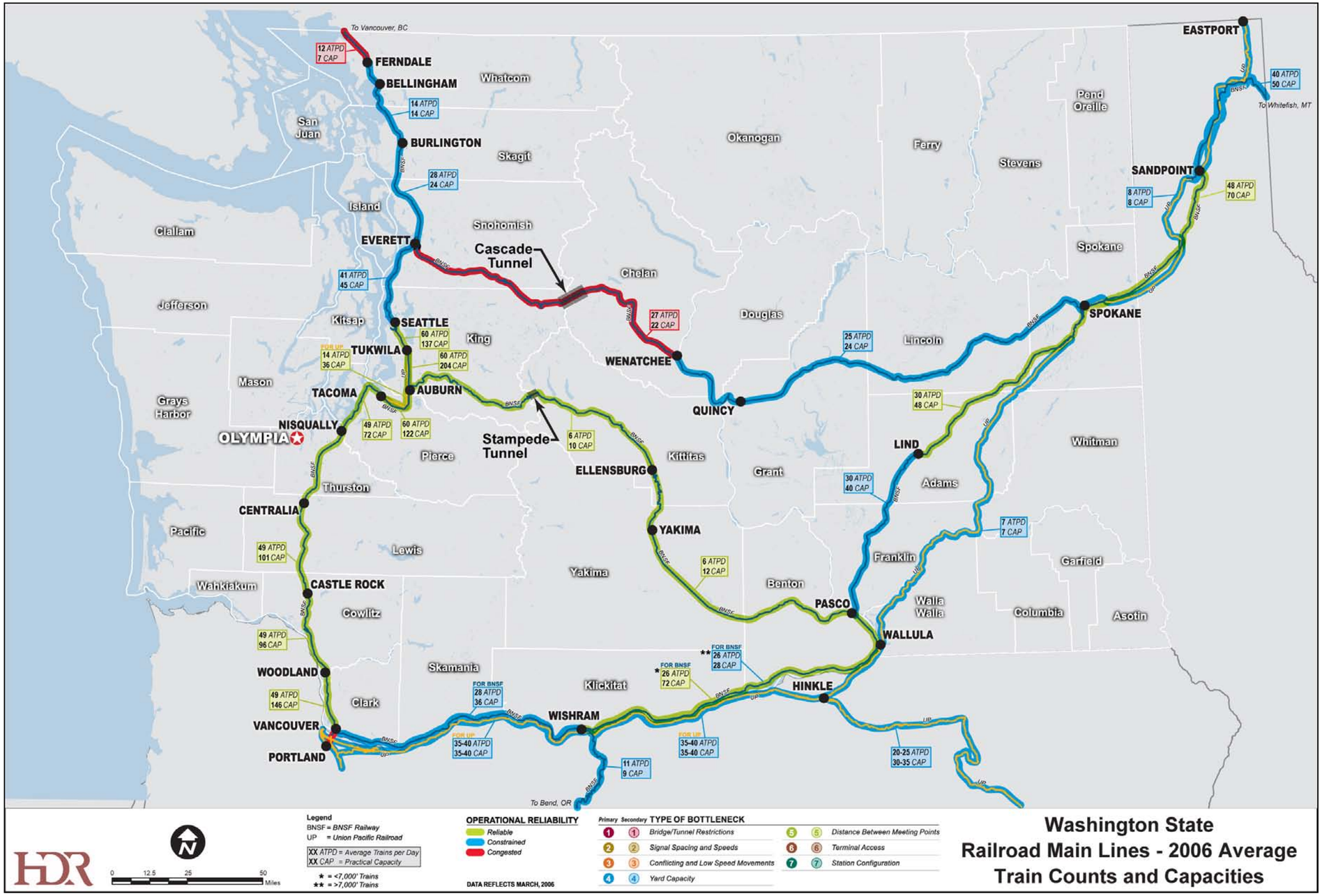
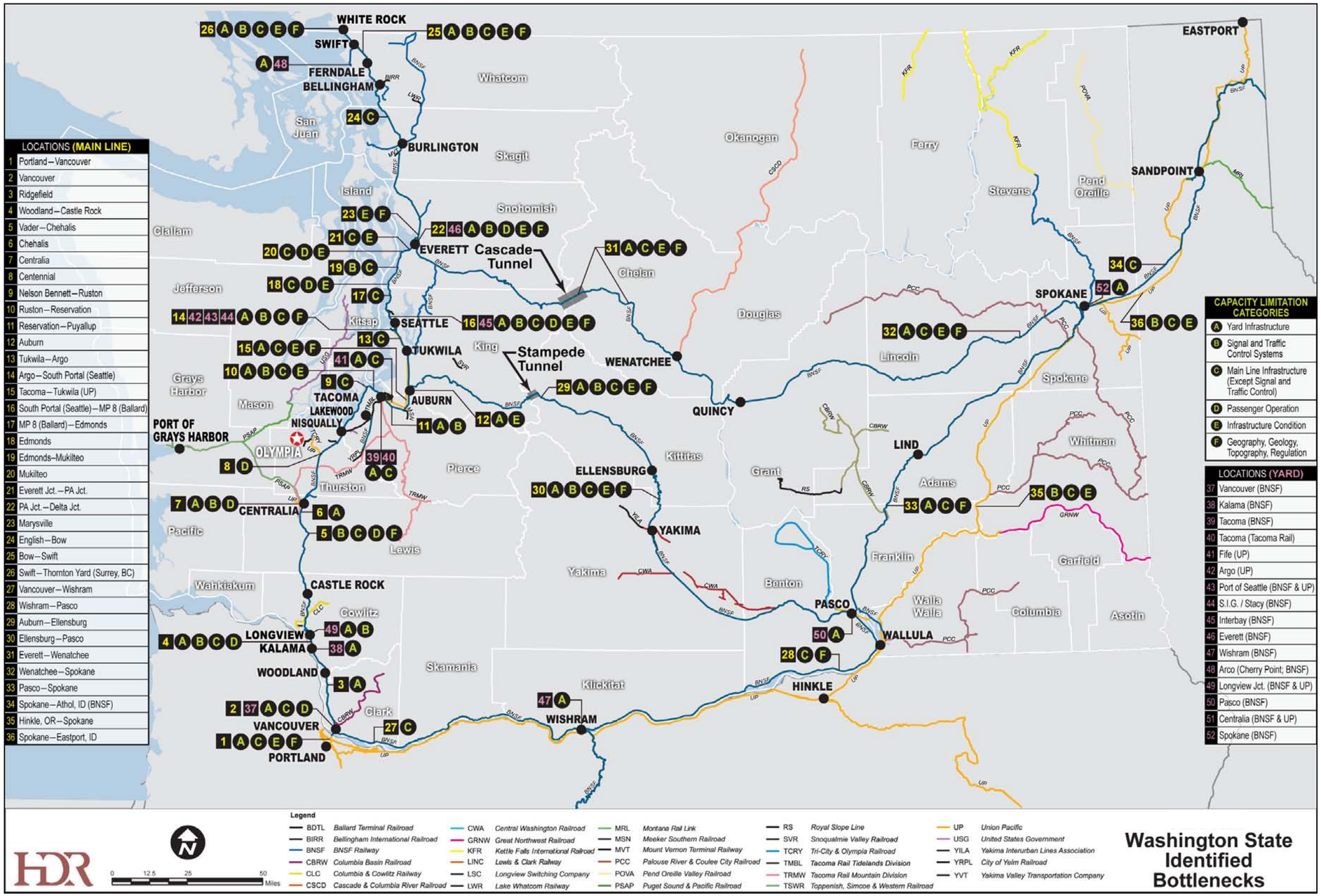


Figure 3.2 Washington State Rail System Identified Bottlenecks



Portland, Oregon-Vancouver, Washington

Rail capacity between Portland, Oregon, and Vancouver, Washington, is estimated at 84 trains per day (TPD). Three types of capacity restrictions are present within this segment (see Figure 3.2, Location 1).

1. Low-Speed Operation:
   - 10 mph operations at Vancouver Junction and North Portland Junction;
   - 6 mph over the Steel Bridge in Portland and for about 2,000 feet north of the Steel Bridge; and
   - 10 mph speed restrictions accessing Lake Yard.

2. Trains Stopped on Main Tracks:

   Several freight trains per day stop on a main track at Lake Yard, Willbridge, and North Portland Junction while setting out and picking up. Each of the stopped trains occupies the same capacity as three or more through trains.

3. Drawbridges:

   The Willamette River and Columbia River drawbridges (the Oregon Slough bridge is open for marine navigation infrequently) are open for an aggregate duration equivalent to about 24 trains per day.

Vancouver-Seattle, Washington

The capacity of the Vancouver-Seattle route is limited to 72 TPD as the result of single track railroad at the Nelson Bennett and Ruston Tunnels (see Figure 3.2, Location 9). However, individual segments of the route have greater practical capacities:

- Vancouver-Woodland 146 TPD, limited by block signal spacing and train speed;
- Woodland-Castle Rock 96 TPD, limited by extended periods of single track operation from freight rains occupying a main track while setting out or picking up at Rocky Point, Longview, and Kalama terminals;
- Castle Rock-Nisqually 101 TPD, limited by block signal spacing and train speed;
- Tacoma-Auburn 122 TPD, limited by block signal spacing and train speed;
- Auburn-Tukwila 204 TPD, limited by block signal spacing and train speed; and
- Tukwila-Seattle 137 TPD, limited by block signal spacing, speed and Union Pacific Van Asselt and Manar Yards, located on the opposite side of the BNSF main tracks from the Argo Intermodal Yard.

The major capacity limitations in each of the identified segments are summarized below. Refer to Appendix A: Summary of Identified Capacity Constraints for a more detailed description.

Vancouver-Woodland

There is an array of significant capacity limitations at Vancouver (see Figure 3.2, Locations 2 and 37), including:

- Low-speed train operations (10 mph) through Vancouver Junction can block the Portland-Seattle main tracks for extended periods as trains enter or exit Fallbridge Subdivision (Vancouver-Pasco) or cross the main tracks to access the Port of Vancouver from the Fallbridge Subdivision.

- Trains stopping on the main tracks to change train crews.

- Short yard tracks require trains originating from Vancouver Yard to occupy one of the Portland-Seattle main tracks for extended periods while crews assemble a full train for departure. Through trains also must occupy a main track set out or pick up cars at Vancouver Yard because of short yard tracks.

Woodland-Castle Rock

A significant amount of the capacity between Woodland and MP 85 (near Castle Rock) is consumed by standing trains. The occurrence is so common in this area that it is the only segment in the State for which standing traffic has been considered in calculating capacity. Some of the service at Kalama and most of the service at Longview Junction is provided by through trains that must stop on one of the main tracks while setting out or picking up cars. Trains servicing the two grain terminals at Kalama occupy a main track for extended periods due to 10 mph speed restriction accessing yard tracks and the time required to hand throw switches. (See Figure 3.2, Locations 3, 4 and 38.)

Castle Rock-Nisqually

Identified capacity restrictions in this segment include:

- Napavine Hill between Vader and Chehalis. This is the ruling (maximum) grade for freight trains between Portland and Seattle. Trains slow to speeds between 15 and 30 mph as they ascend the grade. (See Figure 3.2, Location 5.)

- Centralia congestion caused by increases in bulk commodity shipments by the Ports of Grays Harbor and Centralia. Unit trains accessing the main track at Centralia are restricted to 10 mph. In addition to increased unit train service to the Ports, several trains per day stop at Centralia, occupying a main track to set out or pick up cars. Amtrak's Centralia Station also serves as a crew change point for freight trains. (See Figure 3.2, Locations 6 and 7.)

- North of Centralia Yard, there is a junction with a line leading east to a coal-fired power plant. Recent construction of a loop unloading track at the power plant has eliminated the need for unit coal trains to occupy the main line when serving the plant. However, capacity is still partially constrained by 10 mph operations through the hand thrown switch off the main track. (See Figure 3.2, Location 7.)

Nisqually-Tacoma

In the early 1990s, BN converted the Ruston and Nelson Bennett Tunnels to single track to accommodate double-stack intermodal trains. (See Figure 3.2, Location 9.) This single track section limits capacity on the entire corridor to 72 trains per day. Freight speeds through this track section can be increased from 40 to 50 mph, increasing capacity by about four trains per day. Currently, 10 Amtrak passenger trains use the line daily. These trains could be routed onto Sound Transit's Lakeview Line. After improvements to the Sound Transit Lakeview line the combined capacity of the lines could be increased to over 135 trains per day.

Tacoma-Auburn

Trains accessing the BNSF's Tacoma Yard at the south end are restricted to 10 mph around the Thea Foss Curve. Trains entering and leaving the north end of the yard also are restricted to 10 mph. Trains that originate or terminate in Tacoma, including those bound directly to the Port of Tacoma must double into the Tacoma or Log Yard tracks, occupying one or both main tracks for an extended period and restricting through train operations to a single main track. (See Figure 3.2, Locations 10, 11, 39, and 40.)

Auburn Yard and the connection to the Auburn-Pasco line are both located on the east side of the line. Port of Tacoma intermodal trains using the yard must cross from east to west to access the yard. Trains are restricted to 10 mph when entering or leaving Auburn yard or the Auburn-Pasco route from the north (Seattle). (See Figure 3.2, Location 12.)

Auburn-Tukwila

A recent Sound Transit infrastructure project has eliminated most of the route conflicts and speed differential conflicts between Auburn and Tukwila.

Tukwila-Seattle

A recent Sound Transit infrastructure project has eliminated most of the route conflicts and speed differential conflicts between Tukwila and Argo; however, some capacity limiting conflicts remain. (See Figure 3.2, Locations 13, 14, 42, 44, and 45.)

There are three tracks between the Tukwila and Argo control points; however, only two trains may operate simultaneously through either control point. Trains to and from South Seattle Yard and UP Argo Yard enter and leave the west main track at 10 mph. Two main tracks remain for through movement, but at Argo and at Tukwila, the two through tracks cannot be used simultaneously.

Union Pacific trains must cross the BNSF main tracks when switching cars between Union Pacific's Argo and Van Asselt yards. The Van Asselt yard provides staging support for Union Pacific's Argo intermodal operations. These crossing movements are made at 10 mph. Each crossing move consumes the capacity of at least two through trains. At Rhodes or Tukwila, UP trains en route to or from Van Asselt/Manar yards must cross over the BNSF main lines to access Black River Junction, consuming the capacity of at least two trains on the Portland-Seattle route.

Tacoma-Tukwila, Washington (UPRR)

The capacity of the Union Pacific Railroad's Tacoma-Tukwila route is 36 TPD, and is limited primarily by the running time between the Fife and Auburn sidings. Capacity also is restricted by trains occupying the main track doubling in and out of the yard at Fife and setting out or picking up cars at the auto unloading facility south of Kent. (See Figure 3.2, Locations 15 and 41.)

Seattle-Everett, Washington

The capacity of the Seattle-Everett route is 45 TPD. Capacity on this segment is primarily limited by 2.5 miles of the single track railroad with a 25 mph speed limit at Everett. Identified capacity restrictions in this segment include:

- South Portal-MP 8 (Ballard). The speed limit in the tunnel between South Portal and North Portal is 20 mph. There are no intermediate signals between South Portal and North Portal resulting in a signal block length of about 1.6 miles. Additional capacity is required in this segment for non-train movements (e.g., transfers, locomotive movements) between Interbay Yard and Seattle. (See Figure 3.2, Locations 16 and 45.)

- Signal block configuration between South Portal and North Portal also imposes an additional constraint. The curvature of the track in the King Street tunnel and the combination of curvature and structures north of the tunnel limit sight distance to the degree that freight trains may need to operate at reduced speeds for the given signal indication. (See Figure 3.2, Locations 16 and 45.)

- Galer Street-MP 5.4 single track segment poses a significant capacity limitation of 48 trains per day. There is a minimum delay of 17 minutes at Galer Street when the line is operating at capacity. (See Figure 3.2, Locations 16 and 45.)

- Ballard Bridge is open for marine navigation at an aggregate of 40 trains of capacity per day. Capacity is further restricted by the 20 mph speed restriction across the bridge. (See Figure 3.2, Locations 16 and 45.)

- Edmonds single track between MP 16 and MP 18 has capacity (144 TPD) greater than the line in general; however, because of the configuration of the single track segments, a minimum delay of three minutes will occur at Edmonds when the line is operating at capacity. (See Figure 3.2, Location 18.)

- Maintenance Access Interbay-Everett Junction. This segment of track has limited roadway access requiring maintenance of way vehicles to occupy one of the two main tracks in when performing maintenance. Because of the lack of crossovers on the double track segments, a single maintenance vehicle can occupy nine miles of track, causing single track operation for as much as 12 miles. (See Figure 3.2, Locations 17 and 19.)

- Single Track Operation Interbay-Everett Junction. Overtaking moves can be made on this segment of track. However, if overtake meets are not coordinated properly, resulting train delays may be extensive because of the extended distance (up to 12 miles) required for each overtake due to the absence of crossovers on the double track segments. (See Figure 3.2, Locations 17, 18 and 19.)

- Everett Junction-PA Junction. The 2.5 miles of single track between PA Junction and Everett Junction, and the 25 mph speed limit, restricts the capacity of the entire line to 45 TPD. (See Figure 3.2, Location 21.)

Everett, Washington-New Westminster, British Columbia

The capacity of the Everett, Washington-New Westminster, BC route is 7 TPD, and is limited by the running time between the siding at Swift and Thornton Yard and the assumption that Canada Customs will continue to stop northward trains at White Rock, British Columbia, for inspection and that U.S. customs will continue holding trains on the main track at Blaine, Washington, before allowing them to proceed at 5 mph through the VACIS (Vehicle and Cargo Inspection System) at Swift. Canadian stops on the main track at White Rock occur randomly.

BNSF has begun originating and terminating trains in the CN Thornton Yard in Surrey, BC. This operational change increases the running time between sidings to 2 hours 5 minutes. If a stop on the main track for Customs at White Rock is assumed, the practical capacity of the line is reduced to 5.8 TPD.

Individual segments of the route have greater practical capacities:

- Between Everett (PA Junction) and Burlington, the capacity is 24 TPD, and is limited by the running time from Delta Junction (including 10 mph operation into and out of Delta Yard) to English siding.

- Between Burlington and Ferndale, capacity is limited to 14.4 TPD by the running time between the Bow and Ferndale sidings. The intervening South Bellingham siding does not accommodate the typical train length on the line.

The major capacity restraints in each of the identified segments are summarized below. Refer to Appendix A: Summary of Identified Capacity Constraints for a more detailed description.

Everett-Burlington

Identified capacity restrictions in this segment include:

- PA Junction-Delta Junction. The line has a capacity of 24 TPD because of low-speed (15 to 25 mph) operations over 3.8 miles of single track. (See Figure 3.2, Location 22.)

- Delta Yard. The manual hand throw switches at Delta Yard and the need to double trains together on the main line when leaving the yard further reduces capacity on this segment of track. (See Figure 3.2, Location 46.)

- Delta Junction Speed Restriction. Main line capacity north of Delta Yard is further limited by a 15 mph speed restriction around the curve at Delta Junction and a 10 mph speed restriction across Snohomish River Bridge just north of Delta Junction. The capacity on the main line through Delta Yard is limited to 14 through trains per day. The yard can originate or depart an additional 16 TPD. (See Figure 3.2, Location 46.)

- Marysville Speed Restrictions. The 20 mph speed limit for freight trains on the Steamboat Slough and Ebey Slough bridges south of Marysville limits the capacity on the line to 24 TPD. (See Figure 3.2, Location 23.)

- English-Bow capacity is limited to 16 trains per day as the result of the running time between these sidings. Capacity could be increased to 48 trains per day if the sidings at Stanwood and Mt. Vernon can be lengthened to fit longer trains. (See Figure 3.2, Location 24.)

Burlington-Ferndale

The capacity between Bow and Ferndale sidings is 14.4 trains per day. If the South Bellingham siding is lengthened to accommodate the long trains that use this line, capacity can be increased to roughly twice that number.

Ferndale-New Westminster, British Columbia

The capacity on this segment is limited by the running time between Swift and Thornton Yard and by U.S. and Canada customs procedures. The capacity is constrained by the 5 mph speed limit though the VACIS for southbound trains at Swift, the 21 mph speed limit at White Rock, and the 15 mph speed limit on the Nicomekl River bridge. (See Figure 3.2, Location 26.)

U.S. Custom inspections may affect the capacity in either direction since Swift is used as a meeting siding. Canada customs periodically stops northbound trains at White Rock for further inspection. When that occurs, capacity on the line is further reduced by the stopped train.

Vancouver, Washington-Pasco, Washington

The capacity of the Vancouver-Pasco route is limited to 36 TPD between Vancouver and Wishram. Capacity is restricted by the 20-minute running time between the end of double track at McLaughlin and the siding at Washougal, and between Bingen and North Dalles sidings. (See Figure 3.2, Location 27.)

Between Wishram and Pasco the capacity is estimated at 51 TPD if trains are restricted to 7,000 feet. If all the trains on this line are longer than 7,000 feet, then the capacity of the line is reduced to 28 TPD versus the estimated 36 TPD between Vancouver and Wishram.

Capacity is limited by the running time between Yellepit and Plymouth and between Yellepit and Hover sidings. (See Figure 3.2, Location 28.)

The capacity imitations on this line also include openings of the Columbia River draw-bridge, trains from Pasco stopping en route to change crews at Vancouver Yard, and the low-speed moves to and from Vancouver Yard, the Port of Vancouver, and connection to the Portland-Seattle route.

Auburn, Washington-Pasco, Washington

The capacity of the Auburn to Pasco route is 10 TPD, limited by the running time over Stampede Pass between the sidings at Lester and Easton. (See Figure 3.2, Location 29.)

Other significant factors limiting capacity on the line include:

- Running time is between the sidings at Pomona and Ellensburg, limiting capacity to 12 TPD (See Figure 3.2, Location 30);

- Running time would be between Toppenish and Byron, limiting capacity to 17 TPD (See Figure 3.2, Location 30); and

- Form-traffic control system imposes an additional limiting human factor when the train dispatcher has to issue separate verbal/written train movement authorities to multiple trains almost simultaneously.

Everett, Washington-Spokane, Washington

The practical capacity of the Everett to Spokane route is estimated at 22 TPD and is limited by the running times between sidings over Stevens Pass between Skykomish and Leavenworth. (See Figure 3.2, Location 31.)

In balanced flow operations (east-west-east-west), the Cascade Tunnel ventilation requirements impose virtually no limitation on capacity. Sufficient ventilation for a westward train can occur between the time that the rear of an eastward train is clear of the west switch of the siding at Berne and the time that the locomotive of the westward train arrives at the east portal of the tunnel. The remaining ventilation required for the west-ward train, as well as the ventilation for the next eastward train, occurs while the westward train is in the tunnel. Effectively, each westward train pushes the smoke from the previous train ahead of it and pulls fresh air behind it, in conjunction with the venti-lating fans. Equipment also is a limiting factor because of the severity of the grade. Run-ning time between sidings can vary considerably depending upon the number of locomotives and their horsepower.

Capacity also can be affected by the relatively short sidings at Lyons, Espanola, and Edwall, all less than 8,000 feet long. When trains of more than 7,400 feet are considered, the capacity between Bluestem and Latah Junction is 18 trains per day. For trains of over 7,500 feet, the capacity is 138 trains per day. (See Figure 3.2, Location 32.)

Pasco, Washington-Spokane, Washington

The capacity of the Pasco-Spokane route is 40 TPD, limited by the running time between Connell and Cunningham, between Sand and Paha, and between Sprague and Fishtrap. (See Figure 3.2, Location 33.)

Spokane, Washington-Sandpoint, Idaho (BNSF)

The capacity of the Spokane-Sandpoint route is 102 TPD, limited by the running time between Rathdrum and Ramsey. (See Figure 3.2, Location 34.)

Hinkle, Oregon-Spokane, Washington (UPRR)

There are two levels of capacity on this line, dependent upon train length. For trains of up to 6,700 feet long, the capacity is 7 TPD, limited by the 1-hour 40-minute running time (55.3 miles) between the sidings at Joso and Wells. For trains over 6,700 feet long, capacity is limited to 4.6 TPD by the 2-hour 35-minute running time (89.2 miles) between the sidings at Ayer and Overlook (on BNSF). (See Figure 3.2, Location 35.)

Spokane, Washington-Sandpoint Idaho (UPRR)

Capacity between Spokane and Sandpoint is limited to 7.6 TPD based on the 47-mile distance between the BNSF connection at Napa Street in Spokane and the siding at Clagstone. This results in a 1-hour 35-minute running time for trains up to 6,400 feet long. For trains greater than 6,400 feet long, capacity is limited by the 64.7 miles between Spokane and the east end of the line at Eastport ID, which reduces the practical capacity to 5.5 TPD. Running time increases from 1-hour 35 minutes to 2 hours 10 minutes. (See Figure 3.2, Location 36.)

Primary Rail Terminals and Yards

Yard capacities are difficult to calculate and describe in simple terms because of the multitude of functions they perform. Some yards have separate assigned tracks for arriving trains, departing trains, storage, switching, and other activities. The capacity, at least the static capacity, of these yards can be described in terms of the number of cars that can be accommodated in the areas assigned to each function. The capacity of Washington State's existing rail yards were not calculated as part of this study. Yards with known capacity constraints are described in following sections of this report.

The total number of cars that can be accommodated in the yard tracks assigned to each function is important; however, the number of tracks assigned to each function and their length is equally important. For example, eight trains of 8,000-foot length can be accommodated in a receiving yard that has a 24,000-foot capacity. If the capacity consists of three tracks of 8,000-foot length, the arriving train can enter the yard and transform from a train to static cars in 10 minutes. If the capacity consists of six tracks of 4,000-foot length, the same train may spend 15 minutes transforming from train to cars. For those

15 minutes, other trains cannot use the lead track being used to double into the yard. A classification yard can have physical room for 10,000 feet of cars, but if the yard must sort cars for 15 destinations and the capacity consists of 10 tracks, each 1,000 feet long, some cars must be handled more than once because of insufficient capacity.

Some yards do not have separate tracks for the various functions. Function is assigned to tracks dynamically as deemed appropriate by the yardmaster. Determining the capacity of these yards is difficult because it can change depending upon the nature of the activities occurring in the yard.

Regardless of capacity, several characteristics of a yard can affect main line capacity. If trains must move slowly on main tracks while entering or leaving the yard, must occupy a main track while stationary (e.g., setting out, picking up, doubling), or cannot be accommodated in the yard on arrival, they will diminish main line capacity. For example, if each of two main tracks passing a yard can accommodate a train every 10 minutes (theoretical capacity 288 trains/practical capacity 144 trains), a train that cannot enter the yard for 20 minutes on arrival occupies the capacity of two trains. In the same situation, a train that must occupy a main track for 30 minutes while doubling occupies the capacity of three trains. If the doubling train must occupy both main tracks (e.g., to leave on the main track farthest from the yard), it occupies the capacity of six trains. If 10 trains per day double out of the yard, they occupy the capacity of 30 to 60 trains. A train that does not block a main track while doubling but enters or leaves the 30-50 mph main track at 10 mph will often occupy the main track capacity of at least two trains.

When a train that is arriving or leaving blocks switching, the capacity of the yard may be diminished because the time available for processing is reduced. For example, if a train arriving or leaving interrupts switching for 20 minutes, the time available for switching is diminished by as much as 1 percent (20 minutes from a day of 7 hours switching time). Yardmasters can limit the reduction in productivity by assigning other work (coupling already switched cars, spotting the repair track), but a large number of arriving and leaving trains interrupting switching can make a significant reduction in dynamic capacity.

To some extent, the capacity reduction imposed by yard configuration can be limited by operating practices (careful scheduling to avoid conflicts), but as traffic increases, that strategy becomes increasingly impractical.

Since the mid-1990s, simulation studies have demonstrated that yards reach their physical limit of ability to accommodate traffic before main lines with proposed improvements do (e.g., the Sound Transit and WSDOT programs). Main line operation then breaks down as a result of trains that cannot be accommodated in yards parking on main tracks.

Table 3.1 describes yard characteristics that affect the extent to which yard and/or main line capacity can be used.

Table 3.1 Washington State Rail System Capacity and Current Traffic Demand

Yard	Dedicated Receiving/ Departure Tracks	Receiving/Departure Min/Max Length	Classification Tracks	Classification Tracks Min/Max Length	Simultaneous Receiving/Departure	Simultaneous Switching/ Receiving or Departure	Doubling Blocks/ Limits Switching	Doubling Blocks/Limits Receiving/Departure	Doubling Blocks Main Track	Through Setout/ Pickup Blocks Main Track at Yard	Through Setout/Pickup Blocks Main Track Approaching Yard	Through Setout/Pickup/ Limits/Blocks Switching	Switching Occasionally Blocks Main Tracks
Delta (BNSF Everett)	No	3565-3565	14	1470-3600	No	No	Blocks	Blocks	Yes				Yes
Interbay (BNSF Seattle)	2	5600-8000	35	600-3600	No	Limited	Limits	Blocks	North Yes South No	Occasionally	Yes	Occasionally	Yes
Stacy/SIG (BNSF Seattle)	R-Yes 3 south of Argo D-No	R 10500 D 4000	19	900-4050	Yes	Limited	Limits	Blocks Departure	No				No
Terminal 5 (Port of Seattle)	No	5000			No	No	Blocks	Blocks	No				No
Argo (UP Seattle)	No	3000			No	No	Blocks	Blocks	Yes			Trains to and From Terminal 5 block receiving, departure, and switching	Yes
South Seattle (BNSF Seattle)	4	4300-8650	3	3500-3800	No	No	Blocks	Blocks	No				No
Tacoma (BNSF)	No	1075-3600	32	1075-3600	No	No	Blocks	Blocks	Yes	Yes	Yes	Yes	Yes
Tacoma (Tacoma Rail)	2	7500			No	Yes	No	No	No				No
Fife (UP)	No	4000			No	No	No	Yes	Yes	Yes	Yes	Occasionally	No
Longview Jct. (BNSF/UP Longview)	No	3600	12	3600	No	Limited	Limits	Blocks	Occasionally	Yes	Yes	Limited Switching	No
Vancouver (BNSF)	2	3900-5740	29	775-4800	No	Yes	No	Blocks	Yes	Yes	Yes	Occasionally	Yes
Pasco (BNSF)	11	7300-8500	47	890-1600	Yes	Yes	No	No	No				No
Yardley (BNSF Spokane)	5	7100-8600	33	800-4800	Limited	Limited	Limits	Limits	Occasionally	No	Occasionally	Occasionally	No

Terminals and yards are only part of the rail network. When key terminals and yards exceed theoretical capacity the railroads can manage those locations by keeping the network fluid. The two primary measures used to monitor yard fluidity are "cars-in-inventory" and "dwell time." As cars-in-inventory increases so does dwell time. Using these and other train forecasts railroads determine the nature of operations one week into the future based on current operating conditions. BNSF has identified the "performance degradation point cars in inventory" for each primary terminal on their network. With the goal of keeping the network fluid railroads will execute actions such as alternate routes and handling train traffic differently to alleviate pressure. Some bottlenecks are addressed by changing how trains are blocked switched, including doing some switching on line and in sidings to relieve congestion.

Table 3.2 shows the terminal performance for major BNSF terminals in Washington State.

Table 3.2 Terminal Performance for Major BNSF Washington State Terminals

Yard	Daily Average	28-Day High	Performance Degradation Point	Percent of Performance Degradation Point
Wishram	103	184	125	82%
Kalama	31	54	100	31%
Longview Junction	184	210	200	92%
Pasco	1,686	2,004	1,700	99%
Kent	37	96	60	62%
Pasco-Ain Junction	1,873	2,171	1,700	110%
Seattle	123	160	150	82%
Spokane	589	762	700	84%
Tacoma	204	250	200	102%
Vancouver	456	610	475	96%
Wenatchee	27	57	60	45%
Yakima	79	117	125	63%
Arco	80	115	80	100%
Bellingham	46	65	80	58%
Centralia	107	154	125	86%
Connell	8	21	30	27%
Everett	521	671	500	104%
Interbay	403	492	325	124%

The primary rail terminals in Washington are BNSF's Spokane, Pasco, Vancouver, Seattle, and Delta (Everett) Yards, the UPRR's Argo Yard (Seattle), and Tacoma Rail's Tacoma Yard.

Spokane-BNSF

Spokane Yard is a flat switching yard responsible for classifying cars for trains going east, west, and south, as well as various locals. The average daily capacity is 1,000 to 1,200 cars, with an average dwell of 27 hours. The terminal is considered critical when it exceeds 1,300 cars. The yard consists of three main yards: Erie Street; Hauser, Idaho; and Yardley. Erie Street Yard is used primarily for grain trains or UPRR interchange. Hauser Yard is used primarily for limited intermodal pick-up/set out, grain storage, 1,000-mile inspection, adding distributed power, and crew changes. Yardley Yard is split between two smaller yards. The "hell hole" is made up of 17 short tracks where most of the small blocks are built. The larger yard is located next to the mainline and used for larger blocks and for setting out, picking up, and building trains. When the yard is full the mainline is used for building outbound trains. Picking up blocks for outbound trains usually requires the train be entirely reswitched when it contains multiple blocks. This reswitching can take as long as five hours to complete. Since this is not primarily an origin/destination point the biggest constraint to maintaining a fluid yard is having inbound trains and power arrive on time. Also, due to the fact that the crew change point for the trains through Spokane is at Hauser, Idaho, 24 miles away, the mainline capacity between Spokane and Hauser is critical. Mainline capacity between Spokane and Athol was identified as being critical to Spokane Yard. Currently, approximately half of the 42 miles is double track and half single track.

The performance degradation point for Spokane Yard is 700 cars in inventory. Cars-in-inventory between April 15, 2005, and April 15, 2006, was:

- Daily Average = 589;
- Highest 28-Day Period = 762;
- Highest 7-Day Period = 867; and
- Single-Day Maximum = 1,006.

Pasco-BNSF

Pasco Yard is a directional hump yard responsible for classifying 41 blocks, arriving 15 trains per day, and departing 14 trains per day. The yard includes 47 bowl tracks, 9 arrival tracks, and 10 departure tracks. The biggest issue with the yard capacity is on-time trains and power.

The performance degradation point for Pasco Yard is 1,700 cars in inventory. Cars-in-inventory between April 15, 2005, and April 15, 2006, was:

- Daily Average = 1,686;
- Highest 28-Day Period = 2,004;

- Highest 7-Day Period = 2,178; and
- Single-Day Maximum = 2,352.

Vancouver-BNSF

Vancouver Yard is a flat switching yard responsible for classifying cars to/from Pasco, California, UPRR, Interbay, Everett, and various locals. The average dwell is 24 hours, which is consistent with only having a single outbound train for a block (destination). The dwell time increases quickly when the daily yard inventory exceeds 750 cars. Yard operations conflict with other mainline operations and further impacted by existing infrastructure constraints. Mainline operations through Vancouver Yard total 70 to 75 trains per day. These trains include general merchandise, intermodal, unit trains (grain), UPRR interchange, and Amtrak. Flat switching is done from both ends of the yard with a restriction of 12 cars at the south end because of the mainline operations. Yard operations conflict with other mainline operations and further impacted by existing infrastructure constraints. The primary infrastructure constraint is the 10 mph single mainline track connecting the Fallbridge and Seattle Subdivisions. This configuration reduces the mainline throughput and because of the yard, lead, and mainline conflicts consumes mainline capacity whenever departing trains from the Yard or United Grain. The time-sensitive schedule for Amtrak also causes certain yard operations to stop throughout the day for Amtrak trains.

The performance degradation point for Vancouver Yard is 475 cars-in-inventory. Cars-in-inventory between April 15, 2005, and April 15, 2006, was:

- Daily Average = 456;
- Highest 28-Day Period = 610;
- Highest 7-Day Period = 701; and
- Single-Day Maximum = 896.

Seattle-BNSF

Seattle Terminal is made up of the following yards in the Seattle area:

- Two main yards:
  - Interbay/Balmer; and
  - Stacy Street.
- Support yards:
  - West Seattle;
  - South Seattle; and
  - Kent.

Interbay/Balmer has an old and inefficient mini-hump, so the yard effectively flat-switches to classify cars for trains going north and south. Interbay also supports an adjacent grain elevator in the area.

Stacy Street is located east of the Seattle International Gateway (SIG) international intermodal facility. Stacy Street supports SIG and several local general merchandise customers.

West Seattle does not arrive or depart any trains but does support Port of Seattle T-5 intermodal and serves local industries in West Seattle and Harbor Island.

South Seattle supports the South Seattle Domestic Intermodal facility and a couple of general merchandise customers.

Kent does not classify cars but does support general merchandise customers in the Kent Valley and the facility. Primarily a setout and pick up location.

The biggest issue with the yard capacity is not being able to depart trains. The reasons for not being able to depart trains is usually lack of power or crews. Commuter windows do restrict when trains can arrive and depart.

The performance degradation point for Interbay Yard is 325 cars in inventory. Cars-in-inventory between April 15, 2005, and April 15, 2006, was:

- Daily Average = 403;
- Highest 28-Day Period = 492;
- Highest 7-Day Period = 584; and
- Single-Day Maximum = 662.

Delta (Everett)-BNSF

Delta Yard is a flat switching yard responsible for classifying cars for 12 outbound trains as well as various locals. The average daily capacity is 800 cars with an average dwell of 28 to 29 hours. The terminal is considered critical when it exceeds 850 cars. The yard is a belt pack operation which limits the cuts of cars to be switched to 15 cars. The yard is made up 13 tracks, which are used for classification and receiving/departing. The biggest issue at Delta Yard is the downtime for passenger train (Sound Transit and Amtrak) windows. Also, having six 7,000-foot R&D tracks and 14 additional classification tracks would provide additional future capacity and fluidity. The WSDOT High-Speed Rail Corridor project, which realigns Rogers Main to connect with the Bayside Subdivision, would reduce conflict with through trains waiting for commuter windows and a slot through the Everett tunnel.

The performance degradation point for Delta Yard is 500 cars in inventory. Cars-in-inventory between April 15, 2005, and April 15, 2006, was:

- Daily Average = 521;
- Highest 28-Day Period = 671;
- Highest 7-Day Period = 712; and
- Single-Day Maximum = 836.

Argo-UPRR

Union Pacific Railroad's (UPRR) Seattle operation is Argo Yard, located south of the downtown area. Argo Yard is bound by East Marginal Way to the west, various industrial sites to the south, Spokane Street to the north, and BNSF mainline to the east. The facility handles domestic intermodal trailers and containers, solid waste containers, solid waste transfer facility, as well as Port generated containers. The storage and interchange tracks located on the north side the yard are used for both intermodal and carload operations for both UPRR and BNSF.

UPRR switch crews currently move cars between businesses on Harbor Island and Argo Yard. Most UPRR trains are arrived and departed from Argo Yard. UPRR unit trains currently going to Harbor Island Terminal 5 must pull through Argo Yard which interferes with Argo Yard. According to UPRR officials, UPRR operates 24/7 in terms of intermodal container handling capability.

The facility has loading tracks for domestic and marine containers, and a separate loading area for the solid waste containers at the south end of the yard. Combined, all loading tracks have a capacity of 67 five-platform DST rail cars each 305 feet in length.

Tacoma Yard-Tacoma Rail

Tacoma Rail's primary responsibilities are to support Port of Tacoma intermodal operations and local Commercial customers. The goal is to maintain a continuous flow of rail traffic without disruption. This is accomplished by first being able to receive inbound trains from either of the mainline carriers (UP, BNSF) that serve the Tideflats as they arrive in the Tacoma area. Second, Tacoma Rail yards must have enough room to switch out, stage, and position railcars for efficient delivery. Third, Tacoma Rail's staging and support infrastructure must have sufficient room to pull completed trains or empties from its customers.

Tacoma Rail uses a rail industry rule of thumb for infrastructure utilization that available track should not be utilized in excess of 60 percent by railcars. Utilization in the range of 50 to 60 percent indicates mild congestion. At that level, there are some restrictions of operations. Ratios in excess of 60 percent indicate significant congestion and reduced responsiveness. At a time of significant utilization, railcars have to be moved and shuffled excessively to make room for other cars while attempting to keep cars in logical sequences. Utilization in excess of 80 percent indicates a yard is in gridlock and all activities are severely delayed.

See terminal working inventory graphs in Appendix A.

Secondary Rail Corridors

The secondary rail corridors in Washington State are generally not constrained by train volumes. Usually one train per day in each direction is sufficient to handle the car volumes generated by the line. The capacity constraints are directly related to the track condition and the resulting speed restrictions to the service. For example, Tacoma Rail operates freight service (under franchise agreement with BNSF) on the Nisqually to Tacoma line that Sound Transit purchased from BNSF. Speeds are restricted to 10 mph because of track condition. A single round-trip on this 16-mile line takes almost four hours. Tacoma Rail uses two shifts of train crews to serve a modest number of freight customers on the line. Funded Sounder and Amtrak *Cascades* track and signal improvements on this line will reduce the freight round trip time from 4 hours to 50 minutes. The freight service currently provided by two crews will be performed by one crew with time left for other work.

The effect of low speeds on longer secondary lines can be even more significant. A train on an 80-mile secondary line of with a speed limit of 20 mph will spend an entire workday merely traveling from one end of the line to the other and back again. The economies of rail transportation (reduced fuel, labor, and equipment cost) are lost to increased travel time.

What Are the Commuter and Intercity Passenger-Only Constraints?

Capacity limitations for passenger trains operating between Portland, Oregon, Seattle, Washington, and Vancouver, British Columbia, result from a combination of infrastructure designed exclusively for freight operations and by the time-sensitive nature of passenger service. The time-sensitive requirements for passenger service can amplify the effect of relatively small capacity limitations. This effect is not limited to passenger trains, however. It also is associated with the operation of domestic intermodal trains.

A small amount of delay is generally not important to freight traffic, but passenger service requires a strict adherence to schedules developed with the fastest possible running times to attract and maintain riders. Passenger train operation must be precisely planned over the entire route to avoid delays. In general, a passenger train occupies less capacity than a freight train because it is shorter, lighter, and travels at a higher speed. The capacity consumption can be more than that of a freight train because of the need to overtake slower trains. When capacity limitation for freight trains causes them to queue on main tracks, the movement of passenger trains may cause additional delay to other traffic because of the priority movement needed on the remaining capacity in order to maintain schedule or at least minimize the delay that is caused by the queuing.

For the same reason, a passenger train (or time-sensitive freight train) may cause the capacity of the line to be reduced if operation at capacity is associated with a minimum delay because of the configuration of the line.

The major passenger-only capacity restraints in each of the identified segments are summarized below. Refer to Appendix A: Summary of Identified Capacity Constraints, for more detailed descriptions.

Portland

Portland Union Station is generally adequate for current and planned service; however, there are several limitations. (See Figure 3.2, Location 1.)

Speed – The speed limit on the Steel Bridge, immediately south of the station, is 6 mph. The six mph speed limit continues through the station to the north end. The 6 mph speed limit has a direct effect on capacity. There are two elements to the effect. First, there is a very large speed differential between freight trains and passenger trains, significantly increasing the minimum headway between a freight train and a following passenger train. Second, when all traffic is moving at the same speed, the capacity limitation of low speed can be mitigated by block length. This is only effective if the speed is great enough to allow a consistent minimum headway. At 6 mph, signals must be very closely spaced to allow a minimum headway that is consistent with the minimum headway possible between Portland and Vancouver.

There are two tracks that pass through the station and are operated as main tracks at either end, but they are operated as yard tracks through the station. Trains operate at restricted speed, which is a speed not exceeding 20 mph but prepared to stop within half the range of vision. Depending upon the weight of the train and the visibility conditions (e.g., weather, obstructions), restricted speed can be a speed much less then 20 mph. This condition does not directly affect capacity for passenger operations; however, it has an effect on capacity when a freight train passes through the station, aggravating the effect of the 6 mph speed limit on the Steel Bridge.

Track Configuration – The track configuration is generally adequate for the current and planned traffic; however, it must be utilized carefully to ensure consistency with the requirements of current and future passenger operations. Only two of the tracks (numbers 4 and 5) can be approached and entered at normal speed. Tracks 2 and 3 connect to track 4 through a turnout with a 10 mph speed limit. Also, simultaneous arrival and departure can only occur on one pair of tracks, which must always include track five. Tracks 4 and 5 also are the tracks that pass through the station and would be main tracks if signaled. Thus, there is potential conflict between passenger and freight trains, depending upon the traffic situation. This effect is aggravated by the low speed limit for freight trains.

Signal System – There is no signal system on the tracks through Portland Union Station. The Union Pacific CTC traffic control system extends south from (and including) the south end of the station. The BNSF traffic control system extends north from a point north of the north end of the station.

Vancouver, Kelso, Centralia, and Centennial Station Platform Configuration

The Vancouver station has only east side and center platforms requiring traffic to be arranged so that passenger trains use the east track to board passengers whenever possible (See Figure 3.2, Location 1). When the center platform is used trains are held out to allow passengers to cross the east track at-grade to get to the station. Depending upon the traffic situation, passenger operations at the station can result in periods of single track operations, which reduces capacity. A similar situation exists at Kelso (See Figure 3.2, Location 4), Centralia (See Figure 3.2, Location 7), and Centennial Stations (See Figure 3.2, Location 8).

Tacoma

Amtrak Station – The Tacoma Amtrak station is located on 1.2 miles of single track east of the main tracks between D Street and River Street. The time required to clear the station is further aggravated by low-speed operations (10 to 20 mph) on the station track restricting number of meet locations on the entire corridor, thereby limiting passenger scheduling options. (See Figure 3.2, Location 10.)

Tacoma Rail/Tacoma Dome Station – The Tacoma Rail line between TR Junction (the connection with BNSF) and the Tacoma Dome Station is single track except for a section of double track approximately 1,700 feet long between Portland Avenue and L Street. The speed limit is 30 mph for passenger trains (except 10 mph over switches at Portland Avenue, L Street, and G Street) and 10 mph for freight trains. (See Figure 3.2, Location 10.)

Seattle

Capacity at King Street Station (See Figure 3.2, Location 14) is limited by the following:

- Number of through tracks. Currently, two of the three through tracks are configured and dedicated for Sound Transit commuter service. Amtrak trains going through Seattle must share the remaining through track in the station.

- Limited number of simultaneous moves from the station northward to the main tracks. Northbound Amtrak trains must operate on the normally southward main track through the King Street tunnel.

- Simultaneous movements between the main tracks and the station are not possible at the south end of the station because of a short segment of single track.

- Hand throw switches on the south end of the station extend the time needed for movement on the single track segment.

- Access to the Amtrak maintenance facility is restricted by single track operations.

Everett

Passengers walking between the station and the platform used by Amtrak trains must cross the track used by Sound Transit commuter trains. Effectively, each Sound Transit train arriving and leaving uses the Sound Transit track and the main track when considering passenger train capacity. (See Figure 3.2, Location 21.)

Vancouver, British Columbia

Only one track in Pacific Central Station can accommodate an Amtrak *Cascades* trains due to the length of the enclosed customs and immigration processing area. (See Figure 3.2, Location 26.)

■ Existing and Projected Rail Demand

What Are the Current Demands on the Rail System?

Average train volumes for Washington State's major rail lines are listed in Table 3.3 and are based on representative sampling daily volumes from March and April 2006. Train volumes can vary significantly from day to day as well as seasonally.

Significant segments of the State's rail system currently are operating at or approaching their practical capacities (50 percent of theoretical) where reliable and predictable train operations can be sustained. The BNSF transcontinental main line from Seattle to Everett, then east over Stevens Pass to Spokane, routinely operates at 50 to 60 percent of theoretical capacity and regularly hits levels approaching 80 percent of theoretical capacity. As a result BNSF has been routing more intermodal trains south to Vancouver, Washington, then east along the Columbia River to Pasco, then north to Spokane.

The U.S.-Canadian border crossing currently is the most congested rail segment in the State because of customs delays and inadequate siding spacing. Trains along this line experience long delays on a regular basis. The on-time performance percentage of Amtrak's daily *Cascade* trains has decreased from 88 percent in January 2001 (80 percent for FFY 2001) to 46 percent in May 2006.

Table 3.3 Average Daily Train Volumes

Line Segment (Owner)	Split Volume (Freight/ Passenger)	Total Volume	Practical Capacity	Volume as Percent of Practical Capacity
Portland, Oregon-Vancouver, Washington (BNSF)	TBD		84	TBD
Vancouver-Seattle, Washington (BNSF)				
Vancouver-Tacoma	45/8	53	72	73.6%
Tacoma-Seattle	45/14	59	137	43.0%
Tacoma-Tukwila, Washington (UPRR)	14	14	35	40.0%
Seattle-Everett, Washington (BNSF)	40/10	50	45	111.20%
Everett, Washington-New Westminster BC (BNSF)				
Everett-Burlington	14/4	18	24	75.0%
Burlington-Ferndale	10/4	14	14.4	97.0%
Ferndale-New Westminster	10/2	12	7	171.40%
Everett-Spokane, Washington (BNSF)	25/2	27	22	122.80%
Vancouver-Pasco, Washington (BNSF)	31/2	33	36	90.6%
Auburn-Pasco, Washington (BNSF)	6/0	6	10	60.0%
Pasco-Spokane, Washington (BNSF)	33/2	35	40	87.6%
Pasco (Wallula)-Spokane, Washington (UP)	7/0	7	5/7[a]	100.0%
Spokane, Washington-Sandpoint, Idaho (BNSF)	46/2	48	102	46.6%
Spokane, Washington-Sandpoint, Idaho (UP)	8/0	8	6/8[b]	100.0%

[a] Seven for trains up to 6,700 feet in length, five for longer trains.

[b] Eight for trains up to 6,400 feet in length, six for longer trains; includes the capacity limitation between the Washington/Idaho border and the east end of the line at Eastport, Idaho.

What Are the Projected Demands on the Rail System?

The 2015 and 2025 forecast peak day average train volumes for Washington State's major rail lines are listed in Table 3.4 and are based on the forecast provided by Global Insight and increased utilization and standardization of equipment projections provided by BNSF.

Table 3.4 2015 and 2025 Forecasted Train Volumes

Line Segment (Owner)	2015 Freight [a b c]/ Passenger	2015 Total	2025 Freight [a b c]/ Passenger	2025 Total
Vancouver-Seattle, Washington (BNSF)				
Vancouver-Kalama	35/16	51	42/26	68
Kalama-Centralia	24/16	40	31/26	57
Centralia-Tacoma	21/16	37	26/26	52
Tacoma-Auburn	22/16	38	29/26	55
Auburn-Seattle	21/34	55	27/44	71
Tacoma-Tukwila, Washington (UPRR)	16	16	20	20
Seattle-Everett, Washington (BNSF)	25/10	35	31/12	43
Everett, Washington-New Westminster BC (BNSF)				
Everett-Burlington	19/6	25	21/8	29
Burlington-Ferndale	15/6	21	17/8	25
Ferndale-New Westminster	10/6	16	12/8	20
Everett-Spokane, Washington (BNSF)	20/2	22	25/2	27
Vancouver-Pasco, Washington (BNSF)				
Vancouver-Wishram	33/2	35	44/2	46
Wishram-Roosevelt	38/2	40	50/2	52
Roosevelt-Pasco	29/2	31	36/2	38
Auburn-Pasco, Washington (BNSF)				
Auburn-Yakima	13/0	13	18/0	18
Yakima-Pasco	18/0	18	24/0	24
Pasco-Spokane, Washington (BNSF)	36/2	38	48/2	50
Pasco (Wallula)-Spokane, Washington (UP)	10/0	10	11/0	11
Spokane, Washington-Sandpoint, Idaho (BNSF)	58/2	60	75/2	77
Spokane, Washington-Sandpoint, Idaho (UP)	10/0	10	11/0	11

[a] Intermodal trains – 28 cars – 270-foot per 5-well double-stack cars 100 percent utilized.

[b] Solid Waste trains – 80 cars per train at 72-foot per Singe well double-stack cars.

[c] General Merchandise trains – 108 cars per train at 60-foot per car.

The number of peak-day intermodal trains running east-west between Spokane and the ports of Seattle and Tacoma is 19 in 2015 and will be 28 in 2025. Based on input from BNSF, 70 percent of all Port of Tacoma trains will travel over Stampede Pass and the

balance down I-5 and along the Gorge. All of the Port of Seattle and domestic intermodal trains will travel over Stevens Pass.

Based on these volumes and the calculated mainline capacities for 8,000-foot trains, peak day trains will exceed practical capacity on the following segments within Washington in 2015 and 2025 (Table 3.5).

Table 3.5 Locations Where Main Line Capacity Is Exceeded for 8,000-Foot Trains

2015	2025
Everett-Burlington	Everett-Burlington
Burlington-Ferndale	Burlington-Ferndale
Ferndale-New Westminster	Ferndale-New Westminster
Everett-Spokane, Washington (BNSF)	Everett-Spokane, Washington (BNSF)
Vancouver-Wishram	Vancouver-Wishram
Wishram-Roosevelt	Wishram-Roosevelt
Roosevelt-Pasco	Roosevelt-Pasco
	Pasco-Spokane, Washington (BNSF)
Pasco (Wallula)-Spokane, Washington (UP)	Pasco (Wallula)-Spokane, Washington (UP)
Spokane, Washington-Sandpoint, Idaho (UP)	Spokane, Washington-Sandpoint, Idaho (UP)
Auburn-Yakima	Auburn-Yakima
Yakima-Pasco	Yakima-Pasco

The BNSF will have to invest significant capital within Washington in order to expand sidings and yards to accommodate 8,000-foot trains based on the forecasted growth.

How Are Railroads Addressing These Capacity Constraints?

The railroads are promoting several strategies described below to add capacity without making significant infrastructure investment. These strategies have been incorporated in the forecast train volumes shown is in Table 3.4.

Improved Slot Utilization

Improving locomotive and car velocity are the keys to achieving the service and capacity needed to handle the forecasted growth in rail traffic. These capacity improvements will be made in several different ways:

- **Line Throughput –** Move more traffic over each route. This includes increasing the number of trains that can move over a line and the average speed at which they move across the route.

- **Terminal Throughput –** Standardize terminal processes and optimize terminal resources.

- **Locomotive Distribution –** Position locomotives in the right place at the right time and turn them faster.

- **Maintenance Reliability –** Use maintenance activities everywhere to make the assets more available to improve velocity.

- **Capital Improvements –** Make the capital investments in expansion of the physical plant (additional track, facilities, and equipment, without which future velocity improvements would not be possible).

- **Train Size/Capacity –** Increase train size and number of units per train.

- **Train Design –** Design and build trains at origin to reduce terminal handling down the line.

For intermodal trains, capacity is improved by increasing the number of cars per train and units per car. This is accomplished by running longer trains, maximizing slot utilization, and optimizing the five-well double-stack railcar length.

Running longer trains, up to 8,000 feet, allows railroads to run about the same number of trains while handling 20 percent more volume. The operation of 8,000-foot trains is an operating practice, which will be discussed in the Task 4 Technical Memorandum. The practice of running 8,000-foot trains will result in some additional infrastructure requirements.

Maximum slot utilization is accomplished when every space available is used on a double-stack car. A five-platform double-stack car has 10 slots available for loading. If all 10 slots are loaded, you have 100 percent slot utilization. The Northwest ports are realizing less than optimal slot utilization today at 70 percent for westbound trains.

For BNSF, intermodal slot utilization was up 1 percent to 93 percent in 2004; each percentage point of increase equals about 800 intermodal platforms per day of additional capacity (Table 3.6).

Table 3.6 BNSF Stack Trains Statistical Trends

Year	Number of Units	Percent Utilization
2001	N/A	90.1%
2002	N/A	91.8%
2003	196	92.0%
2004	207	93.0%
2005	214	93.3%

Optimizing the Railcar Length for double-stack railcars is an initiative that BNSF is undertaking to minimize the rail car length per container ratio. Today, double-stack railcars vary in length from 70 feet for a single-well double-stack railcar to 325 feet for a five-well double-stack railcar. The industry average used for purposes of estimating capacity is 305 feet.

In order to maximize the mainline capacity the BNSF is developing dedicated, 40-foot container-only, five-well double-stack cars that are 270 feet long.

Railcar Length per Container

The standard five-well (270 feet) railcar combined with the improved intermodal slot utilization results in 27 feet of railcar utilized per 40-foot container. This compares quite favorably with 43.57 railcar feet/container of today's five-well (305 feet) double-stack cars with 70 percent slot utilization. The combined slot utilization increase with use of dedicated 270-foot railcars results in a 56 percent capacity improvement for international intermodal.

■ Planned Capacity Improvements

What Are the Currently Funded Capacity Improvement Projects in Washington?

The projects in Table 3.7 are either fully or partially funded relating to main line, terminal access, or secondary line capacity projects. The majority of the funded north-south projects between Vancouver, WA and Blaine, WA are related to the State's passenger rail program. Many of the projects appearing in Table 3.7 are also shown in Figure 3.3, Washington State Identified Funded Projects.

Table 3.7 Funded Rail Projects

Location	Project Name	Funding ($1,000s)	Funding Biennium	Source
Vancouver, WA	Vancouver Rail Line Project (incl. 39th St.)	$109,950	2005-2011	WSDOT
Lewis Co.	Chehalis Jct. Crossovers	$3,900	2013-2015	WSDOT
Bellingham, WA	Bellingham Georgia Pacific Curve	$180	2007-2009	WSDOT
Kalama-Longview, WA	Kelso-Martin's Bluff 3rd Mainline	$53,068	2011-2015	WSDOT
BNSF Seattle Sub	Centennial High-Speed Crossovers	$3,875	2006	WSDOT
BNSF Seattle Sub	Tenino High-Speed Crossovers	$3,875	2007-2009	WSDOT
Lewis Co.	Newaukum High-Speed Crossovers	$3,490	2013-2015	WSDOT
Winlock, WA.	Winlock High-Speed Crossovers	$3,925	2006	WSDOT
Mount Vernon, WA	Mount Vernon Siding Upgrade	$3,800	2006	WSDOT
Everett, WA	PA Jct. Curve Realignments and Delta Yard Storage Tracks	$14,000	2005-2007	WSDOT
Stanwood, WA	Stanwood Siding Upgrades	$3,000	2007-2009	WSDOT
Blaine, WA	Swift Customs Facility/Blaine & White Rock	$9,000	2006-2009	WSDOT
Seattle, WA	King Street Station Track Impr.	$15,000	2006-2011	WSDOT
Pierce Co.	Pt. Defiance Bypass Phase 1	$59.6	2007-2009	WSDOT
Everett, WA	Snohomish Riverfront Redevelopment	$1,800	2006	WSDOT
Bellingham, WA	Bellingham Waterfront Restoration Project	$5,000	2009	WSDOT
Cosmopolis, WA	Cosmopolis Bypass Port of Grays Harbor	$765	2007	WSDOT
Pasco, WA	Port of Pasco Intermodal Facility Improvements	$5,400	2006	WSDOT
Chehalis & Centralia, WA	Chehalis Jct. to Blakeslee Jct.; via Centralia	$7,400	2006	WSDOT
Seattle – Tacoma, WA	Sound Transit Phase 1 and 2	$304,000	Under construction	Sound Transit
Seattle – Everett, WA	Sound Transit (Seattle – Everett)	$207,000	Under construction	Sound Transit
Auburn – Seattle, WA	Phase 3 Improvements, Argo-Black River, Sound Transit	N/A	Not yet determined	Sound Transit
Tacoma, WA	Port of Tacoma Bullfrog/Chilcote Jct. Improvements	N/A	Under construction	Port of Tacoma
BNSF Fallbridge Sub	Lyle siding extension	N/A	Under construction	BNSF
BNSF Stampede Sub	BNSF Stampede Pass Tunnel Clearance	N/A	Not yet determined	BNSF

Key main line capacity projects include:

- Vancouver Rail Line Project, provides add capacity to meet freight trains off the main line;
- Point Defiance Bypass Project, reduces Cascades trains running times and bypasses congested Nelson Bennett Tunnel; and
- Kelso-Martin Bluff 3rd Main Line, routes Cascades trains around congested terminal access points to the Ports of Kalama and Longview.

Funding sources include the Washington's LEAP Transportation Document 2006-C, Rail Capital Program dated March 6, 2006; Sound Transit; Port of Tacoma; and the BNSF capital projects plan. A complete listing of state-funded rail projects is available in LEAP Transportation Document 2006-C, Rail Capital Program.

What Are the Currently Identified Capacity Improvement Projects in Washington?

A list of State rail projects has been compiled from previous studies and proposals. The preponderance of the north-south projects between Vancouver, WA and Blaine, WA are part of the WSDOT passenger program plan. The early WSDOT rail projects generally address recovery of main line capacity for through-train movements. The later projects generally address the infrastructure required for higher speeds and an increase in the number of passenger trains. A complete implementation program for these projects is found in *Draft Long-Range Plan for Amtrak Cascades*, WSDOT, February 2006.

Table 3.8 lists the currently identified rail projects, the capacity limitations they are intended to address, and what benefits/mitigation they are intended to provide. Figures 3.3 and 3.4 show the location of the 98 identified rail projects, with the funded projects (40 total) shown on Figure 3.3, and unfunded projects (58 total) shown in Figure 3.4. No operational analysis was performed on the listed projects as part of this Study. This list will serve as a basis for identifying various corridor/sector improvements that may be considered to add capacity to the State's main lines, secondary lines, and rail terminals. Additional projects may be identified during the course of the project as the industry reviews this report and other WTC study documents.

Figure 3.3 Washington State Identified Funded Rail Projects

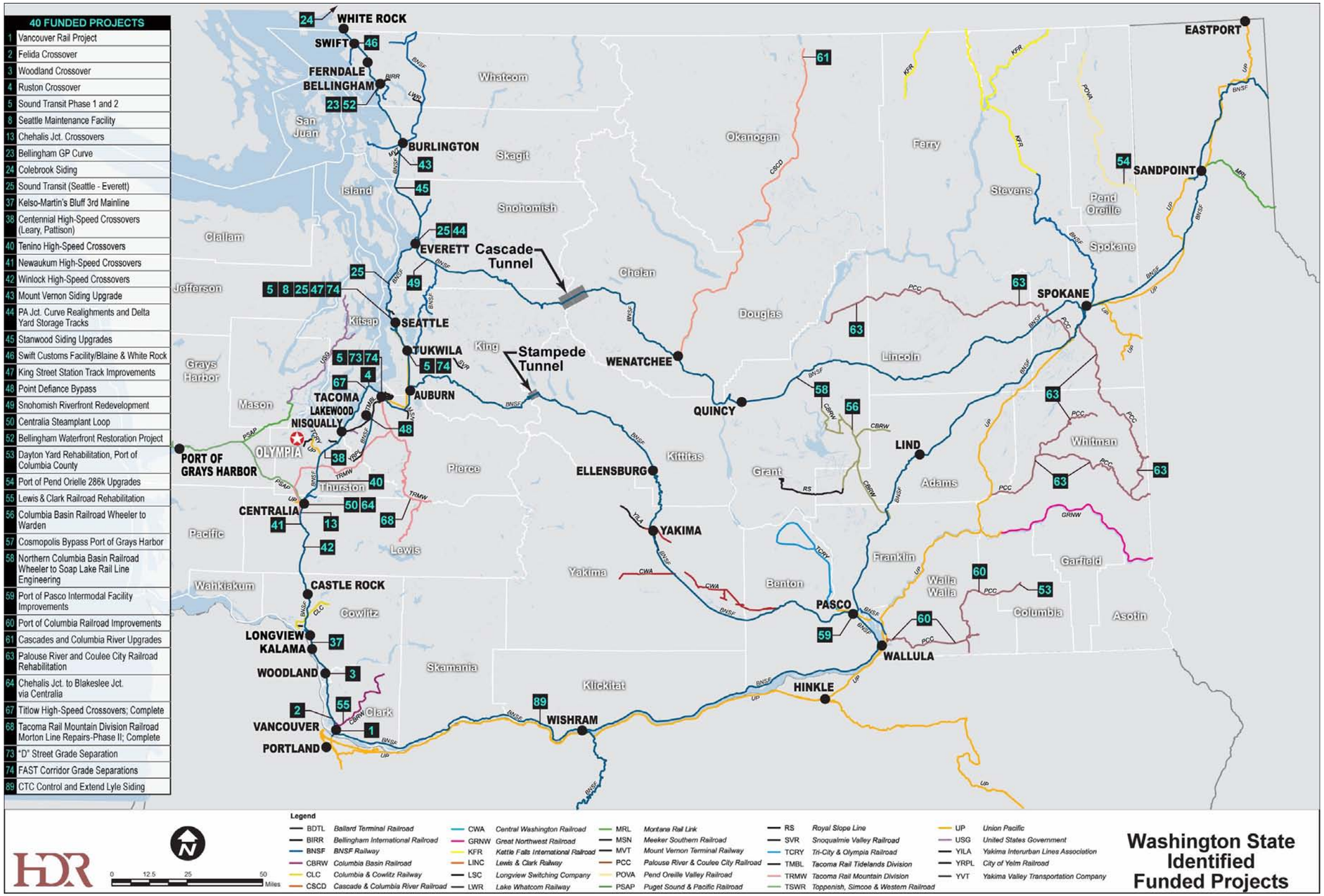


Figure 3.4 Washington State Identified Unfunded Rail Projects

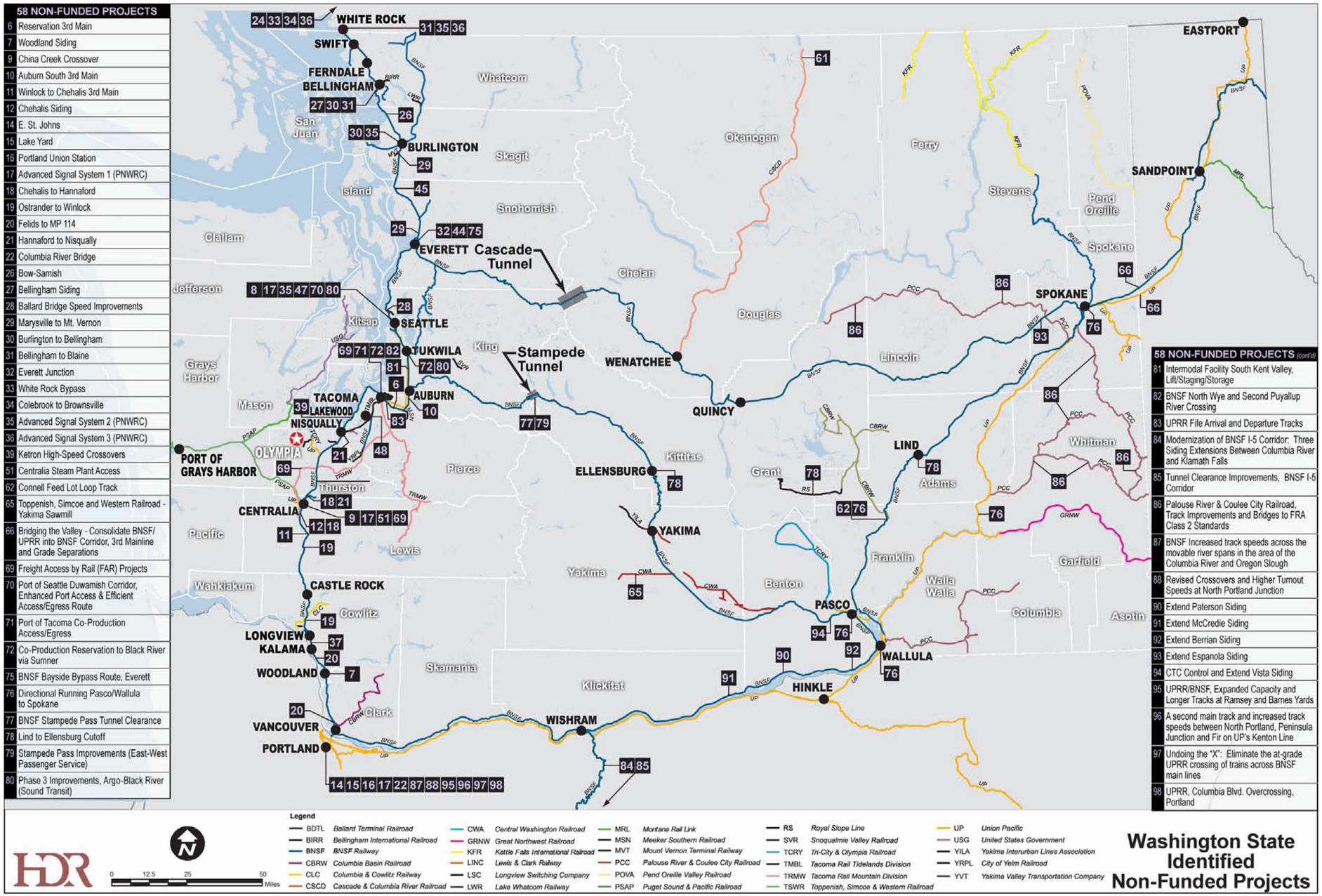


Table 3.8 Identified State Rail Projects

ID No.	State(s) Benefitted	Problem Type	Project Name / Solution Type	Funding	Proposer	Beneficiary	Sectors Benefitted	
							Primary	Secondary
98 Projects								
1	WA	1, 2, 3, 4, 5, 6, 13, 17	Vancouver Rail Project A, B, C, D, F, I, K, M, P	Funded	A	C, D, E	A, I, M, P, X	
2	WA	4, 14	Fallda Crossover I	Complete	A	C, D, E	A, I, M, P	
3	WA	3, 10, 11, 14	Woodland Crossover I	Complete	A	C, D, E	A, I, M, P	
4	WA	2, 3, 4, 14	Ruston Crossover I	Complete	A	C, D, E	A, I, M, P	
5	WA	1, 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 17, 18, 23	Sound Transit Phase 1 and 2 A, B, C, D, E, F, G, I, K, M, N, P	Funded	F	C, D, E, F	A, I, M, P	
6	WA	2, 3, 4, 6	Reservation 3rd Main A, B		A	C, D, E, F	A, I, M, P	
7	WA	3	Woodland Siding A		A	C, D, E	A, I, M, P	
8	WA	2, 3, 5, 6, 23	Seattle Maintenance Facility A, B	Partial	A, E	C, E, F	P	A, I, M
9	WA	13	China Creek X-Over I		A	C, D	A, I, M	
10	WA	4, 10, 12	Auburn South 3rd Main A, C		A	C, D, E, F	A, I, M, P	
11	WA	10, 15	Winlock to Chehalis 3rd Main C		A	C, D, E	A, I, M, P	
12	WA	3	Chehalis Siding A		A	C, D, E	A, I, M, P	
13	WA	15, 17	Chehalis Jct. X-Overs M	2013-2015	A	C, D, E	A, I, M, P	
14	OR	2, 3, 4, 6, 23	E. St. Johns A, B, F		A	C, E	I, M, P	
15	OR	2, 3, 6, 23	Lake Yard B, F, M, P		A	C, E	I, M, P	
16	OR	21	Portland Union Station A		A	A, E	M, P	
17	WA	19, 22	Advanced Signal System 1 (PNWRC) J		A	A, E	P	
18	WA	10	Chehalis to Hannaford C		A	C, D, E	A, I, M, P	
19	WA	10	Ostrander to Winlock C		A	C, D, E	A, I, M, P	
20	WA	10	Fallda to MP 114 C		A	C, D, E	A, I, M, P	
21	WA	10, 13	Hannaford to Nisqually A, C, O		A	C, D, E	A, I, M, P	
22	WA/OR	17, 20	Columbia River Bridge B, L		A	C, D, E	A, I, M, P	
23	WA	7, 9, 15, 17	Bellingham GP Curve M	2007-2009	A	C, E	M, P	
24	WA	9	Colebrook Siding H	Partial	A	C, E	M, P	
25	WA	1, 2, 3, 4, 6, 7, 8, 9, 10, 14, 16, 17, 23	Sound Transit (Sea - Everett) A, B, F, H, I, K, M, N	Funded	F	C, D, E, F	I, M, P	
26	WA	9, 10	Bow - Samish C, H		A	C, E	M, P	
27	WA	9	Bellingham Siding H, U		A	C, E	M, P	
28	WA	17	Ballard Bridge Speed M		A	C, E, F	I, M, P	
29	WA	9, 10	Marysville to Mt. Vernon C, H		A	C, E	M, P	
30	WA	9, 10	Burlington to Bellingham C, H		A	C, E	M, P	
31	WA	9, 10	Bellingham to Blaine C, H		A	C, E	M, P	
32	WA	9	Everett Junction H		A	C, E, F	I, M, P	

Legend

Category		Problem Types
A	1	Trains stopped on main tracks during crew change.
A	2	Trains occupying main tracks for an extended time while doubling into and out of yards.
A	3	Trains occupying main tracks for an extended time while setting out, picking up, or switching.
A	4	Trains stopped on main tracks awaiting accommodation in yards or on connecting routes.
C	5	Route conflict among commonly used routes.
A	6	Low speed entering and leaving main tracks.
F	7	Low speed operation on main tracks (regulatory).
B	8	Signal spacing / speed combination (multiple track excess headway).
C	9	Siding spacing / speed combination (single track).
D	10	Speed differential (Passenger / Freight)
C	11	Speed Differential (Freight / Freight)
D	12	Speed Differential (Passenger / Passenger)
D	13	Single side station (passenger access across main tracks)
C	14	Maintenance of Way access to tracks (track out of service for maintenance of way causes extensive capacity limitation)
F	15	Speed on grades.
B	16	Low speed operation on main tracks (yard limits).
E	17	Low speed operation on main tracks (track geometry, track condition, structure condition)
B	18	Written movement authority procedures.
B	19	Weather related speed reduction for reduced signal visibility.
F	20	Marine Navigation
D	21	Passenger train use of main tracks at stations.
B	22	Signal system for high speed operation.
B	23	Trains stopped for hand throw switches
F	24	Highway crossings limit railroad operations
F	25	Line capacity required beyond improvement of existing facility
E	26	Condition limits traffic type
A	27	Inadequate yard track length, quantity, configuration
C	28	Inadequate Siding Length
A	29	Trains block yard operation for an extended time while setting out, picking up, or switching.
A	30	Trains block yard operation for an extended time while doubling into and out of yards.

Table 3.8 Identified State Rail Projects

ID No.	State(s) Benefited	Problem Type	Project Name / Solution Type	Funding	Proposer	Beneficiary	Sectors Benefitted	
							Primary	Secondary
98 Projects								
33	WA/BC	9, 10	White Rock Bypass C, H		A	C, E	P	M
34	BC	9, 10	Colebrook to Brownsville C, H		A	C, E	P	M
35	WA	19, 22	Advanced Signal System 2 J		A	A, E	P	
36	BC	19, 22	Advanced Signal System 3 J		A	A, E	P	
37	WA	2, 3, 4, 5, 6, 10, 11, 13, 14, 23, 27	Kelso-Martin's Bluff 3rd Mainline A, B, C, D, F, I, K, M, P, T	Phase 1 2011-2015	A	C, D, E	A, I, M, P, X	
38	WA	13	Centennial High-Speed Crossovers (Leary, Pattison) I	Funded	A	C, D, E	A, I, M, P	
39	WA	10, 14	Kelron High-Speed Crossovers I	Funded	A	C, D, E	A, I, M, P	
40	WA	10, 11, 14	Tenino High-Speed Crossovers I	2007-2009	A	C, D, E	A, I, M, P	
41	WA	10, 14, 15	Newaukum High-Speed Crossovers I	2013-2015	A	C, D, E	A, I, M, P	
42	WA	10, 14, 15	Winlock High-Speed Crossovers I	Funded	A	C, D, E	A, I, M, P	
43	WA	9, 10	Mount Vernon Siding Upgrade H, U	Funded	A	C, E	M, P	
44	WA	2, 4, 5, 9, 16, 17, 23	PA Jct. Curve Realignments and Delta Yard Storage Tracks A, E, H, K, M, P	Phase 1 funded	A	C, E	M, P	
45	WA	9, 10	Stanwood Siding Upgrades H	Phase 1 2007-2009	A	C, E	M, P	
46	WA	3, 4	Swift Customs Facility/Blaine & White Rock A, D	2005-2010	A, C, E, M	C, E	M, P, Y	
47	WA	2, 3, 5, 6, 17, 23	King Street Station Track Improvements A, B, D, F, K, M, O	Phase 1 2005-2011	A, E, F	C, D, E, F	P	A, I, M
48	WA	9, 10	Pt. Defiance Bypass Phase-I C, H	Phase 1 2005-2006	A	C, D, E, F	A, I, M, P	
49	WA	3, 6, 16, 17, 23	Snohomish Riverfront Redevelopment A, E, M	Funded	N	C	Y	M
50	WA	1, 2, 3	Centralia Steamplant Loop A	Complete	O	C, D, E	Coal, A, I, M, P	
51	WA	6, 23	Centralia Steam Plant access E, M		A	C, D, E	Coal, A, I, M, P	
52	WA	7, 9, 15, 16, 17, 18	Bellingham Waterfront Restoration Project E, H, M	2007-2009	P	C, E	Y	M
53	WA	26	Dayton Yard Rehabilitation, Port of Columbia County S	Funded	B	BLMR	A, M	
54	WA	26	Port of Pend Oreille 286k Upgrades S	Funded	B	POVA	M	
55	WA	17, 26	Lewis and Clark Railroad Rehabilitation M, S	Funded	Q	CBRW	M	
56	WA	17, 26	Columbia Basin Railroad Wheeler to Warden M, S	Funded	B	Y	A, M	
57	WA	27	Cosmopolis Bypass Port of Grays Harbor T	2007-2009	B	Z	A, M	
58	WA	17	Northern Columbia Basin Railroad Wheeler to Soap Lake Rail Line Engineering M	Funded	B	Y	A, M	
59	WA		Port of Pasco Intermodal Facility Improvements	Funded			I	
60	WA		Port of Columbia Railroad Improvements	2007-2013		Port of Columbia (BLMR)	A, M	
61	WA		Cascades and Columbia River Upgrades	Funded		CSCD	A, M	
62	WA		Connell Feedlot Loop Track Palouse River and Coulee City Railroad Rehabilitation M, S			C or Y	A	
63	WA	17, 26		2005-2013		B, W	A, M	
64	WA	1, 6, 8	Chehalis Jct. to Blakeslee Jct.; via Centralia D, G, P	Funded	B	C, D, E	A, M	

Legend

A	31	Yard operation must use main tracks

Category	Description
A	Yard infrastructure
B	Signal and traffic control systems
C	Main line infrastructure (except signal and traffic control)
D	Passenger operation
E	Infrastructure condition
F	Geography, geology, topography, regulation

Solution Types

A	Additional track to accommodate stopped trains
B	Additional track for low speed operation.
C	Additional track to accommodate overtaking.
D	Additional track to reduce route conflict duration / eliminate route conflict.
E	Traffic Control Systems (CTC).
F	Additional crossovers / turnouts to increase flexibility.
G	Reduce duration of block occupancy (change signal spacing and / speed).
H	Reduce time between sidings (change spacing and / or speed).
I	Additional crossovers to reduce length / duration of single track operation.
J	Advanced signal system.
K	Change normal use of existing tracks.
L	Change drawbridge type
M	Improve track geometry, track condition, structure condition for higher speed
N	Eliminate regulatory speed limits
O	Change station design
P	Power existing hand throw switches
Q	Grade separation
R	Additional track to increase capacity
S	Modify existing route to accommodate additional traffic types
T	Modify yard track length, quantity, configuration
U	Increase length of sidings

Table 3.8 Identified State Rail Projects

ID No.	State(s) Benefited	Problem Type	Project Name / Solution Type	Funding	Proposer	Beneficiary	Sectors Benefitted	
							Primary	Secondary
98 Projects								
65	WA	17, 26	Toppenish Simcoe and Western Railroad - Yakima Sawmill M, S		B	X	M	
66	WA/ID	9, 24	Bridging the Valley; Consolidate BNSF/UPRR into BNSF Corridor, 3rd Mainline and Grade Separations H, Q		R	C, D	A, I, M, X	P
67	WA	4, 14	Tilllow High-Speed Crossovers; Complete I	Complete	A	C, D, E	A, I, M, P	
68	WA	17	Tacoma Rail Mountain Division Railroad Morton Line Repairs-Phase II: Complete M	Funded	V	V	M	
69	WA	4, 17	Freight Access By Rail (FAR) projects M		B, U	C, D, V	A, I, M	
70	WA	2, 5, 17, 23	Port of Seattle Duwamish Corridor, Enhanced port access and efficient access/egress route. B, D, E, F		G	C, D, G	I	
71	WA	1, 2, 5, 17, 23	Port of Tacoma Co-Production Access/Egress A, B, D		H	C, D, H	I, M	A, P
72	WA	8, 9, 10	Co-Production Reservation to Black River via Sumner K		T	C, D, T	A, I, M	P
73	WA	24	"D" Street Grade Separation Q	Funded	S, T	C, D	A, I, M, P, X	
74	WA	24	FAST Corridor grade separations Q	Continuing	S, T	C, D	A, I, M, P, X	
75	WA	5, 6, 8, 16, 17, 23	BNSF Bayside bypass Route, Everett E, K, M		C	C, E, F	M	
76	WA	9, 10, 11	Directional running Pasco/Wallula-Spokane K		C	C, D	A, I, M	
77	WA	25	BNSF Stampede Pass Tunnel Clearance S		C, T	C	I	
78	WA	8, 9, 10, 11, 25	Lind to Ellensburg Cutoff R		A/B	C, E	I	M, P
79	WA	9, 18	Stampede Pass Improvements (East-West passenger service) E, H		A	C, E	P	I, M
80	WA	2, 3, 5, 6, 17, 23	Phase 3 Improvements, Argo-Black River, Sound Transit B, F, K		F	C, D, E, F	A, I, M, P	
81	WA		Intermodal Facility South Kent Valley, Lift/Staging/Storage				I	
82	WA	9, 17	BNSF North Wye and Second Puyallup River Crossing B, D		H	C, D, H	I, M	
83	WA	2, 4	UPRR Fife Arrival and Departure Tracks A		D	D, H	I, M	
84	OR	9	Modernization of BNSF I-5 Corridor, 3 Siding Extensions Between Columbia River and Klamath Falls H			C	I, M	
85	OR	26	Tunnel Clearance Improvements. BNSF I-5 Corridor S			C	I	
86	OR	26	Palouse River & Coulee City Railroad, Track Improvements and Bridges to FRA Class 2 Stds. M, S		B	W	A, M	
87	OR	17	BNSF, Increased track speeds across the movable river spans in the area of the Columbia River and Oregon Slough M		A, L	C, D, E	A, I, M, P	
88	OR	5, 6	Revised crossovers and higher turnout speeds at North Portland F, M		A, L	C, D, E	A, I, M, P	
89	WA	9, 28	CTC control and Extend Lyle siding E, U	Funded	C	C	A, M	I, P
90	WA	9, 28	Extend Paterson Siding U	BNSF Capital program 2010	C	C	A, M	I, P
91	WA	9, 28	Extend McCredie Siding U	BNSF Capital program 2010	C	C	A, M	I, P

Legend

	Proposers / Beneficiaries
A	Washington State Department of Transportation Passenger Rail Program
B	Washington State Department of Transportation Freight Rail Program
C	BNSF Railway
D	Union Pacific Railroad
E	Amtrak
F	Sound Transit
G	Port of Seattle
H	Port of Tacoma
I	Port of Vancouver
J	Port of Portland
K	Oregon Department of Transportation
L	Portland - Vancouver I-5 Corridor Transportation and Trade Partnership
M	USDOT
N	City of Everett
O	TransAlta
P	Port of Bellingham
Q	Clark County
R	Spokane Regional Transportation Council
S	Puget Sound Regional Council
T	WSDOT
U	Thurston County
V	Tacoma Rail
W	Palouse River & Coulee City Railroad
X	Toppenish Simcoe & Western Railroad
Y	Columbia Basin Railroad
Z	Port of Grays Harbor

Table 3.8 Identified State Rail Projects

ID No.	State(s) Benefited	Problem Type	Project Name / Solution Type	Funding	Proposer	Beneficiary	Sectors Benefitted	
							Primary	Secondary
98 Projects								
92	WA	9, 28	Extend Berrian Siding U	BNSF Capital program 2010	C	C	A, M	I, P
93	WA	9, 28	Extend Espanola Siding U	BNSF Capital program 2010	C	C	I	M, P
94	WA	4	CTC control and Extend Vista siding E, U		C	C	A, M	
95	OR	4	UPRR / BNSF, Expanded capacity and longer tracks at Ramsey and Barnes yards A, T		L	C, D, E	I, M	
96	OR	5, 6, 9, 17	A second main track and increased track speeds between North Portland, Peninsula Junction, and Fir, on UP's Kenton Line H, M		A, L	C, D, E	A, I, M, P	
97	OR	5, 6, 17	Undoing the "X". Eliminate the at-grade UPRR crossing of trains across BNSF main lines B, D		L	C, D, E	A, I, M, P	
98	OR	23	UPRR, Columbia Blvd Overcrossing, Portland Q		L	C, D, E	A, I, M	P

Legend	
Sectors Benefitted	
A	Agriculture & Food
I	Intermodal
M	Manufactured Goods
P	Passenger
X	Public Non-Rail Transportation
Y	Public Non-Transportation

Appendix A

Descriptions of Identified Rail Constraints

Where Are the Rail Network Constraints?

Capacity constraints can be related to a piping or "hose analysis." The capacity of the hose is limited to the capacity of the smallest diameter piece. If there are several pieces that have the same limiting diameter, the capacity will not increase until all of the pieces of that diameter have been replaced with segments of larger diameter. When they are replaced, the capacity of the hose is still no more than the capacity of the next smallest diameter piece. The size of the replacement of the smallest diameter hose is unimportant as long as it is at least as large in diameter as the next larger piece. However, if the capacity of the hose is being increased to a particular goal, it makes sense to replace the smaller segments with segments that have at least the goal capacity so that they do not need to be replaced again.

Known capacity constraints within each of the State's major rail corridor are briefly described in the following sections. The capacity constraints are presented in geographical order and do not represent any prioritization.

Portland, Oregon-Vancouver, Washington

The capacity limitations between Portland, Oregon and Vancouver, Washington are most readily described by type of limitation. There are three significant limitations on capacity between Portland and Vancouver. (See Figure 3.2, Location 1.)

Low-Speed Operation

The speed limit for all diverging movements at Willbridge (crossovers) and North Portland Junction (Port of Portland and UP connections and crossovers between main tracks) is 10 mph. The speed limit for trains on the Fallbridge Subdivision (Vancouver-Pasco route) at Vancouver is 10 mph. Each of these movements occupies the same capacity as approximately three through trains.

The speed limit over the Steel Bridge in Portland and for about 2,000 feet north of the Steel Bridge is 6 mph. There is little freight traffic in this area, but each train occupies a main track between Portland and Lake Yard for about 30 minutes.

Trains Stopped on Main Tracks

Several freight trains per day stop on a main track at Lake Yard, Willbridge, and North Portland Junction while setting out and picking up. Each of the stopped trains occupies the same capacity as three or more through trains.

Drawbridges

The Willamette River and Columbia River drawbridges (the Oregon Slough bridge is open for marine navigation infrequently) are open for an aggregate duration equivalent to about 24 train per day.

Vancouver (Portland-Seattle/Vancouver-Pasco)-Seattle (South Portal)

Vancouver

There is an array of significant capacity limitations at Vancouver. Capacity that appears at first glance to be at least 12 trains per hour can be half of that or less for most of a day. (See Figure 3.2, Locations 2 and 37.)

Low-Speed Operation – All trains entering or leaving Vancouver yard or moving between the Portland-Seattle route and the Vancouver-Pasco route move at 10 mph. Depending upon the specific movement, a train may occupy both of the Portland-Seattle main tracks and the Vancouver-Pasco main tracks consuming the same capacity as three to six through trains.

Trains move at 10 mph between Vancouver Yard (or Vancouver-Pasco main line) and Port of Vancouver crossing the Portland-Seattle main line at-grade. Each of these trains consumes the same capacity as six trains on the Portland-Seattle route.

Trains Stopped on Main Tracks – All trains moving between the Portland-Seattle route north of Vancouver and the Vancouver-Pasco route change crews at Vancouver. These trains occupy at least one of the Portland-Seattle and/or Vancouver-Pasco main tracks for 10 minutes or longer during the crew change. Trains moving from one route to another that cannot be accommodated immediately (e.g., traffic or crew availability), occupy one of the Portland-Seattle main tracks north of Vancouver or one of the Vancouver-Pasco main tracks east of Vancouver, causing single track operation on the remaining main track of the route and significantly reducing capacity.

Trains also stop on the main lines because the tracks in Vancouver yard do not accommodate the length of typical freight trains. Originating freight trains will often occupy one of the Portland-Seattle main tracks for an extended period while assemble a full train for departure. Also, the yard can generally not accommodate through trains that must set our or pick up cars at Vancouver. These trains also occupy one of the main tracks for extended periods switching cars consuming the capacity of six through trains.

Woodland-Castle Rock

A significant amount of the capacity between Woodland and MP 85 (near Castle Rock; see Figure 3.2, Locations 3 and 38) is consumed by standing trains. Some of the service at Kalama and most of the service at Longview Junction is provided by through trains that must stop on one of the main tracks while setting out or picking up cars. Trains servicing the two grain terminals at Kalama occupy a main track for extended periods due to 10 mph speed restriction accessing yard tracks and the time required to hand throw switches. There is an auxiliary track extending between the Cenex-United Harvest and Kalama Export Company grain terminals; however, it is often not available for train movement because of the need to store cars for the grain terminals or other local industries. When the track is available, it is not generally practical for use by a stopped train to clear the main track because of the hand throw switches that connect it to the main tracks. Until about 20 years ago, all freight trains had a caboose staffed with personnel available to restore hand throw switches to the correct position after use. Freight trains no longer have personnel station at the rear, so restoring a hand throw switch behind a train to the correct position generally involves a crew member from the front of the train waiting by the switch for the train to pass, restoring the switch to the correct position, and walking back to the front of the train.

Vader-Chehalis

The ruling grade in both directions on the Portland-Seattle route is between Vader and Chehalis (Napavine Hill; see Figure 3.2, Location 5). Freight trains generally ascend this hill at speeds well below 30 mph, often as low as 15 mph. The signal block lengths are similar to the block lengths on the higher speed tracks of the rest of the corridor. Therefore, the capacity of this part of the route is less roughly 30 percent than the level segments immediately to the north or south due to underpowered low-speed trains.

The low-speed freight operations on this segment aggravate the speed differential between freight and passenger trains increasing the capacity consumed by passenger trains overtaking freight trains.

As a freight train ascends the hill at 20 mph, following freight trains are overtaking it at 30 mph while passenger trains are overtaking it at 60 mph. The headway between similarly powered freight trains will (were it not for the effect of block lengths) return to the headway approaching the hill. As each train passes the summit, it accelerates while the train behind is losing speed ascending the hill. Freight trains with sufficient power to ascend the hill at near normal speed (generally intermodal trains) and passenger trains will not regain the headway lost while the preceding train was ascending the hill. The point at which it overtakes the train ahead is 10 to 15 minutes (as little as seven miles for a passenger train and 10 miles for a freight train) closer than it would have been given the speed differential on the Napavine Hill grade.

The speed differential and overtaking capacity also are a consideration on the rest of the route. Before Northern Pacific installed CTC between Vancouver and Wabash (near Centralia) in the early 1960s, there were sidings were spaced approximately every eight miles to allow overtaking. The installation of CTC between Vancouver and Wabash in the

early 1960s eliminated the need for overtaking sidings, given the low traffic volume of the era. Today, the need to restore overtaking capacity is increasing due to heavy traffic and train speed differentials ranging from 35 to 45 mph for grain trains, 50 to 60 mph for most other freight trains, and 79 mph for the passenger trains.

Centralia

North of Centralia yard, there is a junction with a line leading east to a coal-fired power plant. Recent construction of a loop unloading track at the power plant has eliminated the need for unit coal trains to occupy the main line when serving the plant. Capacity at this location is still partially constrained by a 10 mph speed restriction through a hand thrown switch. This remaining constraint consumes the capacity of three through trains for every coal train.

The Puget Sound & Pacific line between the Port of Grays Harbor and Centralia has experienced significant growth in unit trains of bulk commodities. These trains enter and leave the main track at 10 mph at Centralia and change crews at the passenger station. Each train can consume the capacity of three to six through trains.

Several trains per day stop at Centralia, occupying a main track while setting out or picking up. Each of these trains occupies the capacity of three to six through trains. (See Figure 3.2, Locations 6 and 7.)

Ruston-Nelson Bennett

The Ruston and Nelson Bennett tunnels under Point Defiance in Tacoma were originally double track tunnels (see Figure 3.2, Location 9). By 1970, car sizes had increased to a point were many of the freight trains would not fit on the east track because of restricted overhead and side clearances. Crossovers were constructed at both ends of the tunnels and CTC was installed to allow freight trains with oversized cars to use the west track through the tunnel. Passenger trains and unrestricted freight trains could use either track, preserving double track operation. The resulting capacity limitation was not significant for the traffic of the era.

In the early 1990s, BN converted the Ruston and Nelson Bennett Tunnels to single track to accommodate double-stack intermodal trains. The soils that the tunnels are constructed in make them impractical to enlarge. A new tunnel on an offset alignment would need to be constructed to restore the original double track section.

This single track section limits capacity on the entire corridor to 72 trains per day. Freight speeds through this track section can be increased from 40 to 50 mph, increasing capacity by about four trains per day. Currently, 10 Amtrak passenger trains use the line daily. These trains could be routed onto Sound Transit's Lakeview Line. After improvements to the Sound Transit Lakeview line the combined capacity of the lines could be increased to over 135 trains per day.

Tacoma

The speed limit on the Thea Foss curve (also known as Head of Bay curve) at Tacoma currently is 10 mph. The signal spacing through Tacoma is designed for the speed restriction.

BNSF's Tacoma yard tracks are less than that of a typical freight train, so several trains per day must stop on a main track to set out or pick up. Trains that originate or terminate in Tacoma must double into the Tacoma or Log Yard tracks, occupying one or both main tracks for an extended period restricting through train operations to a single main track.

Trains accessing the yard at the south end are restricted to 10 mph. This does not result in a capacity restriction since the speed around the Thea Foss curve currently is restricted to 10 mph. Trains entering and leaving the north end of the yard also are restricted to 10 mph. Each train entering or leaving the yard consumes the capacity of at least three through trains (exclusive of time spent doubling on the main tracks). Most trains must double together before leaving, further reducing the capacity because of the extended occupancy by standing trains. (See Figure 3.2, Locations 10, 11, 39, and 40.)

Auburn

Auburn Yard and the connection to the Auburn-Pasco line are both located on the east side of the line. Trains are restricted to 10 mph when entering or leaving Auburn yard or the Auburn-Pasco route from the north (Seattle). Each of these trains consumes the capacity of three or more through trains. (See Figure 3.2, Location 12.)

Tukwila-Argo

A recent Sound Transit infrastructure project has eliminated most of the route conflicts and speed differential conflicts between Tukwila and Argo; however, some capacity limiting conflicts remain.

There are three tracks north of and south of the Tukwila and Argo control points; however, only two trains may operate simultaneously through either control point. Trains to and from South Seattle yard and UP Argo yard enter and leave the west main track at 10 mph.

Union Pacific trains must cross the BNSF main tracks when switching cars between Union Pacific's Argo and Van Asselt yards. The Van Asselt yard provides staging support for Union Pacific's Argo intermodal operations. These crossing movements are made at 10 mph. Each crossing move consumes the capacity of at least two through trains. At Rhodes or Tukwila, UP trains en route to or from Van Asselt/Manar yards must cross over the BNSF main lines to access Black River Junction consuming the capacity of at least two trains on the Portland-Seattle route. (See Figure 3.2, Location 13 and 42.)

Argo-South Portal

Trains from the SIG/Stacy yard entering the main track at 10 mph at the Coach Wye, the hand throw switches at the south end of King Street Station and the location of the passenger car maintenance yard on the opposite side of the main tracks from King Street

Station are the significant limits on the capacity of this section. Once the Sound Transit infrastructure projects currently under construction in this area are completed in 2008, there will be no significant infrastructure constrains remaining. (See Figure 3.2, Locations 14 and 44.)

Tacoma-Tukwila (Union Pacific RR)

Trains doubling in and out of the yard at Fife must occupy the main track for an extended time. Trains setting out or picking up at the auto unloading facility is south of Kent must occupy the main track while working. In both areas, capacity approaches zero while trains are performing this work. (See Figure 3.2, Location 15 and 41.)

Seattle (South Portal) – Everett (PA Junction)

South Portal-MP 8 (Ballard)

The speed limit in the tunnel between South Portal and North Portal is 20 mph. There are no intermediate signals between South Portal and North Portal resulting in a signal block length of about 1.6 miles. While this speed and distance provide capacity similar to most of the line between Seattle and Portland, it can be a limitation for the aggregate of Seattle-Everett, Portland-Seattle, and Seattle Terminal non-train movements (e.g., transfers, locomotive movements) that use this segment.

The signal block between South Portal and North Portal also imposes an additional constraint. Generally, a yellow signal (proceed not exceeding 35 mph prepared to stop at the next signal) will not be a capacity limitation on track with a 20 mph speed limit. The speed is sufficiently low to allow the locomotive engineer to observe that the next signal is not indicating stop (because the train ahead is still moving and already has left the block ahead) before taking action to stop the train (often irreversible in freight train operation). However, the curvature of the track in the King Street tunnel and the combination of curvature and structures north of the tunnel limit sight distance to the degree that freight trains may need to stop for signals that already have changed to an indication that does not require a stop.

There are two segments of single track operation. The longer one, between Galer Street and MP 5.4, poses a significant capacity limitation of 48 trains per day. There is a minimum delay of 17 minutes at Galer Street when the line is operating at capacity.

The Ballard Bridge is open for marine navigation an aggregate of 40 trains of capacity per day. Capacity also is restricted by the 20 mph speed restriction across the bridge. (See Figure 3.2, Location 16 and 45.)

Edmonds

Single track between MP 16 and MP 18 has a capacity of 144 trains per day. This is greater than the limiting capacity of the Seattle-Everett route; however, a minimum delay of three

minutes occurs here when the line is operating at capacity because of the configuration of the single and double track segments. (See Figure 3.2, Location 18.)

Mukilteo

Single track between MP 27 and MP 28 has a capacity of 288 trains per day, greater than the limiting capacity of the Seattle-Everett route. As currently configured, when the Seattle-Everett route is operating at capacity, no delay occurs because of this section of single track. (See Figure 3.2, Location 20.)

Maintenance Access Interbay-Everett Junction

This segment of track has limited roadway access requiring maintenance of way vehicles to occupy one of the two main tracks in this segment for its entire length when performing maintenance, occupying as much as 34 percent of the capacity of the line. (See Figure 3.2, Locations 17 and 19.)

Single Track Operation Interbay-Everett Junction

When overtaking is necessary on this segment, it requires one double track segment and both adjoining single track segments. Depending upon the exact traffic arrangement, such an overtaking movement may be made without significant loss of capacity if the trains are (due to the pattern of occupied and unoccupied track that occurs when traffic on the line is at capacity); however, the delay involved may be extensive. (See Figure 3.2, Locations 17, 18, 19, and 20.)

Everett (Everett Junction-PA Junction)

The 2.5 miles of single track between PA Junction and Everett Junction is the capacity limitation of the Seattle-Everett route, due to its length and 25 mph speed limit. This limitation does not apply to traffic entering and leaving the line at Everett Junction for movement by way of the Bayside Yard route. The aggregate of the traffic of the two routes is limited by the single track segment at Interbay. (See Figure 3.2, Location 21.)

Everett (PA Junction)-New Westminster, British Columbia

PA Junction-Delta Junction

The line between Everett Junction (Seattle-Everett route) and GN Junction (the entrance to Delta Yard) has a capacity of 24 TPD because of low-speed (15 to 25 mph) operations over 4.2 miles of single track.

The hand throw switches at Delta yard and the need to double trains together on the main line when leaving the yard further reduces capacity on this segment of track. The movement of a single train from the time it occupies the main track at GN Junction until the time it clears the single track segment at Everett Junction can be one hour, each train occupying the capacity equivalent of at least two trains.

Main line capacity north of Delta Yard is further limited by 15 mph speed restriction around the curve at Delta Junction and a 10 mph speed restriction across Snohomish River Bridge just north of Delta Junction. The capacity on the main line past Delta Yard is limited to 14 through trains per day. The yard can originate or depart an additional 16 TPD. (See Figure 3.2, Locations 22 and 46.)

Marysville

The 20 mph speed limit for freight trains on the Steamboat Slough and Ebey Slough bridges south of Marysville limits the capacity on the line to 24 TPD. (See Figure 3.2, Location 23.)

English-Bow

The capacity of this segment is 48 trains per day, affected by the running time between the sidings at Mt. Vernon and Bow, if the trains involved fit in the siding at Stanwood and Mt. Vernon. However, typical trains are longer than the sidings at Stanwood and Mt. Vernon, making the capacity limitation 16 trains per day between Bow and English. (See Figure 3.2, Location 24.)

Bow-Swift

The capacity of this segment is 14.4 trains per day, affected by the running time between the sidings at Bow and Ferndale. The South Bellingham siding is generally too short to accommodate most of the trains that use this line. (See Figure 3.2, Location 25.)

Swift-CN Thornton Yard (Surrey, British Columbia)

The capacity between Swift and Thornton Yard (the northern origin and destination of most freight traffic on the Everett-New Westminster route) is affected by running time between meeting points (the siding at Swift and Thornton Yard) and by U.S. and Canada customs procedures. If trains run between Swift and Thornton Yard unaffected by customs procedures, capacity is 12 trains per day, significantly affected by the 5 mph speed limit for southward trains north of Swift (for movement though the VACIS), the 21 mph speed limit at White Rock, and the 15 mph speed limit on the Nicomekl River bridge. (See Figure 3.2, Location 26.)

U.S. Customs inspects southward trains at Swift. The duration of the inspection may affect the capacity in either direction because the meeting point may not be available for a subsequent pair of trains, therefore reducing capacity.

Northward trains stop at Swift to close and seal the doors of all empty cars. If the duration of this activity is similar to that of the U.S. customs inspection of the southward train on the siding, there is no capacity effect. Canada customs periodically stops northward trains at White Rock for further inspection. When that occurs, capacity is reduced by the stopped train. If each northward train is stopped by Canada Customs, the capacity is reduced to eight trains per day.

The Amtrak *Cascades* trains are the only traffic on the line that does not stop for border inspection at Swift.

The Everett-New Westminster route and the BC Rail Langley-Roberts Bank/Deltaport route cross at Colebrook. Theoretically, the capacity limitation on the Everett-Thornton route makes traffic so infrequent that traffic on the BC Rail line should be of almost no concern. Traffic on the two routes is not synchronized (which would be impractical if not impossible). Traffic is controlled by BC Rail, with virtually no consideration being given to the effect of BC Rail movement on the Everett-New Westminster route. The joint section of track is allocated to traffic on the BC Rail route as much as 30 minutes in advance. If this occurs during the approximately one-hour interval between Everett-New Westminster route trains that is normal when the line is operating at capacity, there is no effect. Should one of these movements conflict with Everett-New Westminster route traffic, the capacity limiting effect can be substantial.

Vancouver-Pasco

The capacity imitations on this line (in addition to the lengthy running time between some of the sidings; see Figure 3.2, Locations 27 and 28) include openings of the Columbia River drawbridge, trains from Pasco en route stations north of Vancouver stopping to change crew, and the low-speed movement to and from Vancouver Yard, the Port of Vancouver, and the Portland-Seattle route. (See Figure 3.2, Locations 1, 2, and 37.)

Auburn-Pasco

The running time between the Lester siding and the double track segment at Easton is the capacity limit on the Auburn-Pasco route (see Figure 3.2, Location 29); however, there are other significant factors. Between Ellensburg and Pasco, the capacity limiting running time is between the sidings at Pomona and Ellensburg, giving a 12 trains per day capacity. Were that improved, the next limiting running time would be between Toppenish and Byron, limiting capacity to 17 trains per day.

In addition, the form-based traffic control system imposes an additional capacity limiting factor. When the line is at capacity, it would be necessary for the train dispatcher to issue four separate verbal/written train movement authorities almost simultaneously because at full capacity, two meets happen simultaneously, at distant points on the route each time there is an encounter between trains. The nature of the form-based traffic control safety procedures could cause significant delay to at least one of the trains involved, reducing capacity from that determined by running time between sidings.

Everett-Spokane

The significant capacity limitation is the running times between the Skykomish, Scenic, and Berne sidings and between the Leavenworth and Winton sidings, as discussed earlier (see Figure 3.2, Location 31). Were the line to be operated in one direction (westward) only, for example as one of two one-way routes acting as double track between Seattle and

Spokane, capacity would be limited by the current configuration of the Cascade Tunnel. Although the tunnel ventilation time between westward trains would be a factor to a relatively small degree, the approximately 30-minute running time through the tunnel would limit capacity to 24 trains per day. For safety reasons, only one train is allowed to occupy the tunnel at a time. There are tunnels throughout the world, some of which are in the United States, than can be occupied by more than one train simultaneously. However, such an arrangement for the Cascade Tunnel would involve a different signal system and electrification,.

Capacity also can be affected by the relatively short sidings east of Wenatchee at Lyons, Espanola, and Edwall, all less than 8,000 feet long. When trains of more than 7,400 feet are considered, the capacity between Bluestem and Latah Junction is 24 trains per day. For trains of over 7,500 feet, the capacity is 18 trains per day. (See Figure 3.2, Location 32.)

Pasco-Spokane

The single track segment between Connell and Cunningham has the longest single track running time on this route, and thus is the capacity limiting segment. (See Figure 3.2, Location 33.)

Spokane – Athol, Idaho

Two sections of single track running time between Irvin (Spokane) and Otis Orchards (10 miles west of Hauser, Idaho; 4.1 miles) and between Rathdrum, Idaho, and Athol, Idaho, (11 miles) have the longest single track running times on this route, and thus are the capacity limiting segments. The Irvin to Otis Orchards segment includes a single track bridge over the Spokane River. As Hauser, Idaho, is the crew change and mainline fueling point for through trains which pick up and set out cars in Spokane, adequate mainline capacity between Spokane and Hauser is very important. (See Figure 3.2, Location 34.)

Primary Rail Terminals and Yards

BNSF

Utilizing terminal performance data provided by BNSF and assuming daily average inventory exceeding 80 percent of the Performance Degradation Point or 80 percent the following BNSF yards and terminals are considered to be operating at or over capacity:

- Arco;
- Centralia;
- Everett;
- Interbay;
- Longview Junction;

- Pasco;
- Seattle;
- Spokane;
- Tacoma;
- Vancouver; and
- Wishram.

The common reasons for these terminals being over capacity:

- Inefficient mainline access – Arrival/Departure tracks are either not available or are too short to hold an entire train. This requires doubling trains entering and leaving at virtually all of them.
- Shortage of locomotives for outbound trains.
- Shortage of crews for outbound trains.
- Inbound trains not on time or inbound trains bunched together.

UPRR

UPRR Argo Yard (Seattle) is over capacity because it is used for both domestic and international intermodal traffic, solid waste, and general merchandise. The mainline connection is located so close to the throat of Argo Yard that virtually all switching must be done from the west end, which conflicts with unit trains arriving to or departing from the Port of Seattle Terminal 5 on-dock intermodal facility. (See Figure 3.2, Locations 42 and 43.)

Tacoma Rail

Tacoma Rail's Tacoma Rail Yard tracks are consistently over 60 percent utilized and often times 80 percent utilized, resulting in operational inefficiency and significant delays. (See Figure 3.2, Location 40.)

Commuter and Intercity Passenger

There are two capacity limitations that affect passenger trains exclusively. The first is the limitation imposed by passenger-exclusive infrastructure. The second is the limitation imposed by the time-sensitive nature of passenger traffic. This limitation has a double effect. First, relatively small capacity limitations can have a significant effect because of the commercial capacity requirement.

In general, the capacity for a given segment of line can be much higher for passenger trains than for freight trains. Passenger trains are not as long as freight trains, are faster than freight trains, and have a much shorter braking distance than freight trains. When passenger trains are mixed with freight trains, the signal system must be configured to

take advantage of the differences in order to make use of the capacity benefit. There is no capacity benefit if the signal system keeps passenger trains that can stop in 4,000 feet two miles apart as it does freight trains.

Often, operation at capacity involves some amount of minimum delay. Minimum delay is generally not important to freight traffic, but traffic that requires the shortest possible running time, such as passenger trains and some domestic intermodal traffic, is limited to the capacity that is available without delay. This can be significantly less than the capacity of the line. When the limitations of the typical single track operation between Portland and Vancouver, Woodland and Castle Rock, Ruston and 21st Street (because of freight traffic congestion) and the physical single track operation in the Nelson Bennett and Ruston tunnels, at Tacoma, and at King Street Station are combined, capacity is limited.

The need to operate passenger trains (and some intermodal trains) without delay aggravates capacity limitations for other trains. For example, freight trains that do not need to stop in the Kalama-Rocky Point area (north of Vancouver) are regularly delayed by congestion caused by the trains that must stop exceeding the capacity for such traffic. When a passenger train (which is more time-sensitive than the freight train) approaches, the passenger train delays freight traffic that need not stop. The capacity limitation that is delaying the freight trains for the passenger trains is related to the stopped freight trains rather than to the passenger train. Were the trains that cannot be accommodated at Kalama, Longview Junction and Rocky Point not standing on the main tracks waiting, the passenger train and the other freight trains could be accommodated. Often, the nature of a "passenger-related" capacity improvement is an improvement in freight trains so that they can be accommodated clear of the main tracks. The alternative would be the provision of a separate track for passenger train operation, bypassing the capacity limitations associated with freight operation altogether.

Portland

Portland Union Station is generally adequate for current and planned service; however, there are several limitations. (See Figure 3.2, Location 1.)

Speed – The speed limit on the Steel Bridge, immediately south of the station, is six mph. The six mph speed limit continues through the station to the north end. The six mph speed limit has a direct effect on capacity. There are two elements to the effect. First, there is a very large speed differential between freight trains and passenger trains, significantly increasing the minimum headway between a freight train and a following passenger train. Second, when all traffic is moving at the same speed, the capacity limitation of low speed can be mitigated by block length. This is only effective if the speed is great enough to allow a consistent minimum headway. At six mph, signals must be very closely spaced to allow a minimum headway that is consistent with the minimum headway possible between Portland and Vancouver.

There are two tracks that pass through the station and are operated as main tracks at either end, but they are operated as yard tracks through the station. Trains operate at restricted speed, which is a speed not exceeding 20 mph but prepared to stop within half the range of vision. Depending upon the weight of the train and the visibility conditions

(e.g., weather, obstructions), restricted speed can be a speed much less then 20 mph. This condition does not directly affect capacity for passenger operations; however, it has an effect on capacity when a freight train passes through the station, aggravating the effect of the six mph speed limit on the Steel Bridge.

Track Configuration – The track configuration is generally adequate for the current and planned traffic; however, it must be utilized carefully to ensure consistency with the requirements of current and future passenger operations. Only two of the tracks (numbers four and five) can be approached and entered at normal speed. Tracks two and three connect to track four through a turnout with a 10 mph speed limit. Also, simultaneous arrival and departure can only occur on one pair of tracks, which must always include track five. Tracks four and five also are the tracks that pass through the station and would be main tracks if signaled. Thus, there is potential conflict between passenger and freight trains, depending upon the traffic situation. This effect is aggravated by the low speed limit for freight trains.

Signal System – There is no signal system on the tracks through Portland Union Station. The Union Pacific CTC traffic control system extends south from (and including) the south end of the station. The BNSF traffic control system extends north from a point north of the north end of the station.

Vancouver, Washington

The Vancouver station has only east side and center platforms. This limits capacity in either of two ways. Traffic must be arranged such that all passengers use the east track at Vancouver or passenger trains stopping at Vancouver occupy both tracks (one with the train and one with the passengers crossing to the between tracks platform from the east side of the line). Depending upon the traffic situation, operation of a southward passenger train on the east main track between Vancouver and North Portland Junction (the nearest crossovers) can result in some period of single track operation, which reduces capacity. (See Figure 3.2, Locations 1 and 2.)

Kelso

The Kelso station has only east side and center platforms. This limits capacity in either of two ways. Traffic must be arranged such that all passengers use the east track at Kelso or passenger trains stopping at Kelso occupy both tracks (one with the train and one with the passengers crossing to the between tracks platform from the east side of the line). Depending upon the traffic situation, operation of a southward passenger train on the east main track between Ostrander and Kelso South (the nearest crossovers) can result in some period of single track operation, which reduces capacity. (See Figure 3.2, Location 4.)

Centralia

The Centralia station has only west side and center platforms. This limits capacity in either of two ways. Traffic must be arranged such that all passengers use the west track at Centralia or passenger trains stopping at Centralia occupy both tracks (one with the train and one with the passengers crossing to the between tracks platform from the east side of

the line). Depending upon the traffic situation, operation of a northward passenger train on the west main track between Wabash and Centralia South (the nearest crossovers) can result in some period of single track operation, which reduces capacity. (See Figure 3.2, Location 7.)

Centennial

The Centennial station has only east side and center platforms. This limits capacity in either of two ways. Traffic must be arranged such that all passengers use the east track at Centennial or passenger trains stopping at Centennial occupy both tracks (one with the train and one with the passengers crossing to the between tracks platform from the east side of the line). Depending upon the traffic situation, operation of a southward passenger train on the east main track between Nisqually and Plumb (the nearest crossovers) can result in some period of single track operation, which reduces capacity. (See Figure 3.2, Location 8.)

Tacoma

Amtrak Station – The Tacoma Amtrak station is located on a single track east of the main tracks between D Street and River Street. Single track operation of the station extends between 21st Street and River Street, the nearest crossovers. The capacity limitation of the 1.2 miles of single track operation on which there is a station stop of several minutes is aggravated by the speed limit of 10 to 20 mph over the length of this segment. (See Figure 3.2, Location 10.)

Tacoma Rail/Tacoma Dome Station – The Tacoma Rail line between TR Junction (the connection with BNSF) and the Tacoma Dome Station is single track except for a section of double track approximately 1,700 feet long between Portland Avenue and L Street. The speed limit is 30 mph for passenger trains (except 10 mph over switches at Portland Avenue, L Street, and G Street) and 10 mph for freight trains. (See Figure 3.2, Location 10.)

Seattle

King Street Station has three through tracks (connected to the main tracks at both ends) and four stub tracks (connected to the main tracks only at the south end). Two of the three through tracks are configured for Sound Transit use. Use by Amtrak trains is not practical because the narrow platform is occupied by fixed obstructions (such as stairs and elevators) that prevent the operation of motor vehicles needed to supply and service Amtrak trains. Thus, Amtrak trains to and from north of Seattle must share a single track in the station. Depending upon the nature of the train occupancy (e.g., arriving, leaving, long-distance, corridor), trains may be limited to two per hour or less.

The north end of the station is configured for the operation of two Sound Transit trains simultaneously. The track used by Amtrak trains connects only to one of the two main tracks. Northward Amtrak trains must operate on the normally southward main track through the King Street tunnel. Depending upon the traffic situation, this can cause the

same single track capacity limitation on the two main tracks as any other situation in which both tracks are used in the same direction or in which one track is out of service.

There is a short segment of single track operation at the south end of the station. Simultaneous movements between the main tracks and the station are not possible. The hand throw switches on the south end of the station extend the time needed for movement on the single track segment. Each movement requires about five minutes, or 12 trains per hour. The movements affected include passenger trains (Sound Transit and Amtrak), passenger equipment moving between the station and the maintenance facility (Sound Transit and Amtrak), and freight trains.

The route between the station and the maintenance facility is a second segment of single track operation. This segment also has a capacity of about 12 trains per hour. The location of the maintenance facility on the opposite side of the main tracks from the station exacerbates the effect of the capacity limitation because this route includes movement on both main tracks. (See Figure 3.2, Locations 14 and 16.)

Everett

Passengers walking between the station and the platform used by Amtrak trains must cross the track used by Sound Transit trains. Effectively, each Sound Transit train arriving and leaving uses the Sound Transit track and the main track when considering passenger train capacity. (See Figure 3.2, Location 21.)

Vancouver, British Columbia

Only one track in Pacific Central Station can accommodate an Amtrak Cascades Train. Train size is limited to the length of the current Talgo trains in this service by the length of the enclosed area needed for customs and immigration processing. (See Figure 3.2, Location 26.)

■ Descriptions of Identified Washington State Yards and Terminals Rail Constraints

BNSF Vancouver Yard

Interviewed: Daryl Ness, Terminal Superintendent
Telephone: (360) 418-6377
Date: 4/18/06

Summary

Vancouver Yard is a flat switching yard responsible for classifying cars to/from Pasco, California, UPRR, Interbay, Everett, and various locals. The average dwell is 24 hours

which is consistent with only having a single outbound train for a block (destination). The dwell time increases quickly when the daily yard inventory exceeds 750 cars. Yard operations conflict with other mainline operations and are further impacted by existing infrastructure constraints. Mainline operations through Vancouver Yard total 70 to 75 trains per day. These trains include general merchandise, intermodal, unit trains (grain), UPRR interchange, and Amtrak. Flat switching is done from both ends of the yard, with a restriction of 12 cars at the south end because of the mainline operations. The primary infrastructure constraint is the 10 mph single mainline track connecting the Fallbridge and Seattle Subdivisions. This configuration reduces the mainline throughput and because of the yard, lead, and mainline conflicts consumes mainline capacity whenever trains depart from the yard or United Grain. The time-sensitive schedule for Amtrak also causes certain yard operations to periodically stop throughout the day for Amtrak trains.

Measures

- Daily yard capacity (inventory) up to 750 cars switched is comfortable
- Over 750 cars terminal is pushing limits
- Average dwell is 24 hours
- When daily yard capacity exceeds 750 cars the dwell will increase to 40 hours.

Classification Tracks

- 17 tracks – track centers too close for Carmen to work between

R&D Tracks

- 6 – Carmen can work between the tracks

Blocks (Destinations)

- Only one outlet per train for each block

Trains – Spread out over 24 hours

- Pasco daily
- Interbay daily
- California (Barstow) daily
- Everett to Vancouver daily
- Camas Local daily
- Albany daily
- Transfer from Portland, 100 cars per day

- UPRR Interchange, 100 cars per day
- Passenger Trains

Switching Operation

- Flat switching from both ends
- 12-car lead on the south end
- 20- to 25-car lead on the north end

General Information

- Pasco provides blocks for the entire terminal
- 70 to 75 trains per day through Vancouver

Needs/Issues

- Wider track centers in the yard for Mechanical Department to work. However, not worth the loss of tracks.
- Available power for outbound trains
- Available crews are not a problem
- 10 mph single mainline track connecting the Fallbridge and Seattle Subs the biggest problem:
  - Main problem is departing outbound trains out of B Yard or United Grain
  - Doubling trains together on mainline takes 30 to 60 minutes

BNSF Spokane Yard

Interviewed: Maxine Timberman, Terminal Superintendent
Telephone: (509) 536-2224
Date: 4/18/06

Summary

Spokane Yard is a flat switching yard responsible for classifying cars for trains going east, west, and south, as well as various locals. The average daily capacity is 1,000 to 1,200 cars, with an average dwell of 27 hours. The terminal is considered critical when it exceeds 1,300 cars. The yard is made of three main yards: Erie Street; Hauser, Idaho; and Yardley. Erie Street Yard is used primarily for grain trains or UPRR interchange. Hauser Yard is

used primarily for limited intermodal pick-up/set out, grain storage, 1,000-mile inspection, adding distributed power, and crew changes. Yardley Yard is split between two smaller yards. The "hell hole" is made up of 17 short tracks where most of the small blocks are built. The larger yard is located next to the mainline and used for larger blocks and for setting out, picking up, and building trains. When the yard is full the mainline is used for building outbound trains. Picking up blocks for outbound trains usually requires the train be entirely reswitched when it contains multiple blocks. This reswitching can take as long as five hours to complete. Since this is not primarily an origin/destination point the biggest constraint to maintaining a fluid yard is having inbound trains and power arrive on time. Also, due to the fact that the crew change point for the trains through Spokane is at Hauser, Idaho, 24 miles away, the mainline capacity between Spokane and Hauser is critical. Mainline capacity between Spokane and Athol was identified as being critical to Spokane Yard. Currently, approximately half of the 42 miles are double track and half single track.

Measures

- Daily yard capacity (inventory) average 1,000 to 1,200 cars switched okay
- Over 1,300 cars terminal is hurting
- Average dwell is 27 hours

Yards

- Erie Street – Primarily for UPRR interchange, staging, and pickup/setout of grain trains
- Yardley – Primarily for classification
- Hauser – Some intermodal pick up/set out, grain storage, 1,000-mile inspection, add distributed power

Classification Tracks

- "Hell Hole" – 17 tracks average 1,500 feet
- Long – 12 tracks average 3,200 feet – 5 longest tracks used for R&D/Pickup and Setout

Blocks (Destinations)

- 10 outbound blocks – built in the "Hell hole" tracks
  - 4 industry jobs
  - Pasco
  - Laurel
  - Everett
  - Galesburg

Trains – Spread out over 24 Hours

- Outbound
  - 4 general merchandise originate from Spokane – 3 to 4 blocks each
  - 1 train goes north
  - 3 trains go west
  - 0 trains go east
  - Westbound trains – intermodal primarily via Wenatchee, general merchandise and grain via Pasco
- Pick Up/Setout Trains
  - 5 to 6 general merchandise trains per day
    - Pasco to Conway (Pittsburgh, Pennsylvania)
      - Galesburg block
    - Pasco to Ft Worth, Texas
      - Laurel and Missoula block
    - Pasco to Dilworth, Minnesota
      - Shelby, Northtown, Whitefish block
    - These trains require trains be reswitched to put pickups in the train blocked.
    - 5 hours in schedule for reswitching of Pasco to Dilworth train
    - If road crews have time in their hours of service they will spot the setouts and take a train to Hauser for crew change. When inbound crew reach hours of service switch crew needs
  - 2 intermodal trains per day
- Through Trains/Day
  - 50 – Merchandise, intermodal, grain, Amtrak
  - General merchandise

Switching Operation

- Flat switching from both ends
  - 80 percent from west end
  - East end for big cuts – Pasco, Everett, Galesburg
- 12 car lead on the south end
- 20 to 25 car lead on the north end

Needs/Issues

- Available power for outbound trains
- Trains on schedule
  - When off schedule the plan for the yard is off, dwell time increases, and congestion increases. When yard is full, trains set out and pick up on the mainline instead of long receiving and departing (R&D) track, which reduces mainline capacity.
- When Pasco has a "meltdown," Spokane has to take on classification responsibilities.
- Mainline capacity tied to yard capacity. The two biggest mainline capacity constraints for Spokane which would improve velocity are:
  - Single track between Otis Orchards and Irvin, which includes the single-track Spokane River Bridge
  - Single track east of Hauser, Idaho (Rathdrum to Athol)

BNSF Delta Yard (Everett)

Interviewed: Stu Gordon, Terminal Manager
Telephone: (425) 304-6646
Date: 4/18/06

Summary

Delta Yard is a flat switching yard responsible for classifying cars for 12 outbound trains as well as various locals. The average daily capacity is 800 cars with an average dwell of 28 to 29 hours. The terminal is considered critical when it exceeds 850 cars. The yard is a "belt pack" operation using remote control locomotives, which limits the cuts of cars to be switched to 15 cars. The yard is made up of 13 tracks, which are used for classification and receiving/departing. The biggest issue at Delta Yard is the downtime for Passenger Train (Sound Transit and Amtrak) windows. Having six 7,000-foot R&D tracks and 14 additional classification tracks would provide additional future capacity and fluidity. The WSDOT High-Speed Rail Corridor project, which realigns the Rogers Main to connect with the Bayside Line, would reduce conflict with through trains waiting for commuter windows and a slot through the Everett tunnel.

Measures

- Daily yard capacity (inventory) average 800 cars
- Goes from green to yellow at 750 cars
- Goes from yellow to red at 850 cars

- Average dwell is 28 to 29 hours
- When red average dwell is 35 hours

Yard Tracks

- 13 – Classification, R&D
- No dedicated R&D tracks

Blocks (Destinations)

- 15 outbound blocks

Trains

- All general merchandise
- No intermodal
- Average inbound trains daily: 12
- Average outbound trains daily: 12
  - Every outbound train built out of the Classification Yard

Switching Operation

- Flat switching from both ends
  - Primarily north (railroad west) end
  - Secondarily south (railroad east) end
- Belt pack operation which has tonnage limits – usually 15 cars maximum in a cut

Needs/Issues

- Getting out of the way for Sound Transit and Amtrak
- Windows
  - Bellingham Subdivision 4 times per day
  - Scenic Subdivision 4 Sound Transit and 2 Amtrak per day
  - No trains
    - 5:30 a.m. to 9:00 a.m.
    - 5:00 p.m. to 6:30 p.m.
    - 8:30 p.m. to 9:30 p.m.

- Available power for outbound trains
- Trains on schedule
  - When trains are off schedule, the plan for the yard is impacted, dwell time increases, and congestion increases. When the yard is full then trains set out and pick up on the mainline instead of long R&D track. This reduces mainline capacity.
- Suggested Improvements
  - Add 6 R&D tracks 7,000 feet each
  - Expand yard
    - Add 14 Classification Tracks
  - Add CTC from PA Junction to Delta Junction
  - Reconfigure Rogers Main to allow trains to operate via the Bayside Spur and bypass the Everett tunnel. This project is a part of the WSDOT High-Speed Rail Program.

BNSF Pasco Yard

Interviewed: J.T. Labberton, Terminal Manager
Telephone: (509) 546-3219
Date: 4/18/06

Summary

Pasco Yard is a directional hump yard responsible for classifying 41 blocks, arriving 15 trains per day, and departing 14 trains per day. The average volume of cars processed per day is 1,500 to 1,600. The average in-yard inventory is 2,000 cars with an average dwell time of 29 to 30 hours. The major issues with yard capacity are on-time trains and power availability.

Measures

- Processed average cars 1,500 to 1,600 per day
- Average in-yard inventory of 2,000 cars per day
- Average dwell – measure of how long in terminal
  - Goal 22 hours
  - Average 29 to 30 hours

Yard Tracks

- 47 – Bowl tracks
  - 3 longest tracks holds 26, 60-foot cars (1,560 feet)
  - Shortest tracks 1,160 feet
- R&D tracks
  - 9 Departure
  - 10 Arrival

Blocks (Destinations)

- 41 outbound blocks – 14 take more than one track

Trains

- Average inbound trains daily: 15
  - via Yakima Valley Subdivision: 2 to 5 per day
  - via Fallbridge Subdivision: 10 to 30 per day
  - via Lakeside Subdivision: 10 to 25 per day
- Average outbound trains daily: 14
  - via Stampede Pass: 5 per day 5 days per week, 6 per day 3 days week
  - via Fallbridge Subdivision: 10 to 30 per day
  - via Lakeside Subdivision: 10 to 25 per day
- Through trains
  - 25 to 30/day: grain, intermodal, Amtrak
- Pasco Industry Jobs – 3
- Locals – 3 (Yakima Valley Sub., Connell, UPRR Interchange)

Switching Operation

- Directional humping by plan
  - Westbound 10 a.m. to 10 p.m.
  - Eastbound 10 p.m. to 10 a.m.

Needs/Issues

- Available power for outbound trains
- Increasing vertical clearance on Stampede Pass will cause increase of traffic through Pasco
- Trains on schedule
  - When off schedule the plan for the yard is off, dwell time increases, congestion increases. When yard is full then trains set out and pick up on the mainline instead of long R&D track. This reduces mainline capacity.

BNSF Seattle Terminal

Interviewed: Tom Martin, Assistant Terminal Manager
Telephone: (206) 272-3663
Date: 4/19/06

Interviewed: Tom Rowley, Terminal Superintendent
Telephone: (206) 272-3719
Date: 4/25/06

Summary

Seattle Terminal is made up of the following yards in the Seattle area:

- Two main yards
  - Interbay/Balmer
  - Stacy Street
- Support yards
  - West Seattle
  - South Seattle
  - Kent

Interbay/Balmer has an old and inefficient mini-hump, so the yard effectively flat-switches to classify cars for trains going north and south. Interbay also supports an adjacent grain elevator in the area.

Stacy Street is located east of the Seattle International Gateway (SIG) international intermodal facility. Stacy Street supports SIG and several local general merchandise customers.

West Seattle does not arrive or depart any trains, but does support Port of Seattle T-5 intermodal terminal and serves local industries in West Seattle and Harbor Island.

South Seattle supports the South Seattle Domestic Intermodal Facility and a couple of general merchandise customers.

Kent does not classify cars but does support general merchandise customers in the Kent Valley and the BNSF auto facility. It is primarily a setout and pick up location.

The biggest issue with yard capacities is not being able to depart trains, usually due to lack of power or crews. Commuter train windows do restrict arrival and departure times.

Measures

- Processed average cars (does not include cars at industries)
  - Interbay – 600 per day
  - Stacy – 550 to 600 per day (includes some intermodal cars)
- Average dwell
  - Interbay – goal 28 hours
  - Stacy – average 27 hours

Yard Tracks

- Interbay
  - 15 classification tracks
  - 15 R&D tracks
- Stacy
  - 18 classification/R&D tracks
  - Multifunctional usage (intermodal and general merchandise)

Blocks (Destinations)

- Interbay
  - 12 outbound blocks
  - Canadian blocks overflow into multiple tracks
- Stacy
  - 5 outbound blocks – Pasco, Tacoma, Kent, Seattle, local

Trains

- Interbay
  - Average inbound trains daily: 7
  - Average outbound trains daily: 0
  - Through trains pick up/set out – 5 total (including 1 vehicle and 2 intermodal trains)
  - 1 industry job to support grain terminal
- Stacy
  - Average inbound trains daily: 3
  - Average outbound trains daily: 3
  - Through trains pick up/set out – 2 (1 merchandise and 1 local). Use Colorado Main or PC tracks
  - 7 industry jobs (4 are for West Seattle and Harbor Island). Support Rabanco Lander Operation
- Other industry jobs
  - South Seattle – 3 jobs 24/7
  - Kent 2 to 6 days per week 24 hours per day jobs
- Locals –
  - a.m. – Maltby Turn – Black River, Renton, Maltby, Snohomish – 6 days week (Serves Rabanco Black River)
  - p.m. – Midnight transfer to Tacoma

Needs/Issues

- Available power for outbound trains
- Commuter windows – BNSF has to schedule a portion of the day to hold train crew calls
- Mariners games impact terminal operations
- Trains on schedule
- Yard fluidity would be improved if processed traffic could be moved out of the terminal and staged for departure.

Tacoma Rail Yard

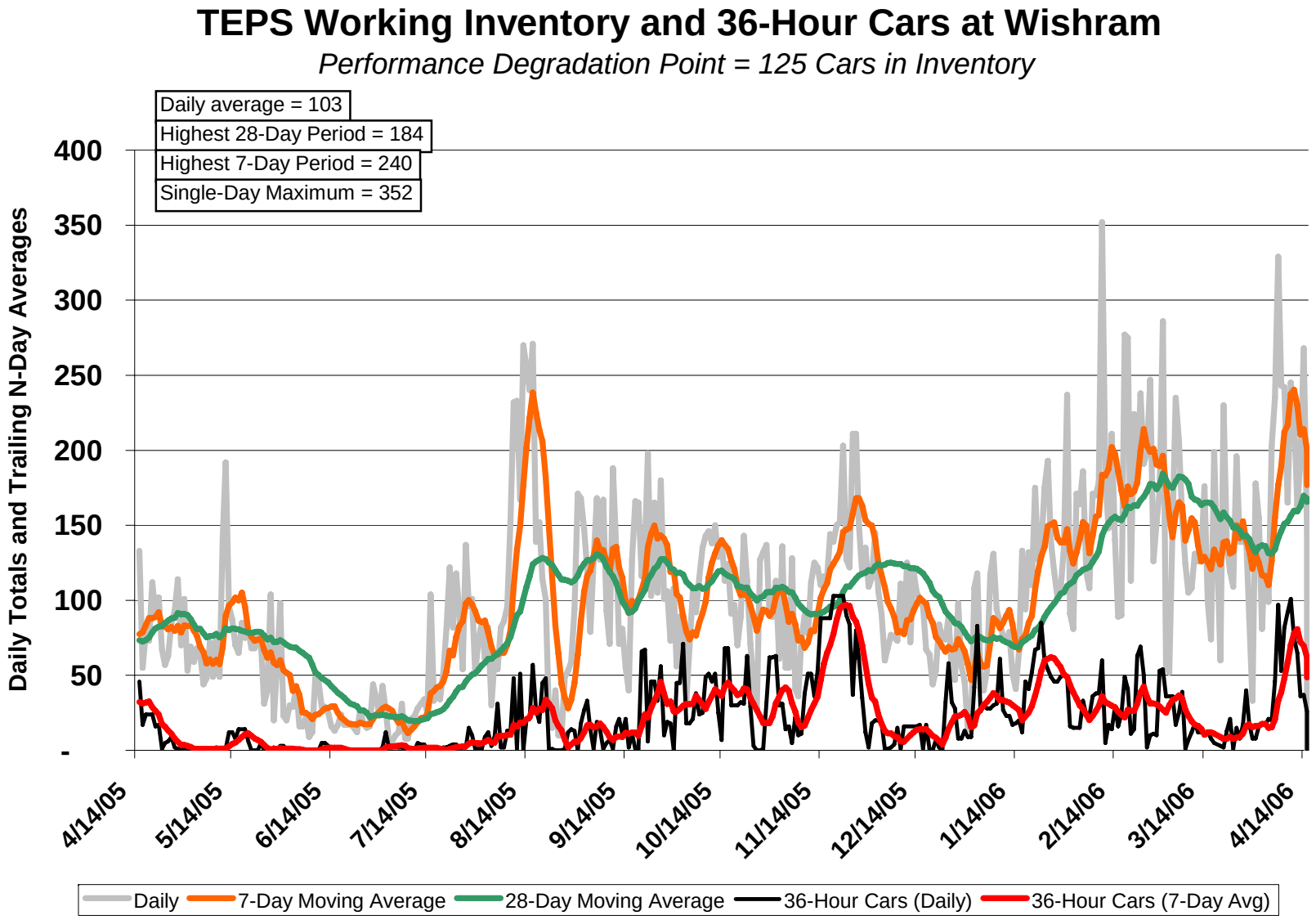
Tacoma Rail monitors infrastructure occupancy within its rail infrastructure. Rail yard space is essential in maintaining a continuous flow of rail traffic without disruption. Uninterrupted flow is when all activities are planned and sequenced to avoid delay. Yard congestion can have a profound impact on these activities.

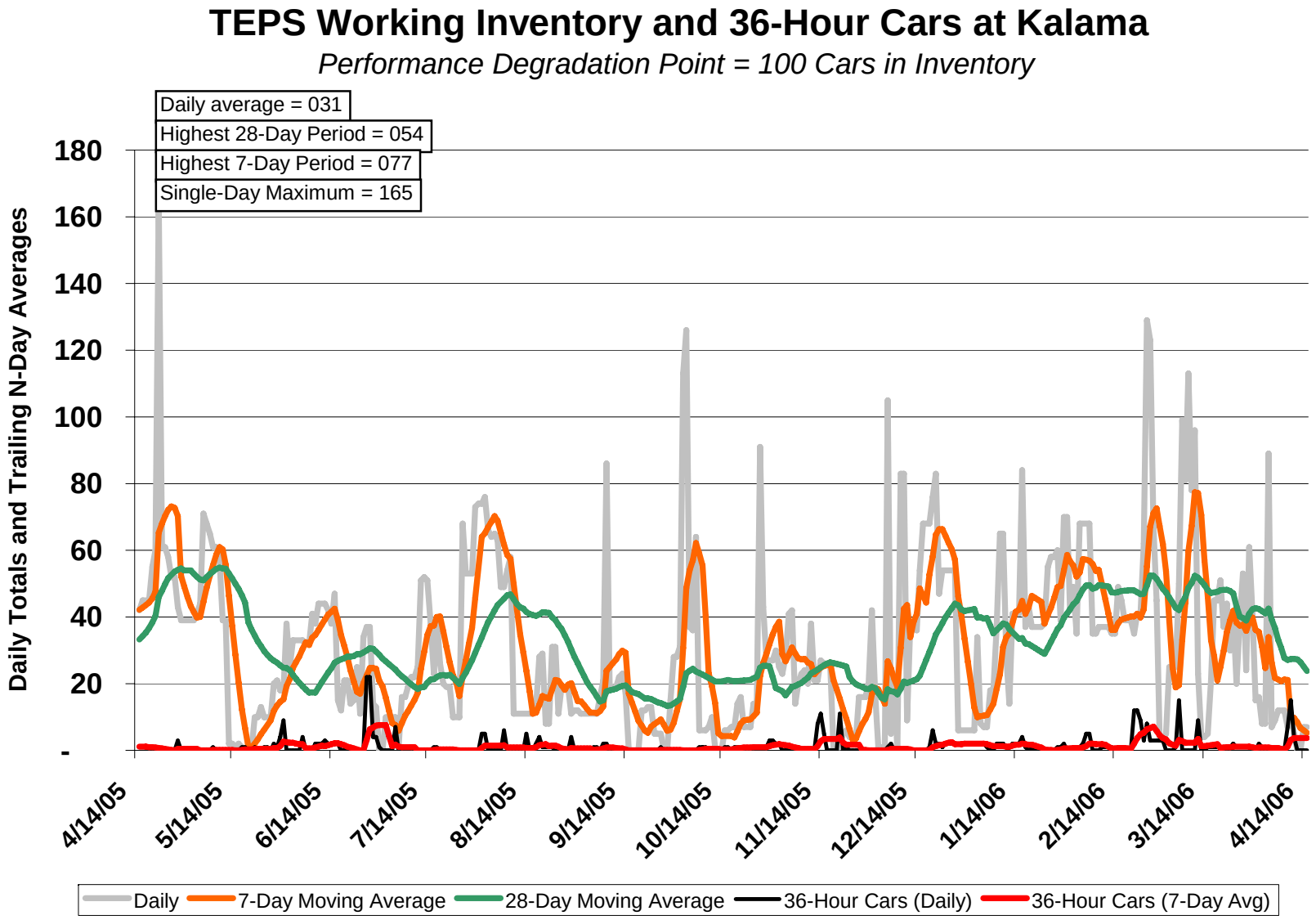
First, Tacoma Rail yards must first be able to receive inbound trains from either of the mainline carriers (UP, BNSF) that serve the Tideflats as they arrive in the Tacoma area. Inbound deliveries can range from 300- to 8,000-foot trains and actual arrival times can vary widely from schedule. If an inbound train cannot be delivered to Tacoma Rail, it may be routed out of the Fife/Tacoma area and may not be available again for up to 24 hours.

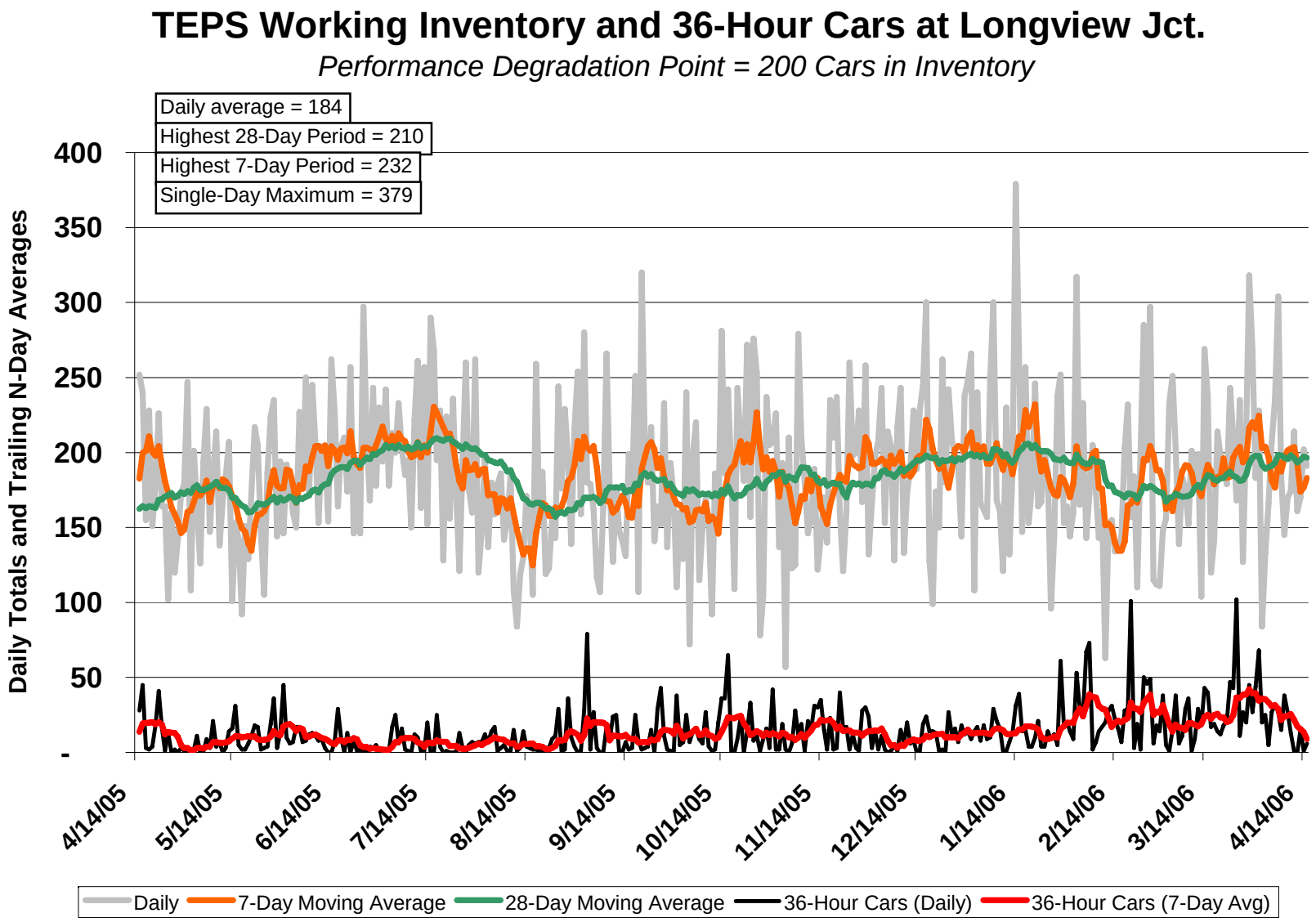
Second, Tacoma Rail yards must have enough room to switch out, stage and position railcars for efficient delivery. Inbound loads are not presorted for destination within the Tideflats. Inbound trains may have mixed loads of commercial and intermodal equipment. The intermodal traffic may be destined to Evergreen, K-Line, Hyundai, or Northwest Container while the commercial traffic could be destined to any number of Tacoma Rail's 60-plus customers. Sorting inbound railcars for internal destinations can be excessively time-consuming and expensive. Staging and support tracks along with a clear switching lead have to be available in order for this sorting to be accomplished efficiently.

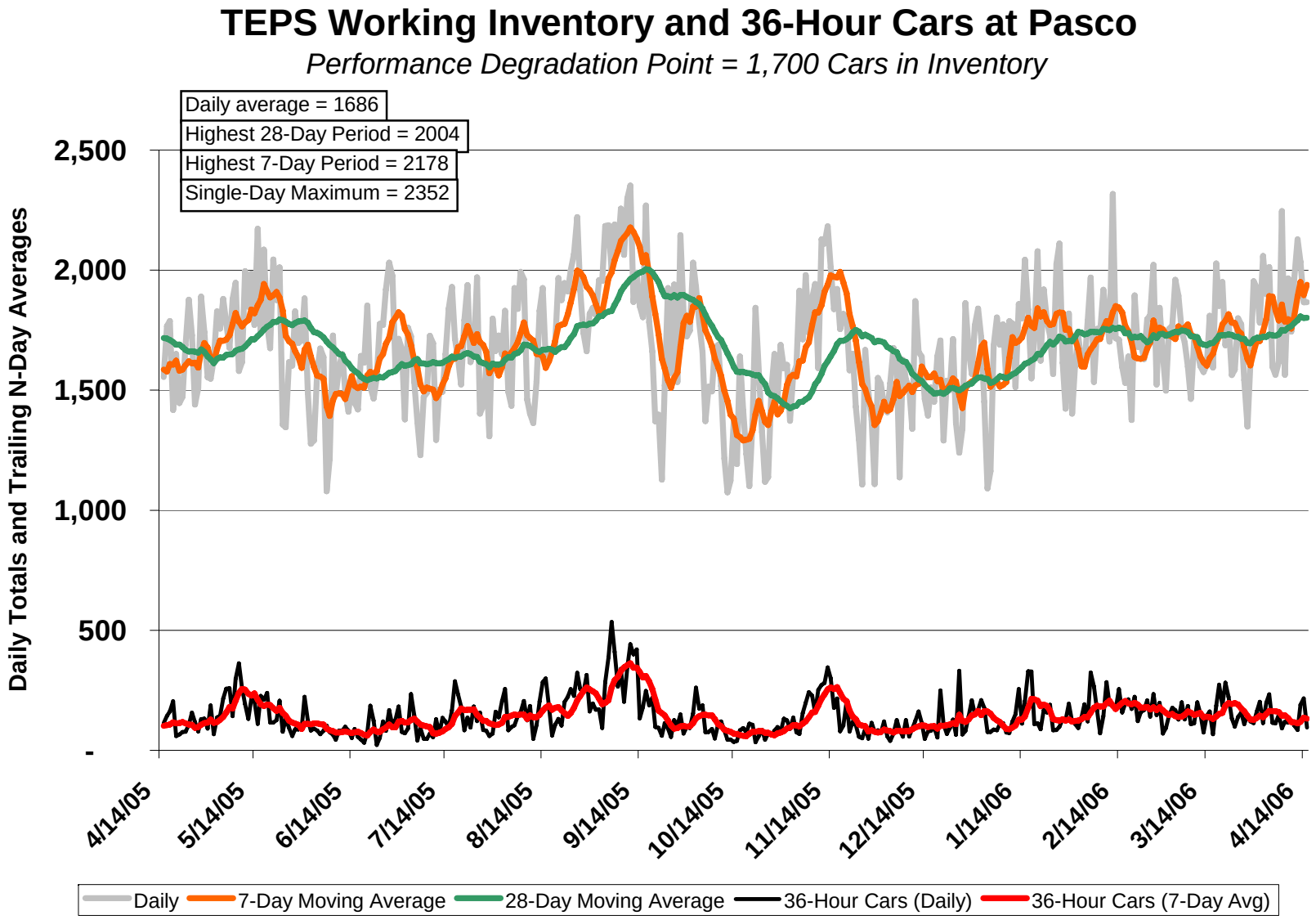
Third, Tacoma Rail's staging and support infrastructure must have sufficient room to pull completed trains or empties from its customers. That way, when the pull is completed, the next railcars in the yard can be spotted at a facility.

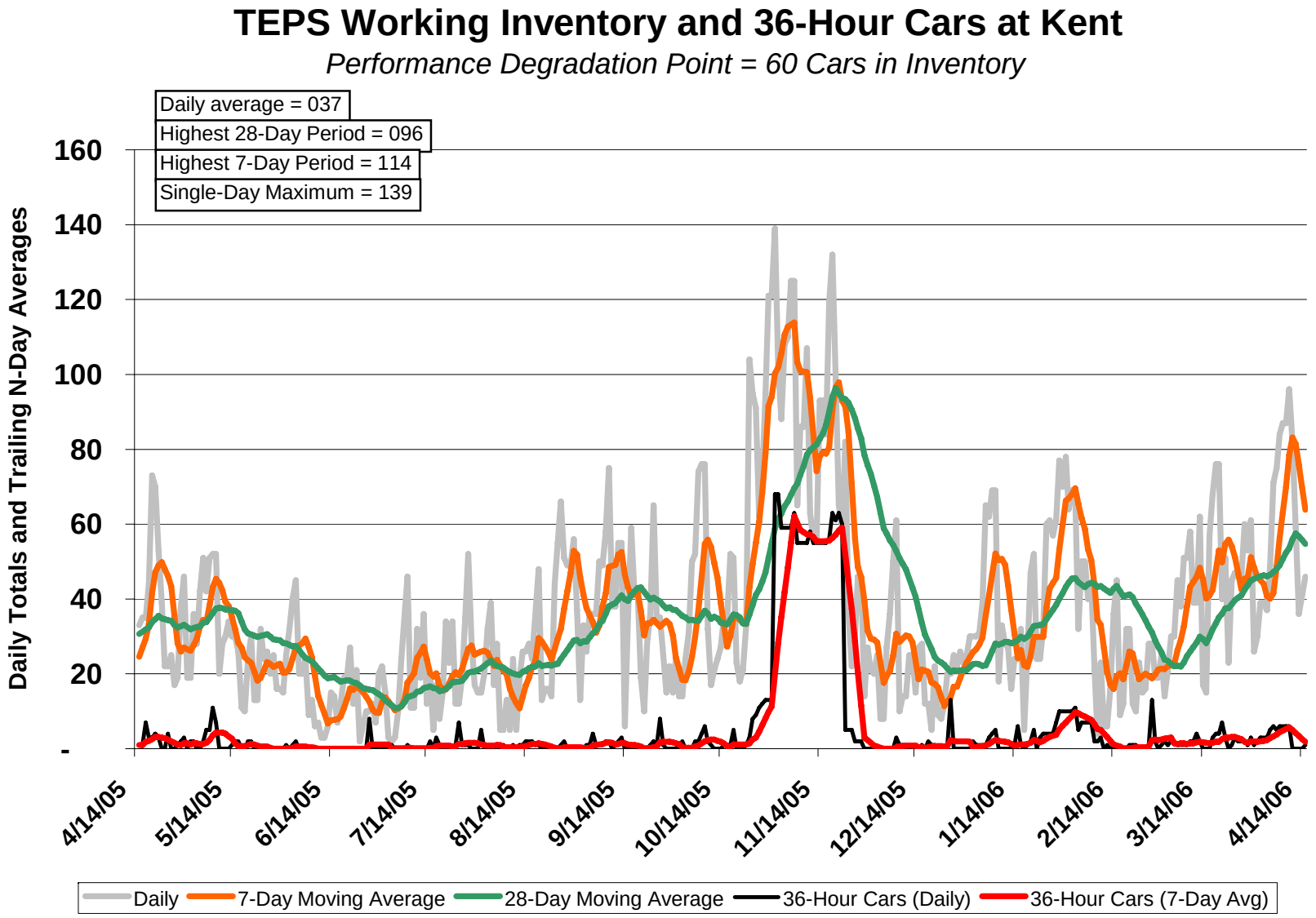
Tacoma Rail uses a rail industry rule of thumb for infrastructure utilization which states that available track should not be utilized in excess of 60 percent by railcars. Utilization in the range of 50 to 60 percent indicates mild congestion. At that level, there are some restrictions of operations. Ratios in excess of 60 percent indicate significant congestion and reduced responsiveness. At a time of significant utilization, railcars have to be moved and shuffled excessively to make room for other cars while attempting to keep cars in logical sequences. Utilization in excess of 80 percent indicates a yard is in gridlock and all activities are severely delayed.


TEPS Working Inventory and 36-Hour Cars at Wishram
Performance Degradation Point = 125 Cars in Inventory
Daily average = 103
Highest 28-Day Period = 184
Highest 7-Day Period = 240
Single-Day Maximum = 352
Daily Totals and Trailing N-Day Averages
400
350
300
250
200
150
100
50
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)


TEPS Working Inventory and 36-Hour Cars at Kalama
Performance Degradation Point = 100 Cars in Inventory
Daily average = 031
Highest 28-Day Period = 054
Highest 7-Day Period = 077
Single-Day Maximum = 165
Daily Totals and Trailing N-Day Averages
180
160
140
120
100
80
60
40
20
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)

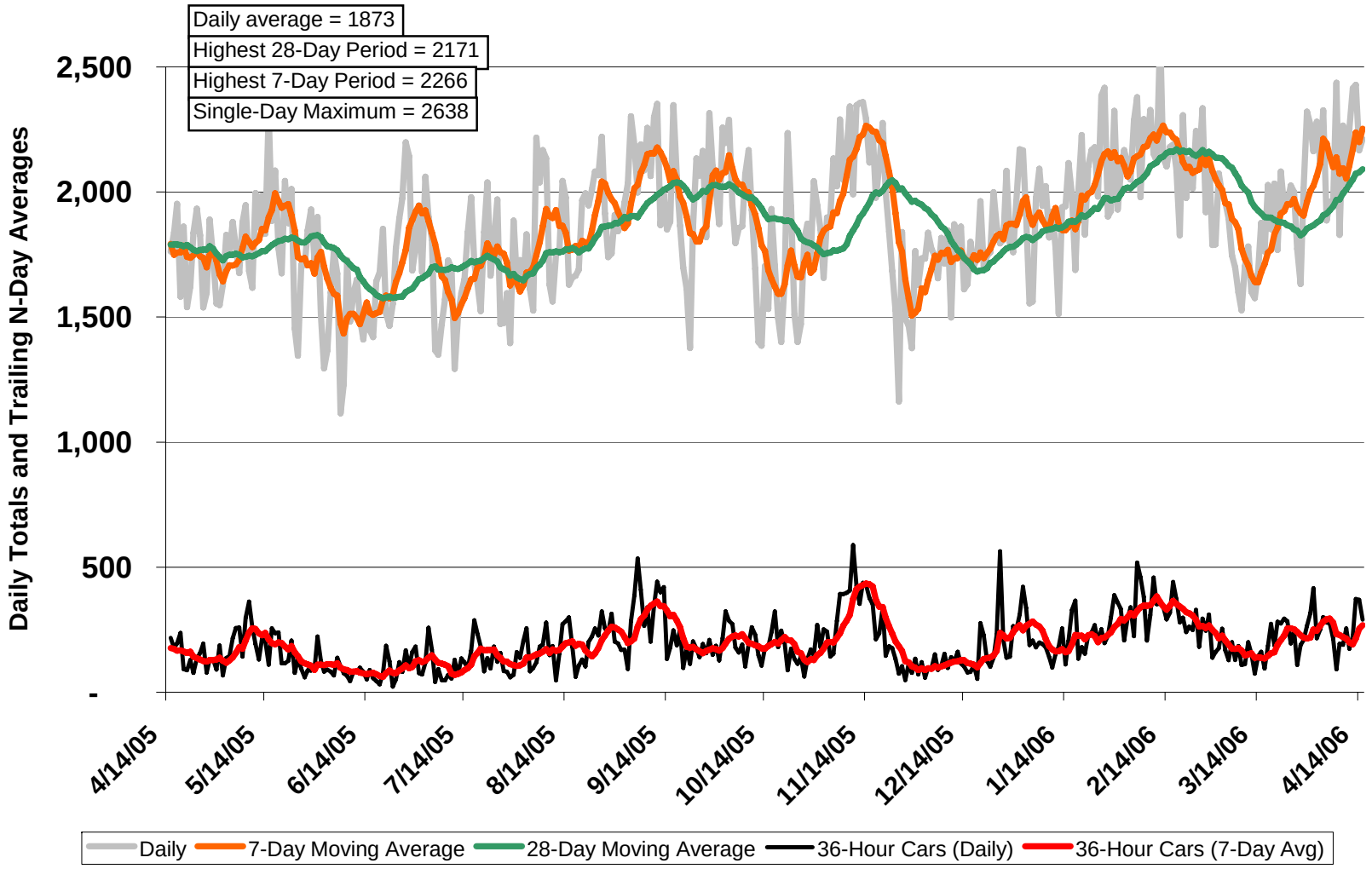

TEPS Working Inventory and 36-Hour Cars at Longview Jct.
Performance Degradation Point = 200 Cars in Inventory
Daily average = 184
Highest 28-Day Period = 210
Highest 7-Day Period = 232
Single-Day Maximum = 379
Daily Totals and Trailing N-Day Averages
400
350
300
250
200
150
100
50
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)


TEPS Working Inventory and 36-Hour Cars at Pasco
Performance Degradation Point = 1,700 Cars in Inventory
Daily average = 1686
Highest 28-Day Period = 2004
Highest 7-Day Period = 2178
Single-Day Maximum = 2352
Daily Totals and Trailing N-Day Averages
2,500
2,000
1,500
1,000
500
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)


TEPS Working Inventory and 36-Hour Cars at Kent
Performance Degradation Point = 60 Cars in Inventory
Daily average = 037
Highest 28-Day Period = 096
Highest 7-Day Period = 114
Single-Day Maximum = 139
Daily Totals and Trailing N-Day Averages
160
140
120
100
80
60
40
20
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)

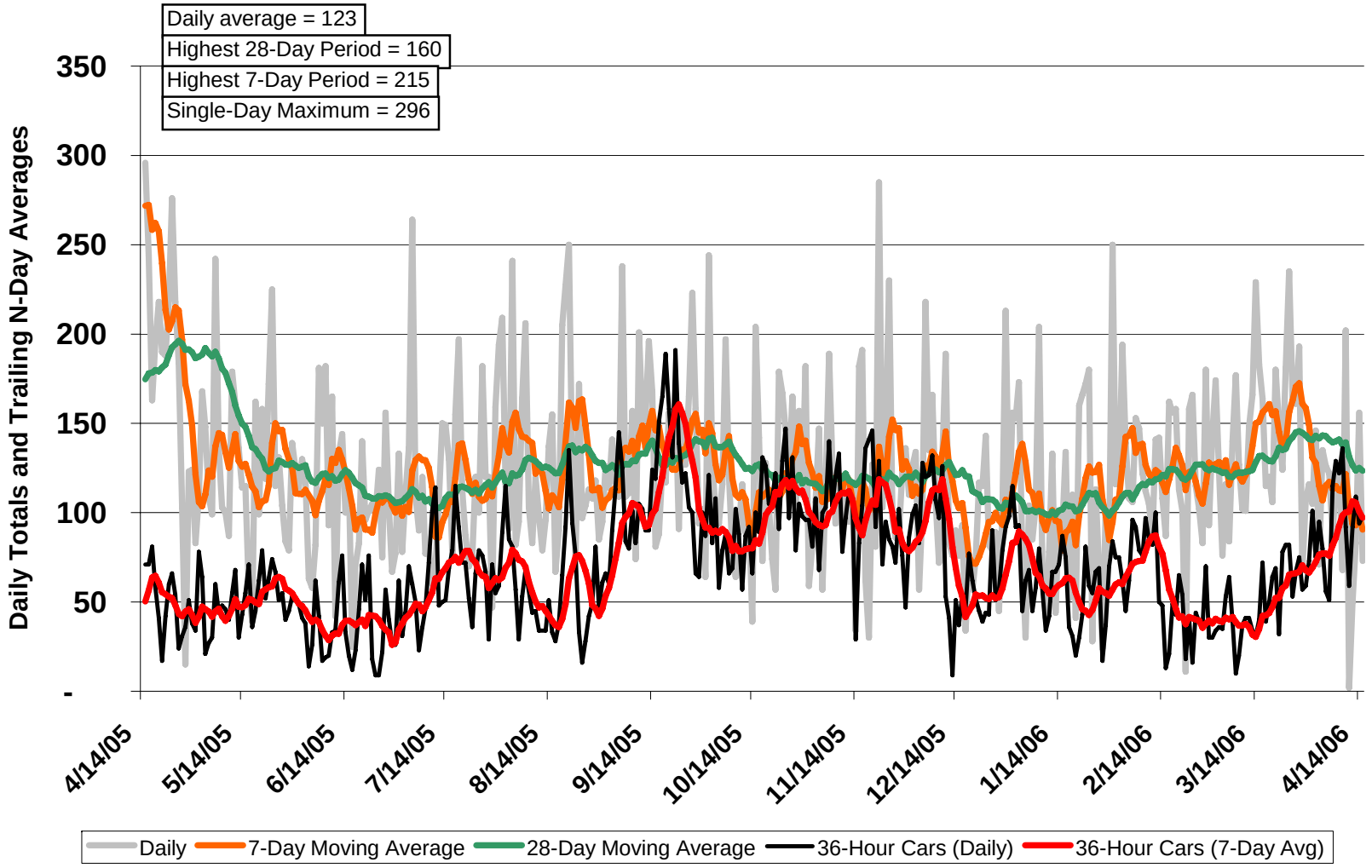
TEPS Working Inventory and 36-Hour Cars at Pasco

Performance Degradation Point = 1,700 Cars in Inventory



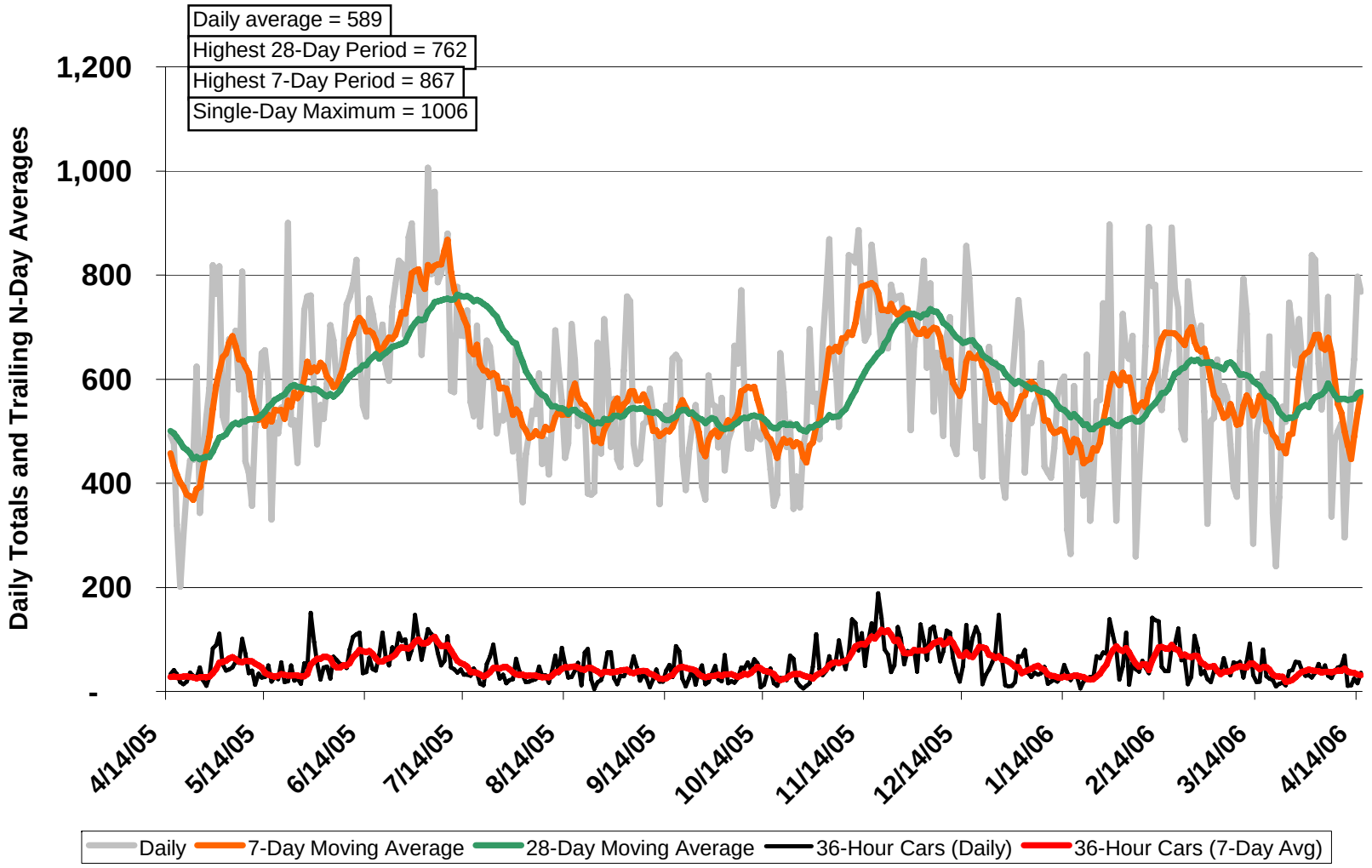
TEPS Working Inventory and 36-Hour Cars at Seattle

Performance Degradation Point = 150 Cars in Inventory



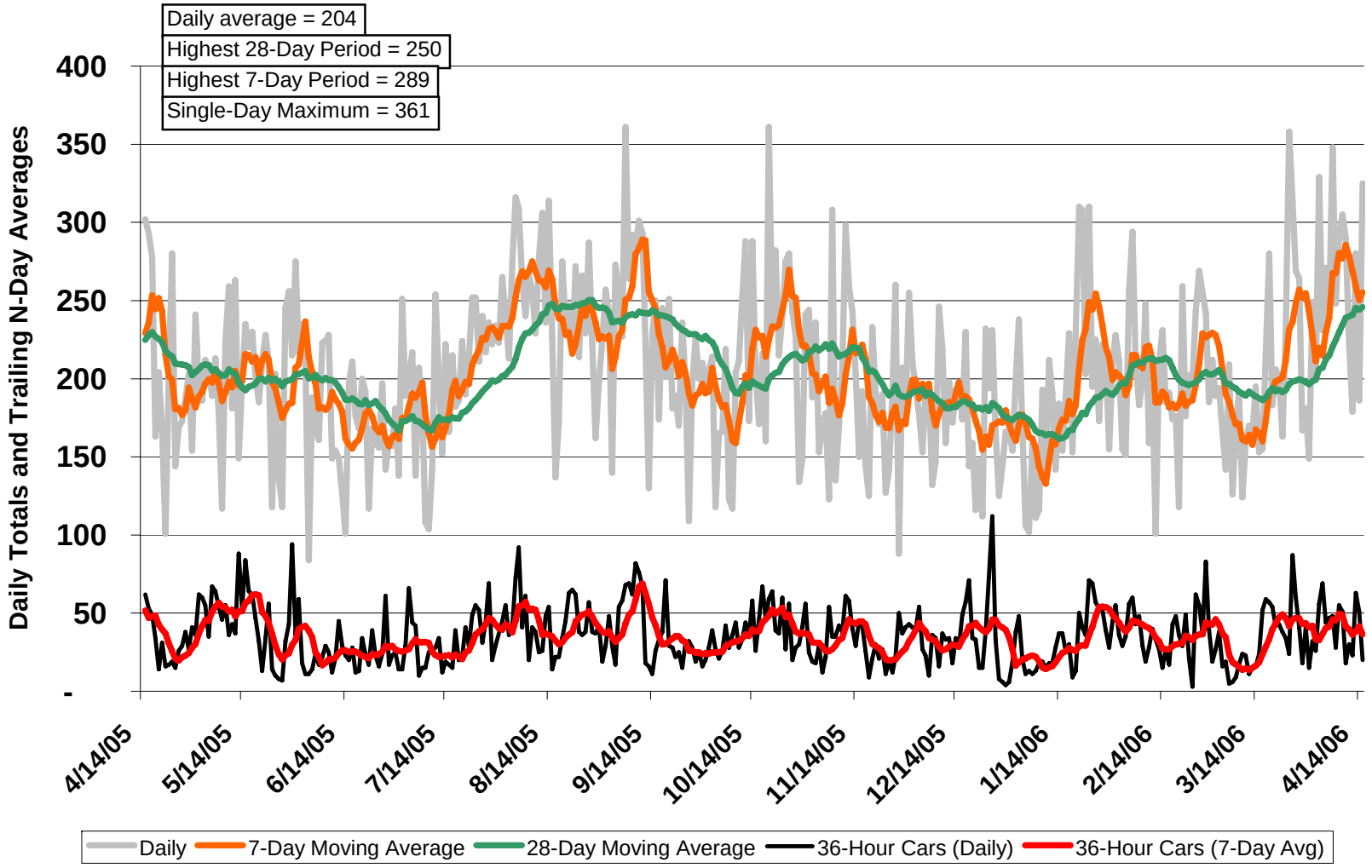
TEPS Working Inventory and 36-Hour Cars at Spokane

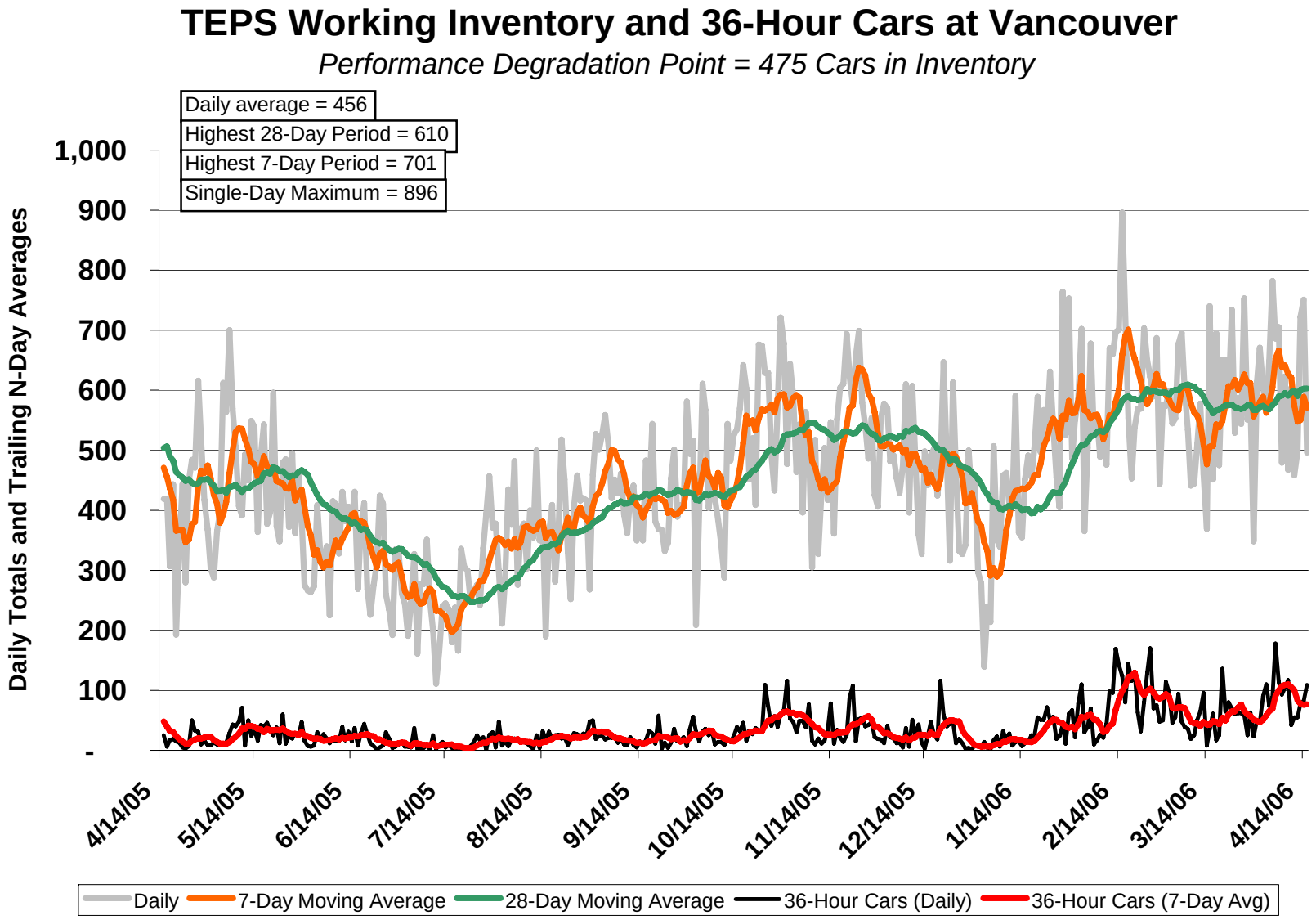
Performance Degradation Point = 700 Cars in Inventory

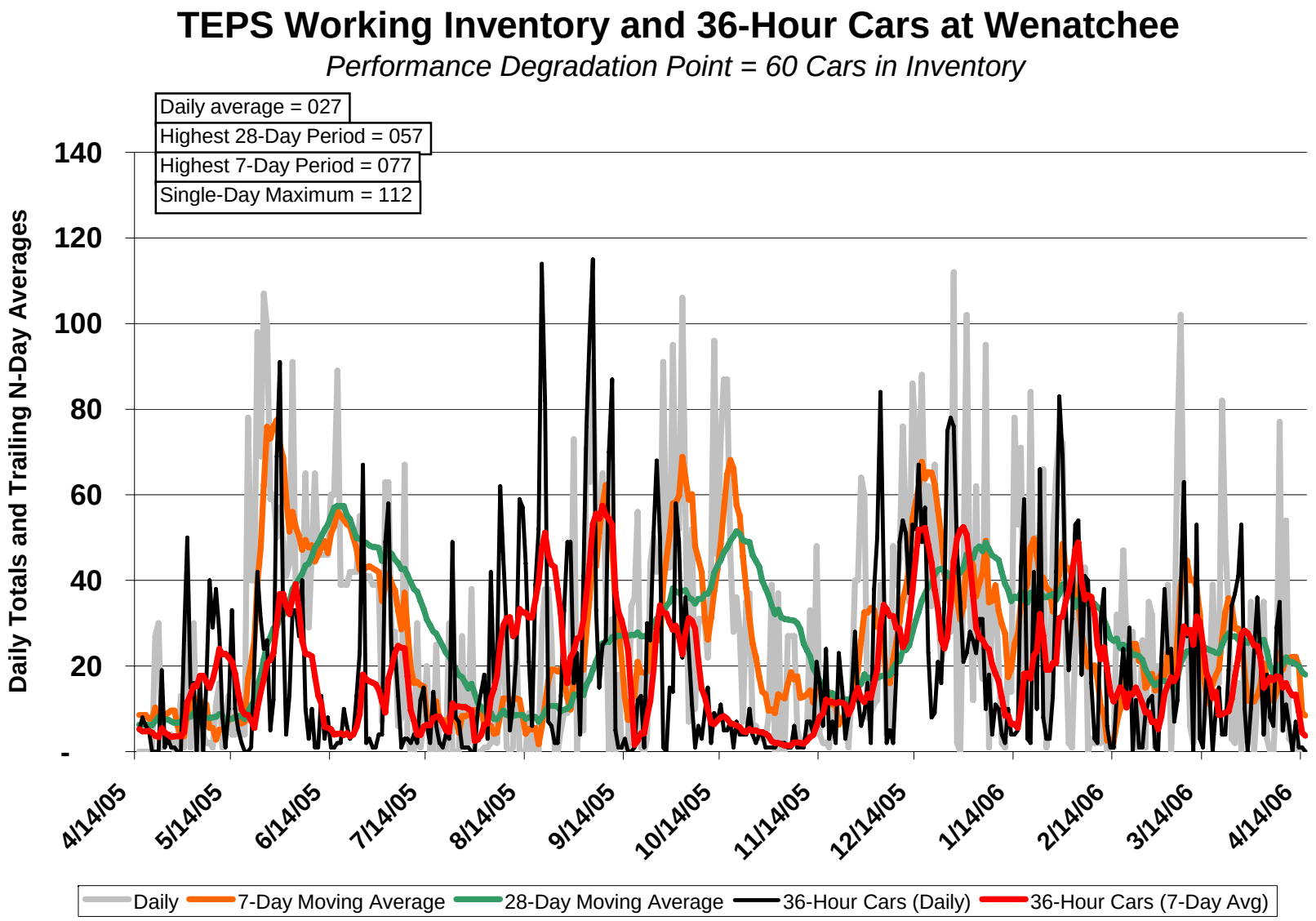


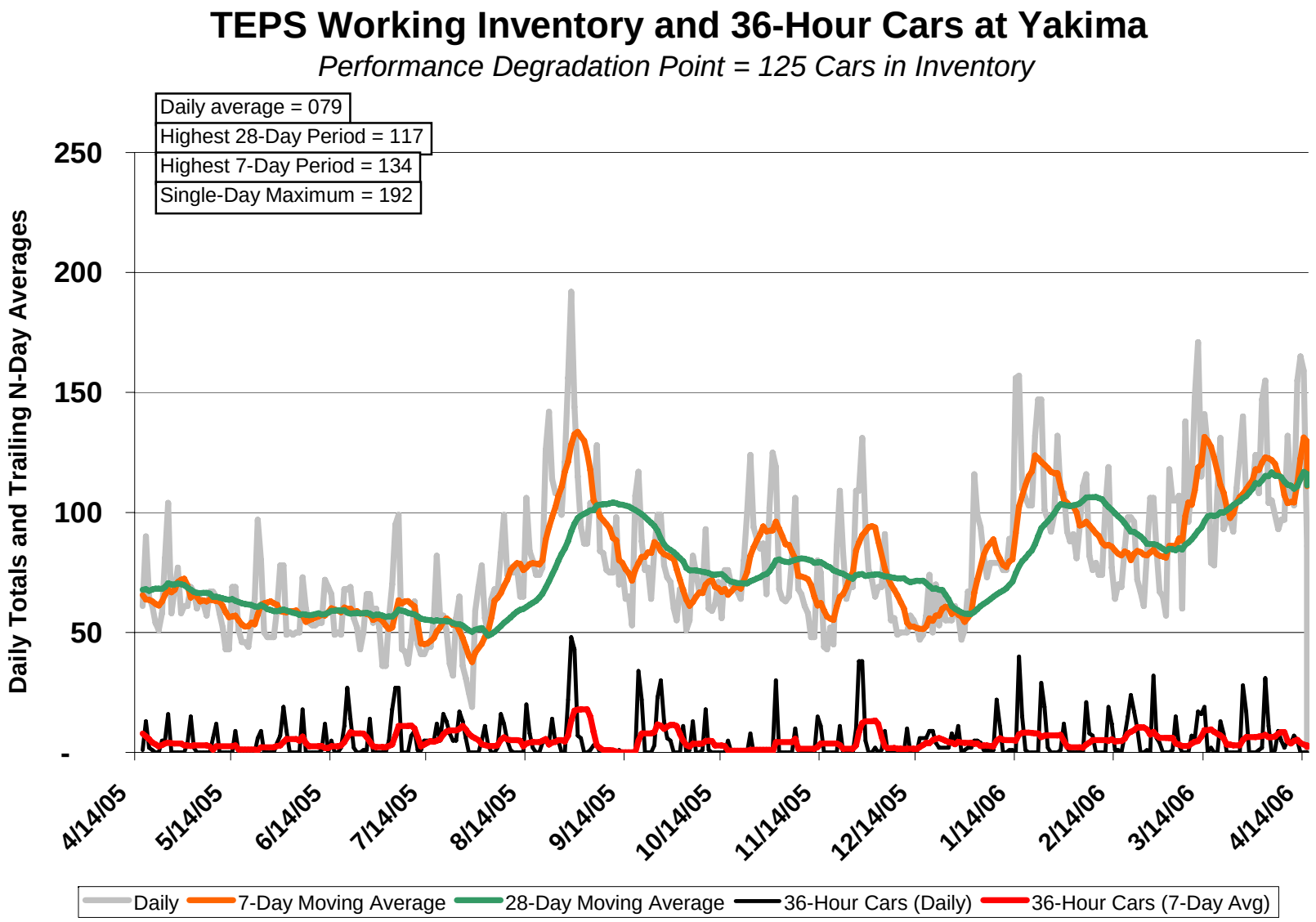
TEPS Working Inventory and 36-Hour Cars at Tacoma

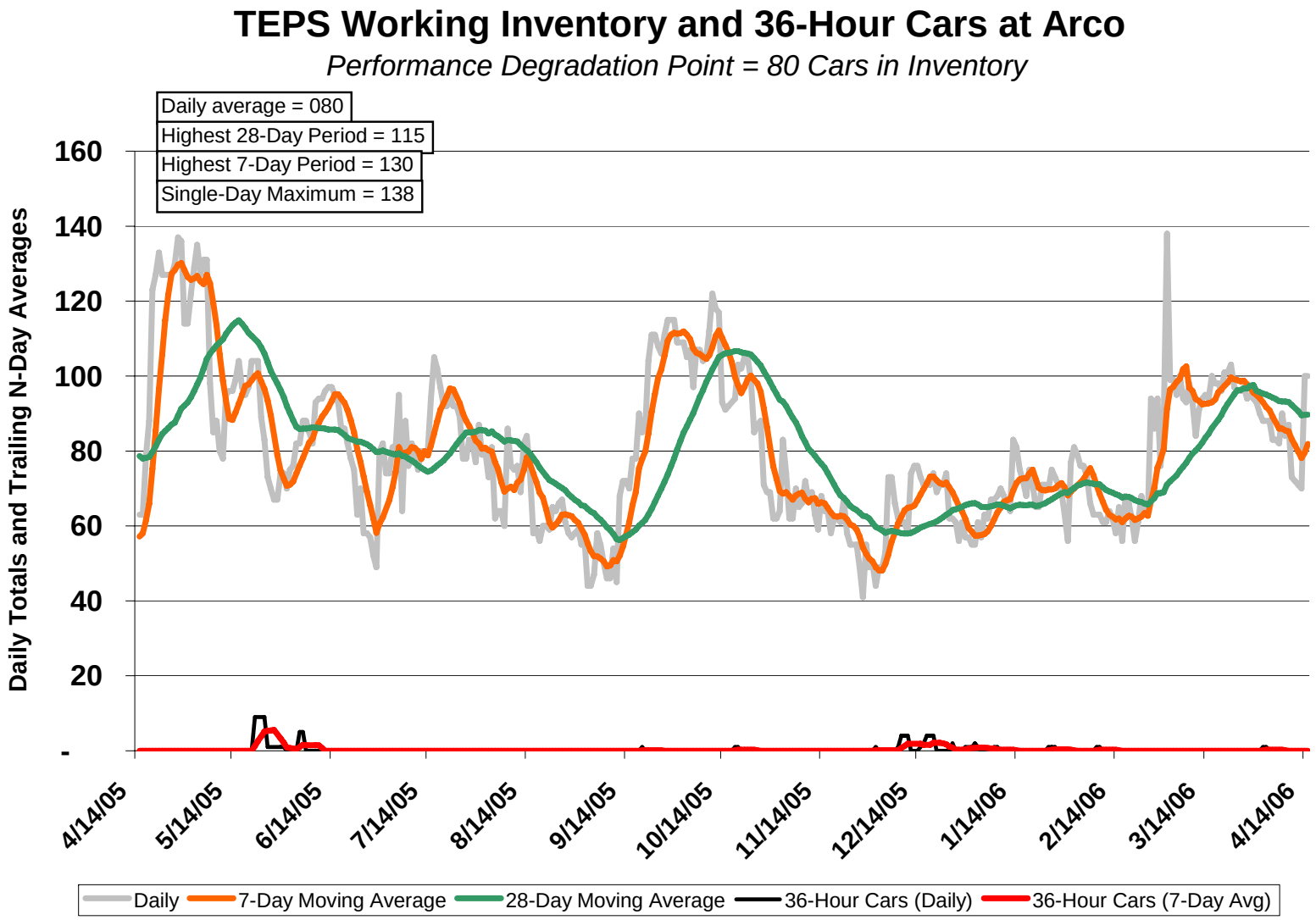
Performance Degradation Point = 200 Cars in Inventory




TEPS Working Inventory and 36-Hour Cars at Vancouver
Performance Degradation Point = 475 Cars in Inventory
Daily average = 456
Highest 28-Day Period = 610
Highest 7-Day Period = 701
Single-Day Maximum = 896
Daily Totals and Trailing N-Day Averages
1,000
900
800
700
600
500
400
300
200
100
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)

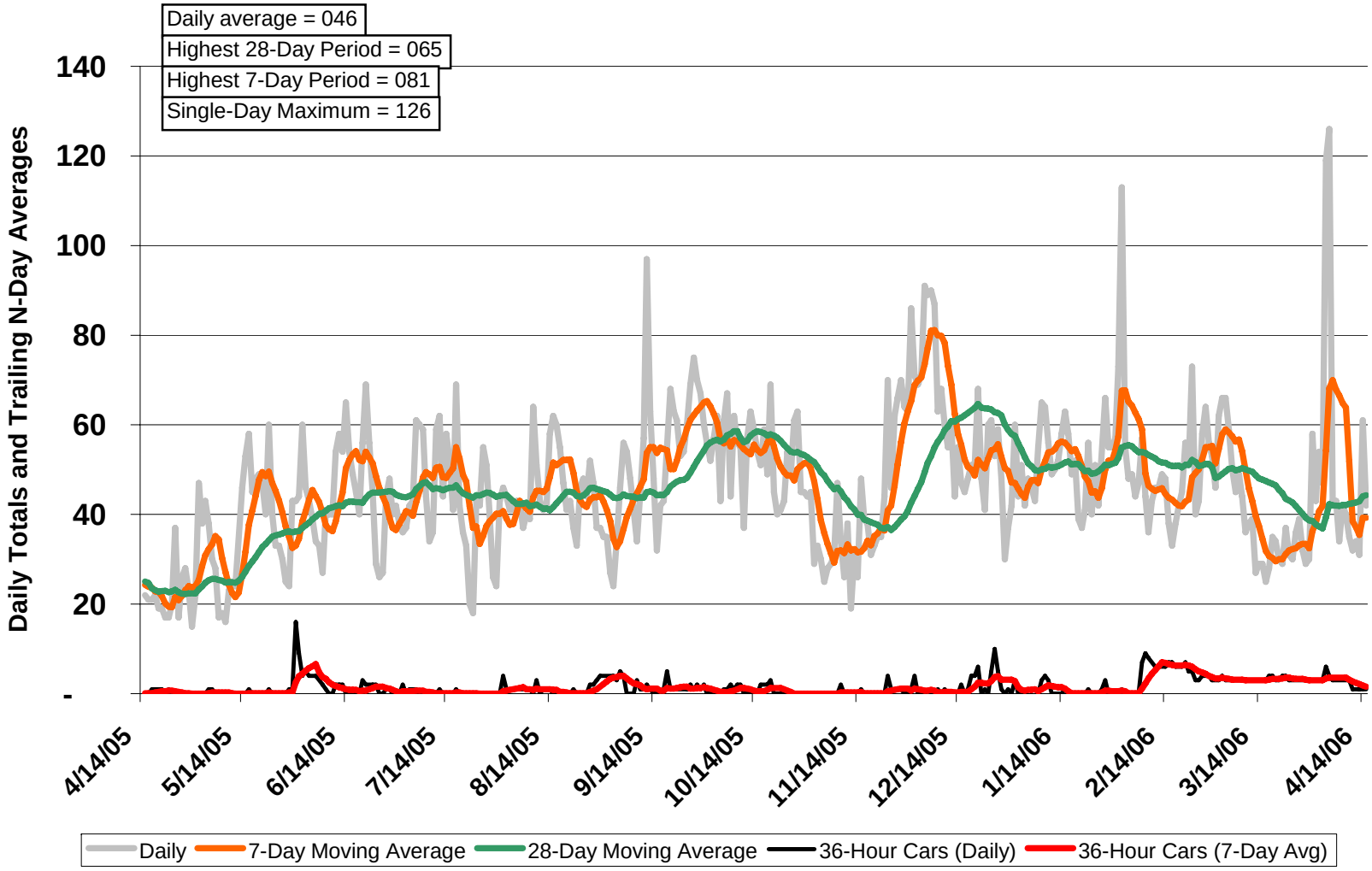

TEPS Working Inventory and 36-Hour Cars at Wenatchee
Performance Degradation Point = 60 Cars in Inventory
Daily average = 027
Highest 28-Day Period = 057
Highest 7-Day Period = 077
Single-Day Maximum = 112
Daily Totals and Trailing N-Day Averages
140
120
100
80
60
40
20
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)

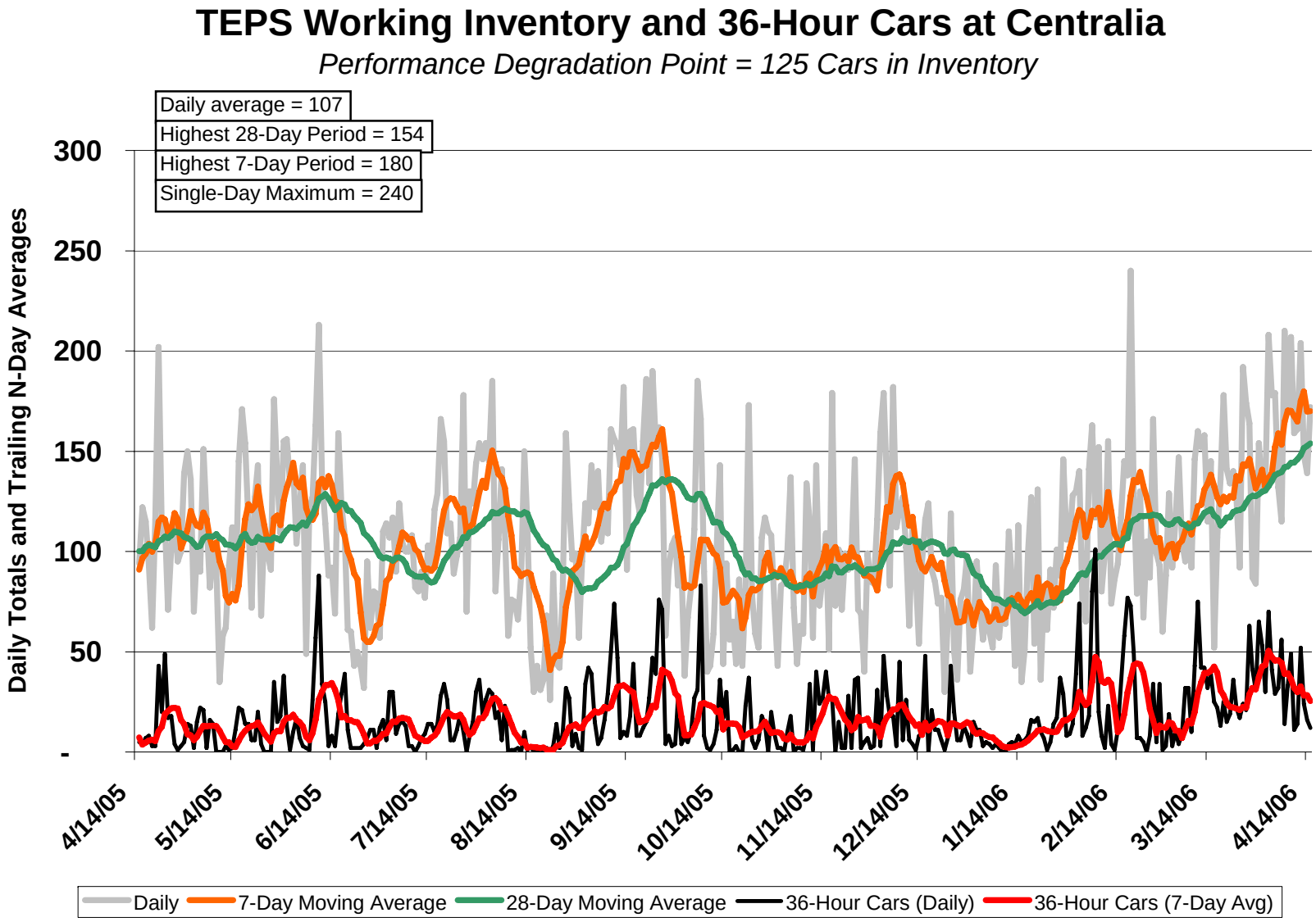

TEPS Working Inventory and 36-Hour Cars at Yakima
Performance Degradation Point = 125 Cars in Inventory
Daily average = 079
Highest 28-Day Period = 117
Highest 7-Day Period = 134
Single-Day Maximum = 192
Daily Totals and Trailing N-Day Averages
250
200
150
100
50
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)

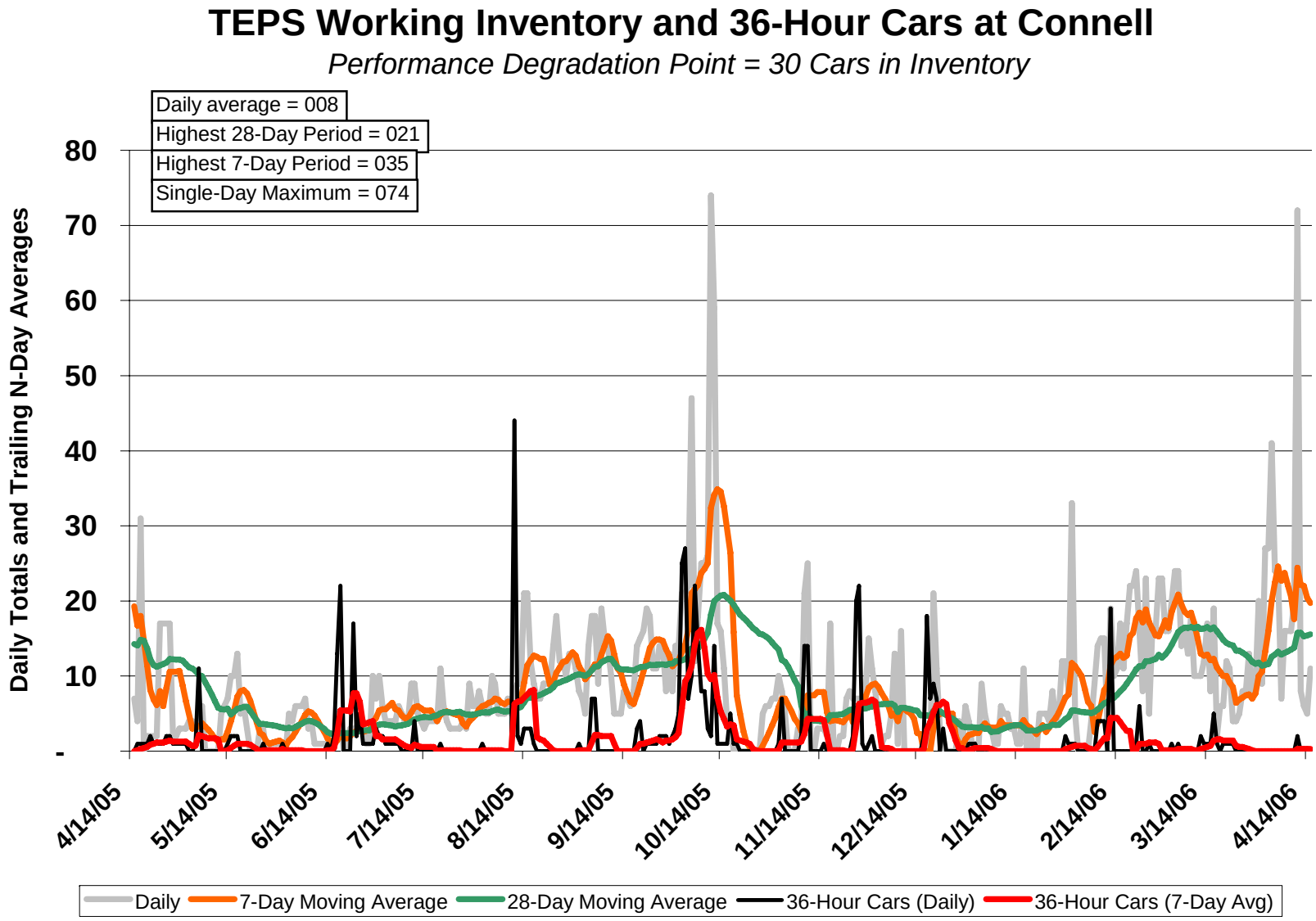

TEPS Working Inventory and 36-Hour Cars at Arco
Performance Degradation Point = 80 Cars in Inventory
Daily average = 080
Highest 28-Day Period = 115
Highest 7-Day Period = 130
Single-Day Maximum = 138
Daily Totals and Trailing N-Day Averages
160
140
120
100
80
60
40
20
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)

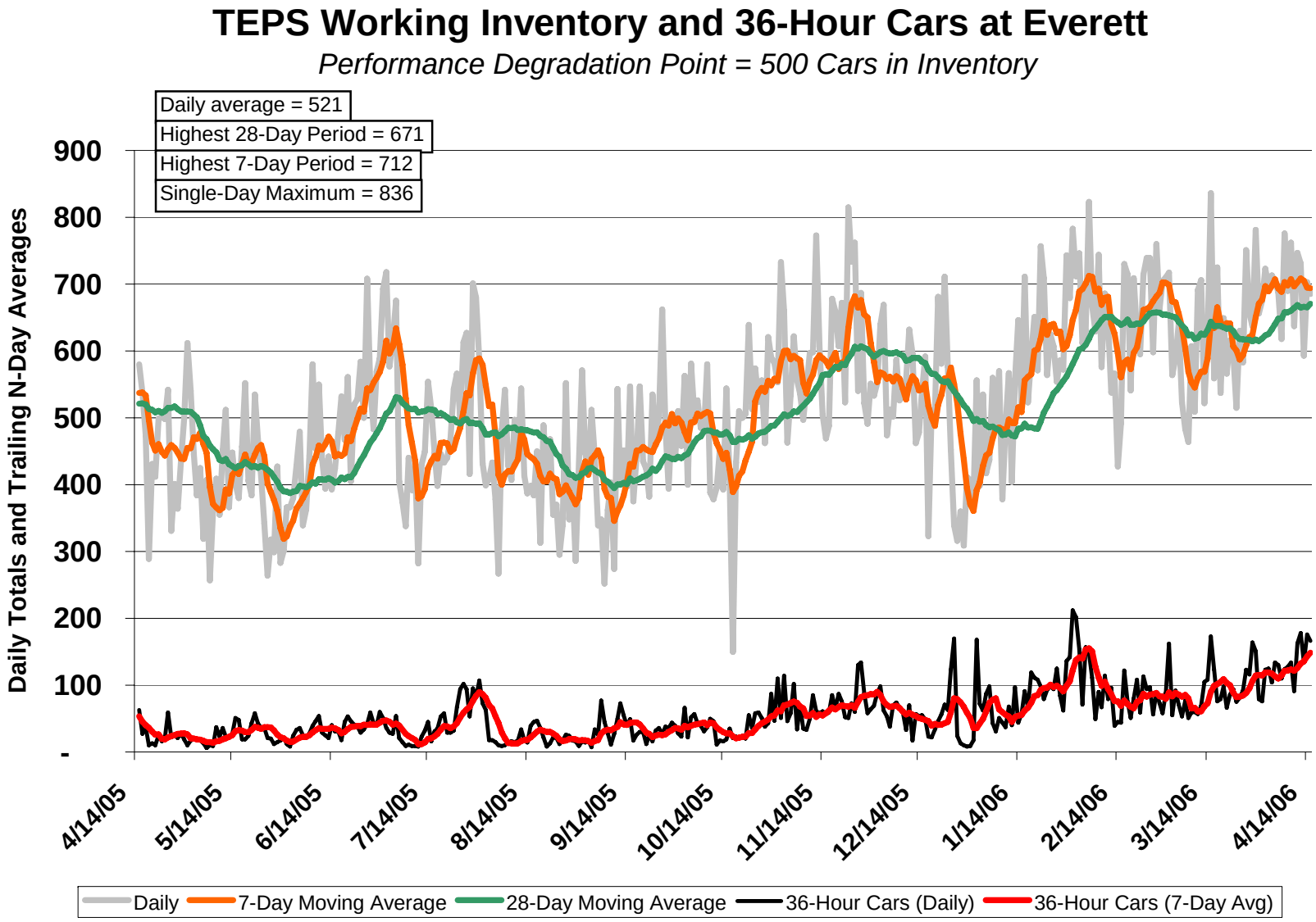
TEPS Working Inventory and 36-Hour Cars at Bellingham

Performance Degradation Point = 80 Cars in Inventory




TEPS Working Inventory and 36-Hour Cars at Centralia
Performance Degradation Point = 125 Cars in Inventory
Daily average = 107
Highest 28-Day Period = 154
Highest 7-Day Period = 180
Single-Day Maximum = 240
Daily Totals and Trailing N-Day Averages
300
250
200
150
100
50
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)


TEPS Working Inventory and 36-Hour Cars at Connell
Performance Degradation Point = 30 Cars in Inventory
Daily average = 008
Highest 28-Day Period = 021
Highest 7-Day Period = 035
Single-Day Maximum = 074
Daily Totals and Trailing N-Day Averages
80
70
60
50
40
30
20
10
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)


TEPS Working Inventory and 36-Hour Cars at Everett
Performance Degradation Point = 500 Cars in Inventory
Daily average = 521
Highest 28-Day Period = 671
Highest 7-Day Period = 712
Single-Day Maximum = 836
Daily Totals and Trailing N-Day Averages
900
800
700
600
500
400
300
200
100
-
4/14/05
5/14/05
6/14/05
7/14/05
8/14/05
9/14/05
10/14/05
11/14/05
12/14/05
1/14/06
2/14/06
3/14/06
4/14/06
Daily
7-Day Moving Average
28-Day Moving Average
36-Hour Cars (Daily)
36-Hour Cars (7-Day Avg)

TEPS Working Inventory and 36-Hour Cars at Interbay

Performance Degradation Point = 325 Cars in Inventory

