PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

E.I. DUPONT DE NEMOURS & COMPANY Complainant v. NORFOLK SOUTHERN RAILWAY COMPANY Defendant	)	Docket No. NOR 42125

FINAL BRIEF OF
E.I. DU PONT DE NEMOURS AND COMPANY

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CASE GLOSSARY

AEP Texas	AEP Texas Northern Co. v. BNSF Ry, STB Docket No. 41191, slip op. (served Sept. 10, 2007)
AEPCO 2005	Ariz. Elec. Power Coop., Inc. v. Burlington N. & Santa Fe Ry., STB Docket No. 42058 (served Mar. 15, 2005).
AEPCO 2011	Arizona Electric Power Cooperative, Inc. v. BNSF Railway, STB Docket No. 42113, slip op. (served Nov. 22, 2011)
AEPCO June 2011	Arizona Electric Power Cooperative, Inc. v. BNSF Railway, STB Docket No. 42113, slip op. (served June 27, 2011)
Bottleneck I	Central Power & Light Co. v. Southern Pacific Transportation Co., 1 S.T.B. 1059 (1996), aff'd sub nom. MidAmerican Energy Co. v. STB, 169 F.3rd 1099 (8th Cir. 1999)
Bottleneck II	Central Power & Light Co. v. Southern Pacific Transportation Co., 2 S.T.B. 235 (1997)
Coal Trading Corp.	Coal Trading Corp. v. Baltimore & Ohio R.R., 6 I.C.C. 2d 361 (1990)
CP&L	Carolina Power & Light Co. v. Norfolk Southern Ry., 7 S.T.B. 235 (2003)
DMIR	Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry., 4 S.T.B. 64 (1998), reconsideration denied, 4 S.T.B. 288, 292 (1999)
Duke/CSXT	Duke Energy Corp. v. CSX Transportation Inc., 7 S.T.B. 402 (2004)
Duke/NS	Duke Energy Corp. v. Norfolk Southern Railway, 7 S.T.B. 89 (2003)
DuPont	E.I. du Pont de Nemours & Co. v. Norfolk Southern Railway Company, STB Docket No. 42125
Ex Parte 715	Rate Regulation Reforms, STB Docket No. EP 715, slip op. (served July 25, 2012)
FMC	FMC Wyo. Corp. v. Union Pacific R.R., 4 S.T.B. 699 (2000)
General Procedures	General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases, 5 S.T.B. 441 (2001)

Major Issues	Major Issues in Rail Rate Cases, STB Ex Parte No. 657, slip op. (served Oct. 30, 2006)
Market Dominance Determinations	Market Dominance Determinations & Consideration of Product Competition, 365 I.C.C. 118 (1981)
McCarty Farms	McCarty Farms, Inc. v. Burlington Northern, Inc., 2 S.T.B. 460 (1997)
M&G	M&G Polymers USA, LLC v. CSX Transportation, Inc., Docket 42123, slip op. at 13 (served Sept. 27, 2012)
Otter Tail	Otter Tail Power Co. v. BNSF Ry., STB Docket No. 42071 (served Jan. 27, 2006), aff'd sub nom. Otter Tail Power Co. v. STB, 484 F.3d 959 (8th Cir. 2007)
PSCo/Xcel	Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern & Santa Fe Ry., 7 S.T.B. 589 (2004)
TMPA	Texas Municipal Power Agency v. Burlington Northern & Santa Fe Ry., 6 S.T.B. 573 (2003)
TPI	Total Petrochemicals & Refining USA, Inc. v. CSX Transportation, Inc., Docket No. 42121, slip op. (served May 31, 2013)
Union Pacific	Union Pac. R.R. v. STB, 202 F.3d 337 (D.C. Cir. 2000)
WFA/Basin I	Western Fuels Association, Inc. v. BNSF Ry., STB Docket No. 42088 (served Sept. 10, 2007)
WFA/Basin II	Western Fuels Association, Inc. v. BNSF Ry., STB Docket No. 42088 (served June 15, 2012)
Wisconsin P&L	Wisconsin Power & Light Co. v. Union Pacific R.R., 5 S.T.B. 955 (2001)
WTU	West Texas Utilities Co. v. Burlington Northern R.R., 1 S.T.B 638 (1996), aff'd sub nom. Burlington Northern R.R. v. STB, 114 F.3d 206 (D.C. Cir. 1997)

ACRONYMS

AAR	Association of American Railroads
ATC	Average Total Cost
BNSF	Burlington Northern Santa Fe Railway Company
BRC	Belt Railway Company of Chicago
CMP	Constrained Market Pricing
Conrail	Conrail Shared Asset Area
CSXT	CSX Transportation, Inc.
CTC	Centralized Traffic Control
DCF	Discounted Cash Flow
DP	Distributive Power
DRR	DuPont Stand-Alone Railroad
G&A	General and Administrative
ICC	Interstate Commerce Commission
IHB	Indiana Harbor Belt Railroad Company
LPM	Limit Price Methodology
MMM	Maximum Markup Methodology
MOW	Maintenance of Way
NS	Norfolk Southern Railway Company
PTC	Positive Train Control
R/VC	Revenue to Variable Cost
RMI	A GE Transportation Company
RTC	Rail Traffic Controller Model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
STB	Surface Transportation Board
TCS	Triple Crown Services
TDIS	Thoroughbred Direct Intermodal Services
TIH	Toxic Inhalation Hazard
TRRA	Terminal Railroad Association of St. Louis
UP	Union Pacific Railroad
URCS	Uniform Railroad Costing System
USDA	United States Department of Agriculture

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Pursuant to the procedural schedule served by the Surface Transportation Board ("Board" or "STB") in this docket on March 8, 2013, Complainant, E.I. du Pont de Nemours and Company ("DuPont"), hereby submits this Final Brief in support of its Complaint, as amended, against Defendant, Norfolk Southern Railway Company ("NS"), for prescriptive rate relief and an award of reparations for past overcharges, pursuant to 49 U.S.C. §§ 10701, 10704 and 11704.[1] As summarized herein, and detailed in DuPont's Opening and Rebuttal Evidence, NS possesses market dominance over all 138 issue movements in this proceeding, thereby establishing the Board's jurisdiction over the challenged rates. The evidence also demonstrates that the challenged rates all exceed a maximum reasonable level under the Stand-Alone Cost ("SAC") constraint of rate reasonableness. Therefore, DuPont is entitled to a prescription of reasonable rates, under 49 U.S.C. § 10704, and an award of reparations (including fully compensatory interest), pursuant to 49 U.S.C. § 11704, for amounts charged by NS since June 1, 2009 in excess of the lawful maximum rates.

I. NS POSSESSES MARKET DOMINANCE OVER THE ISSUE MOVEMENTS.

Before the Board may adjudicate the reasonableness of each challenged rate, it first must determine that NS possesses "market dominance over the transportation to which the rate applies." 49 U.S.C. § 10707(b). Market dominance is "an absence of effective competition from other rail carriers or modes of transportation for the transportation to which a rate applies." 49 U.S.C. § 10707(a) (underline added). Market dominance has both a quantitative and a

[1] In accordance with Board precedent, in this Brief, DuPont summarizes the evidence and arguments in support of the relief requested and eschews the introduction of new or revised evidence that is not already part of the record. Duke Energy Corp. v. Norfolk S. Ry., STB Docket No. 42069, slip op. at 2 (served Dec. 13, 2002) ("The parties are reminded that new evidence is not permitted in briefs and will be subject to motions to strike and other sanctions."). Although the Board has not imposed a page limit upon briefs in this case, DuPont is cognizant of the fact that the record already contains extensive narratives by both parties, and therefore, limits the topics addressed in this Brief to the issues of greatest significance to this proceeding.

qualitative component. Although NS has conceded quantitative market dominance over all 138 issue movements, it has contested its qualitative market dominance over 99 of those movements.

Effective competition can come from other rail carriers (i.e. intramodal competition) or other modes (i.e. intermodal competition). With the exception of just two issue movements, where NS alleges that intramodal competition is available via reciprocal switching at both the origins and destinations, all of the alleged competitive alternatives are intermodal options in the form of direct truck transportation for the entire through movement, a traditional rail-to-truck transload via a bulk terminal near the destination, or a very atypical truck-to-rail transload via a bulk terminal near the origin. However, the fact that alternative transportation modes may be possible does not make such modes feasible. "[A] test of feasibility must include considerations of economic and physical practicality, as well as safety." Gen. Elec. Co. v. Balt. & Ohio R.R., No. 38125S, 1984 ICC LEXIS 206, at *5 (ICC Oct. 12, 1984). DuPont has demonstrated that these alternatives either are not physically practical, are not practical due to safety considerations that arise from their hazardous or noxious traits, or are not economically practical because they do not provide an effective competitive constraint upon the challenged rates.

DuPont has presented its quantitative and qualitative market dominance evidence in Parts II-A and -B, respectively, of its Opening and Rebuttal Evidence, including accompanying exhibits and work papers. This portion of DuPont's Brief addresses the following three aspects of the market dominance evidence. First, DuPont shows that its evidence proves NS's market dominance based upon the traditional market dominance factors established by over 30 years of precedent. Second, in line with the Board's recent decision in Total Petrochemicals & Refining USA, Inc. v. CSX Transportation, Inc. (TPI), Docket No. 42121, DuPont shows that its evidence also proves NS's market dominance under the recently-adopted Limit Price Methodology

("LPM"), but urges the Board to adopt a modification to how it applies the LPM. Third, DuPont explains why, as part of the market dominance determination, the Board may only consider alternative transportation between the same origin and destination to which the challenged rate applies, which means that most of the NS-proposed alternatives for joint line issue movements must be rejected.

A. DuPont Has Established NS's Market Dominance Based Upon A Traditional Market Dominance Analysis.

In its Opening Evidence, DuPont made a *prima facie* showing of market dominance, upon which NS was required to "rebut that showing or suffer the consequence." McGraw Edison Co. v. Alton & S. Ry., 2 I.C.C. 2d 102, 106 (1986). DuPont presented the following five types of evidence from which the Board has declared that "[e]ffective competition from motor carriage may be deduced." Market Dominance Determinations, 365 I.C.C. 118, 133 (1981).

> (1) the amount of the product in question that is transported by motor carrier where rail alternatives are available;
>
> (2) the amount of the product that is transported by motor carrier under transportation circumstances (e.g., shipment size and distance) similar to rail;
>
> (3) the amount of the product that is transported using motor carrier by shippers with similar needs (distributional, inventory, et cetera) as the shipper protesting the rate;
>
> (4) physical characteristics of the product in question that may preclude transportation by motor carrier; and
>
> (5) the transportation costs of the rail and motor carrier alternatives.

Id. The agency also was clear that it would consider other types of evidence beyond just those five factors. DuPont has performed a comprehensive analysis of these factors by presenting multiple facts that, as a collective whole, justify finding NS market dominant. See Dup. Op. Narr. I-6 to -7; Dup. Reb. I-18 to -24.

DuPont has presented evidence showing that it does not transport the issue commodities by truck under circumstances similar to rail. Generally, DuPont uses trucks to transport the issue commodities in only 4 circumstances: (1) to serve non-rail customers; (2) over distances of just a few hundred miles; (3) to deliver less than rail car volumes; and (4) when expedited transit is required. Dup. Reb. I-31 to -38. DuPont predominantly uses trucks at shorter distances than rail, except when trucks may be required to expedite a shipment to a rail customer or to serve a location without access to rail. See e.g., Dup. Reb. II-B-9 to -10, II-B-58 (showing that 88% of DuPont's sulfuric acid truck shipments historically were below 400 miles and 91% of its caustic soda truck shipments were below 250 miles). NS completely ignores these facts by choosing to focus on whether DuPont has ever used trucks to transport the issue commodity, regardless of the circumstances.

Indeed, many of NS's proposed truck alternatives involve prohibitive transport distances of anywhere from 400 to over 1000 miles in some case lanes.[2] Although DuPont physically could transport most of the issue commodities by truck over such distances, and even may have done so in isolated past instances for reasons of necessity, such distances are not feasible for regular transportation. Indeed, after the recent NS rate increases, trucks are less expensive at distances far exceeding those at which truck rates historically have been competitive with rail

[2] See, e.g., Dup. Reb. II-B-9 to -10 (NS proposes trucking alternatives for 9 sulfuric acid lanes than range from 400 to 1,100 miles); II-B-37 to -38 (NS proposes 669 mile truck haul for TIH material); II-B-50 to -53 (NS proposes trucking 3 aniline oil lanes from 619 to 943 miles); II-B-58 to -59 (although 91% of caustic soda truck shipments move less than 250 miles, NS proposes 6 truck alternatives above 345 miles); II-B-87 (NS proposes 579 mile truck haul for TIH material); II-B-97 to -98 (the NS truck alternatives for anhydrous methylamines range from 520 to 1,233 miles); II-B-123 (the NS truck alternatives for aqueous methylamines range from 800 to 1,200 miles); II-B-153 (NS proposes 566 mile truck haul for TIH material).

rates.[3] Therefore, the fact that DuPont is still using truck transportation, even though trucks may now be less expensive than NS rail transportation over such long distances after NS has imposed double and triple digit percentage rate increases, is strong evidence that NS has exercised and is exercising substantial market power over those movements. Dup. Reb. I-42 to 45. If NS did not have market dominance, why would DuPont continue to use NS service when the alleged "effective" alternative is cheaper? No rational businessman would rely on the years-long, hugely expensive and highly uncertain rate challenge process if the competitive market could solve the problem immediately.

DuPont has addressed the physical characteristics of some commodities that render certain transportation alternatives infeasible or impractical. See Dup. Op. Narr. I-38 to -41. For example, certain grades of sulfuric acid cannot be transloaded because of degradation concerns;

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[3] See e.g., Union Pac. R.R.—Abandonment—In New Madrid, Scott & Stoddard Counties, MO, STB Docket No. AB-33 (Sub-No. 261), 2009 STB LEXIS 268, at *11 (STB June 17, 2009) (UP argues that trucks are competitive in "similar short-haul markets" of 280 miles); Rail Gen. Exemption Auth.—Exemption of Paints, Enamels, Lacquers, Shellacs, Etc., Ex Parte No. 346 (Sub-No. 33), 1998 STB LEXIS 107, at *8-9 (STB April 20, 1998) (noting CMA testimony that 300-600 mile hauls preclude trucks as viable competitors); Dep't of Transp., 3 S.T.B. 62, 64 n.5 (1998) (scrap metal moving less than 600 miles is vulnerable to truck competition); Union Pac. Corp.—Control & Merger—S. Pac. Rail Corp., 1 S.T.B. 233, 392 (1996) (KCS study considers trucks non-competitive above 500 miles); Rail Gen. Exemption Auth.—Exemption of Grease or Inedible Tallow, Etc, 10 I.C.C.2d 453, 461 (1994) (adopting 500 mile threshold for truck competition); Rail Gen. Exemption Auth.—Exemption of Rock Salt, Salt, 10 I.C.C.2d 241, 246 (1994) (trucks are dominant mode at 100-150 miles); Rail Gen. Exemption Auth.—Pet. of AAR to Exempt Rail Transp. of Selected Commodity Groups, 9 I.C.C.2d 969, 975-77 (1993) (exemptions granted where most traffic moves at distances under 200 miles, which are less than the system averages); Union Pac. Corp.—Control—Mo.-Kan.-Tex. R.R., 4 I.C.C.2d 409, 442-43 (1988) (finding that trucks can be effective competitors for grain up to 250 miles); CSX Corp—Control—Sea-Land Freight Serv., Inc. & Intermodal Sys., Inc., 3 I.C.C.2d 512, 530 (1987) (rail has "a decided competitive edge over motor carriers for COFC movement of about 500 miles or longer"); Chi., Milwaukee, St. Paul and Pac. R.R.—Reorganization—Acquisition by Grand Trunk Corp., Finance Docket No. 28640 (Sub-No. 9), 1984 ICC LEXIS 288, at *206 (ICC Sept. 12, 1984) (truck competition not effective above 425 miles); CSX Corp.—Control—Am. Commercial Lines, Inc., 2 I.C.C.2d 490, 548-49 (1984) ("trucks compete effectively for [grain] traffic on movements of [150-200 miles]"); Nationwide Increased Freight Rates & Charges, 1977, 359 I.C.C. 312, 331 (1978) (truck competition for caustic soda exists up to 200 miles).

the lime at issue requires special handling and storage; and sand zircon is extremely fine and of such high value that transloading or trucking in super sacks rather than pneumatic trucks is highly undesirable due to the potential for costly product loss in the unloading process. In addition, transloading of titanium dioxide and sulfuric acid from trucks into rail cars simply is not done. Dup. Reb. II-B-12, -158. NS mostly pretends that these issues do not exist or are not relevant.

DuPont has considered the special needs of its customers who depend upon rail cars for storage. See Dup. Op. Narr. I-41 to -42. This includes all of the aniline oil lanes, the aqueous methylamines customers, the lime movement, polyethylene customers, the sodium methylate origin and destination, and various destinations for sulfuric acid and titanium dioxide. Many of these customer needs are manifested in contracts that require rail delivery. NS either ignores this evidence or attempts to minimize its significance by showing the customer may have received a small number of truck shipments at some point in the past. But as demonstrated above, even a customer which requires rail delivery may need the occasional expedited truck shipment. Indeed, the very fact that the truck shipment is expedited means that the customer intends to use the product immediately and thus does not need to store that particular shipment.

DuPont also presented evidence of the expensive investments in additional transportation equipment and infrastructure that would be needed before it could use truck transportation alternatives. See Dup. Op. Narr. I-29 to -38. Those costs render trucking infeasible for anhydrous methylamines, aqueous methylamines, dimethyl ether, dimethyl formamide, sodium caustic, petroleum coke, sulfuric acid, titanium dioxide, lime, and sodium methylate. NS either ignored these costs entirely or wrongly claimed that they are not needed. In no place has NS challenged the cost estimates themselves.

In contrast to DuPont's well-rounded and comprehensive approach, NS builds its case around just two principal allegations of fact: whether DuPont has shipped an issue commodity by truck in the past and how much it would cost DuPont to use trucks compared with rail, after NS's double- and triple-digit rate increases, for the issue movements. If a truck has ever been used and a truck or transload rate is no more than 20% above the challenged NS rate, NS concludes that effective competition exists. NS either discounts or ignores portions of DuPont's evidence concerning the infeasibility of using truck or transload alternatives for entire issue commodities or individual issue movements. Nor does NS give much, if any, consideration to the circumstances in which DuPont has used trucks in the past and whether those circumstances are comparable to the issue movements. These omissions leave gaping holes in the NS market dominance analysis, which encompasses just two of the five factors in Market Dominance Determinations and none of the myriad of other factors that have evolved through agency decisions since then. See Dup. Reb. I-14 to -15, -22 to -23.

The foregoing NS market dominance standard is absurd on its face because the more market power a railroad exerts, by increasing its rates to match or exceed the rates of higher cost alternatives, the less likely it is to be found market dominant. DuPont has demonstrated that NS has engaged in setting the challenged rates based precisely upon this unsupportable market dominance standard.[4] DuPont Opening Exhibit II-B-3 contains the NS rate history for every issue movement, except where the movements are too recent to have a rate history. For the vast majority of the issue movements, NS has increased its rates over just a brief two year period by double- and triple-digit percentages. As a result, truck rates that historically were much higher

[4] This point is closely related to why the Board must consider alternative transportation only between the NS origins and destinations for the issue movements, as opposed to "whole-route" alternatives. See infra Part I.C (discussing Union Pac. R.R. v. STB (Union Pacific), 202 F.3d 337 (D.C. Cir. 2000)).

than rail rates suddenly have become comparable to, or even much lower than, the challenged rail rates. While this may create the appearance of a rate constraint, that constraint is illusory because it is based upon a comparison of rates after NS has exercised its market power. The only reason NS can point to comparable or lower truck rates as evidence of effective competition is because NS itself has created that situation through its own enormous rate increases. In other words, NS already has exercised its market power.

The Board recently has rejected NS's incomplete and over-simplistic market dominance standard in two cases. In both M&G Polymers USA, LLC v. CSX Transportation, Inc. (M&G), Docket 42123, slip op. at 13 (served Sept. 27, 2012), and TPI, slip op. at 16-17, CSX Transportation, Inc. ("CSXT") advocated the exact same standard as NS in this proceeding, to which the Board responded "the mere fact that a rail carrier places its services right at the threshold where, if slightly higher, it might begin to lose traffic to an alternative does not indicate whether that alternative is constraining rates effectively." The Board noted that the complainants in both cases had "correctly observe[d], at some point even a monopolist could price its services so high that even patently ridiculous transportation alternatives would eventually serve to constrain rates." TPI, slip op. at 3; M&G, slip op. at 3. Rather, the Board declared that the central issue is "whether truck or truck/rail alternatives function as 'effective' constraints on [railroad] pricing—i.e., whether they constitute competition sufficient to deter [the railroad] from charging monopoly prices" for the issue movements. TPI, slip op. at 3; M&G, slip op. at 3.

In order to answer this question in light of the rapidly escalating complexity of the market dominance inquiry in cases such as this one,[5] the Board announced a refinement to its approach

[5] This case is far more complex than either M&G or TPI. Whereas M&G involved 1 commodity and 69 movements, and TPI involved 3 very similar commodities and 104 issue movements, DuPont's case involves 26 disparate commodities and 138 issue movements.

towards determining market dominance. DuPont reviews its market dominance evidence in the context of that refinement in the next section. DuPont asserts, however, that it has established NS's market dominance over the issue movements under both the traditional and refined approaches.

B. DuPont Has Established NS's Market Dominance Based Upon The Limit Price Methodology.

At the time both NS and DuPont filed their Reply and Rebuttal evidence, the Board had indicated its intent, in the M&G case, to adopt the LPM "to gauge whether a feasible alternative is functioning as an effective constraint on [a railroad's] pricing."[6] At the request of NS and other railroads, the Board opened the M&G case to receive public comment on the LPM. NS was just one railroad among a large contingent of rail industry interests which submitted comments to the Board. Shortly after comments were received, CSXT and M&G settled their case and no subsequent decision on the LPM was forthcoming in that proceeding. Since the filing of DuPont's Rebuttal evidence on April 15, 2013, the STB issued a market dominance decision in TPI that adopts the very same approach originally described in M&G. In that decision, the Board also considered and addressed the comments that it received on the LPM in the M&G case.

Because neither DuPont nor NS was certain whether the Board ultimately would adopt the LPM, they both addressed it in their evidence. In Reply, NS attacked the LPM on much the same grounds as it did in its comments in the M&G case, and did not present any evidence of the LPM calculations. In Rebuttal, DuPont defended the LPM but sought minor modifications. DuPont also presented evidence of the LPM calculations based upon both its evidence and NS's evidence of transportation alternatives for the contested issue movements. In the following

[6] M&G, slip op. at 13.

subsections, DuPont summarizes its evidence based on the LPM and supports the Board's adoption of the LPM, but seeks a modification to how the Board applies the LPM.

1. The LPM produces a preliminary market dominance conclusion for 71 of the contested lanes; transportation alternatives either are not feasible for the other 28 lanes or there are intangible features that rebut the preliminary conclusion of no market dominance.

The Board's refined approach is a two-part process. First, the Board determines whether the proposed transportation alternative is feasible. If the alternative is not feasible, the Board will conclude that market dominance exists on that bases and the analysis will be at an end. TPI, slip op. at 16. Recognizing that prior Board decisions have used the term "feasibility" in different ways, the Board clarified that it is using the term "to describe the concept of 'practical feasibility'—i.e., whether an alternative is possible from a practical standpoint given real-world constraints." Id. at 4 n.9. The Board has stated that "[w]ithin this rubric the Board considers many factors, including, for example, whether and to what extent such alternatives might involve potentially prohibitive transport distances, product integrity concerns, capacity/infrastructure constraints, and the presence of any transportation requirements imposed by the complaining shipper's customers." Id. at 16. This part of the refined market dominance analysis considers all the same factors as a traditional analysis under the Market Dominance Determinations decision and subsequent precedent, and thus does not constitute a change. If a transportation alternative is practically feasible, the Board will proceed to the second part of the process.

The Board's refinement occurs in the second part of the process, which is the determination of whether a feasible transportation alternative is an effective competitive constraint upon the defendant's pricing. TPI, slip op. at 16. In order to facilitate this determination in complicated cases such as this one, the Board has inserted an objective standard for preliminarily concluding whether market dominance exists prior to evaluating the subjective

factors considered in a traditional analysis. The Board first calculates the Limit Price R/VC of the lowest cost feasible transportation alternative. Id. at 17. Next, the Board compares the Limit Price R/VC to the most recent 4-year average of the defendant's RSAM figure. Id. If the Limit Price R/VC exceeds the RSAM figure, the Board will preliminarily conclude the existence of market dominance; conversely, if the Limit Price R/VC is below the RSAM figure, the Board will preliminarily conclude the absence of market dominance. Id. at 17-18. Either preliminary conclusion can be rebutted by evidence of intangible features, but the further above or below the RSAM, the stronger the conclusion. This refinement does not supplant the guidelines in Market Dominance Determinations or other Board precedent, because all of those factors continue to be relevant to the identification of intangible features to rebut the Board's preliminary conclusions. TPI, slip op. at 22, 23 n.74.

DuPont has presented extensive evidence on both practical feasibility and the LPM rebuttal factors for every issue commodity and movement. This includes calculating the Limit Price R/VC ratio for each transportation alternative proposed by NS and DuPont.[7] Although most of that evidence is tailored to a traditional market dominance analysis, it also is directly relevant to both parts of the LPM analysis. In order to facilitate the Board's evaluation of DuPont's evidence within the framework of the LPM approach, DuPont has prepared Exhibit A to its Final Brief. Exhibit A summarizes in a single chart, on a lane-by-lane basis, the Limit Price R/VC ratio for each transportation alternative presented by the parties,[8] identifies the alternative that produces the lowest ratio, and then summarizes the practical feasibility and

[7] See Dup. Reb. Workpaper "Limit Price Analysis-Errata.xlsx."

[8] In every lane, except A-11, there are at least two alternatives (one each from DuPont and NS), and as many as four (both a direct truck and transload alternative from both parties).

rebuttal factors that are relevant to that movement, accompanied by references to the evidentiary record in which those factors are discussed.[9]

Exhibit A shows that the lowest Limit Price R/VC ratio for all of the transportation alternatives evaluated by DuPont and NS is above the NS RSAM figure for 71 of the 99 contested movements. For each of the remaining 28 lanes, DuPont shows either that the transportation alternative is not practically feasible or, if it is feasible, that there are intangible features that are sufficient to rebut the preliminary conclusion.

2. The Board should apply the LPM only to determine the existence of market dominance.

DuPont believes that the Board has acted within both its statutory authority and its reasonable discretion to adopt the LPM for the reasons set forth at pages I-71 to -78 of its Rebuttal. However, for the reasons stated at pages II-B-209 to -215 of its Rebuttal, DuPont continues to believe that the LPM only functions rationally when it is used to determine the absence of effective competition, not its existence.

The Board is improperly trying to use the RSAM ratio as a fulcrum to establish the absence or existence of effective competition on either side of this single reference point. DuPont does not believe that there can be a single point that serves both objectives. Because the RSAM ratio is the average R/VC ratio that a railroad would need to charge its potentially captive traffic to achieve revenue adequacy, by definition there still is a substantial amount of captive traffic that is priced below the RSAM level and still may be subject to market power. But by allowing the LPM to presume the existence of effective competition at levels below the RSAM ratio, the Board has effectively set a rate floor at the RSAM level that will preclude a shipper

[9] DuPont also is providing Exhibit A as an electronic workpaper. That workpaper is identical to Dup. Reb. Workpaper "Limit Price Analysis-Errata.xlsx" with an added worksheet labeled "Final Brief Analysis."

from challenging a rate below that level. In many instances, this would supplant the statutory floor of a 180% R/VC ratio. See 49 U.S.C. § 10707(d)(1)(A).

In TPI, at 26 n. 78, the Board rejected this argument as "as only a partial solution to the underlying problem" that the LPM is designed to address. DuPont submits that, although only a partial solution, it brings the problem well within manageable proportions while also making it more rational. In the two decisions in which the Board has applied the LPM analysis, the vast majority of case lanes were deemed market dominant under the LPM, leaving only a handful that would require a more detailed analysis without the benefit of the LPM preliminary conclusions. Similarly, in this case, there are only 28 lanes with a Limit Price R/VC ratio below the RSAM, which is just 20% of the 138 issue movements. This small scope should not unduly tax the resources of the Board or delay proceedings.

C. The Board May Only Consider Alternative Transportation Between The NS Origins And Destinations To Which The Challenged Rates Apply.

No transportation alternatives effectively compete with NS between the NS origins and NS destinations on the NS segments of the joint-line lanes. NS tries to mask this fact by claiming that transportation alternatives effectively compete with rail transportation on the entire through route, not just the NS segment. This makes NS appear more competitive because, when combined, the competitive rates charged by the connecting carriers temper the unreasonable NS rates. That is, it shifts the focus of the market dominance inquiry away from NS.

This is contrary to Congressional intent as expressed in the plain language of the statute. Congress has limited the market dominance analysis to transportation from the NS origin to the NS destination:

> When a rate for transportation by a rail carrier providing transportation subject to the jurisdiction of the Board under this part is challenged as being unreasonably high, the Board shall

> determine whether the rail carrier proposing the rate has market dominance over the transportation to which the rate applies.

49 U.S.C. § 10707(b) (underline added). Where a statute is plain, like this, the Board must adhere to it. See Caminetti v. United States, 242 U.S. 470, 485 (1917). See also North Carolina v. EPA, 531 F.3d 896, 906 (D.C. Cir. 2008) ("Where the statute speaks to the direct question at issue, we afford no deference to the agency's interpretation of it and 'must give effect to the unambiguously expressed intent of Congress.'"). Here, DuPont is challenging rates that apply to transportation from the NS origins to the NS destinations, and not beyond. Thus, the scope of the market dominance inquiry is only transportation from the NS origins to the NS destinations.

This interpretation is required if the Board is to be consistent with other portions of the rail rate regulatory statutes. Under the quantitative market dominance analysis, "the rail carrier establishing the challenged rate does not have market dominance over the transportation to which the rate applies if such rail carrier proves that the rate charged results in a revenue-variable cost percentage for such transportation that is less than 180 percent." 49 U.S.C. 10707(d)(1)(A) (underline added). The Board calculates quantitative market dominance consistent with the plain meaning of the underlined phrase, solely for the transportation to which the rate applies. The underlined phrase also is precisely the same language that Congress used in 49 U.S.C. § 10707(b) to describe qualitative market dominance. Therefore, if the qualitative market dominance analysis covered "whole-route" transportation, there would be an unwarranted dichotomy between the qualitative and quantitative market dominance analyses. There is no basis to conclude that Congress intended this phrase to mean one thing when determining

quantitative market dominance and something completely different for qualitative market dominance.[10]

A further dichotomy would exist under 49 U.S.C. § 10701(d)(1), which states that, if a carrier possesses "market dominance over the transportation to which a particular rate applies, the rate established by such carrier for such transportation must be reasonable." (underline added) Here, as in 49 U.S.C. § 10707(b), Congress specifies that market dominance relates to "the transportation to which a particular rate applies." Thus, the statute requires that the rate reasonableness inquiry cover the same transportation and the same rate that was involved in the market dominance inquiry. That is, if a rate applies to transportation from A to B, the Board must evaluate both market dominance and rate reasonableness for the transportation from A to B. It cannot evaluate rate reasonableness for transportation from A to B that occurs under just the challenged rate, but market dominance for transportation from A to B to C that occurs under both the challenged rate and a connecting carrier's rate. This would create an illogical disconnect between the market dominance and rate reasonableness inquiries.

Furthermore, Congress has excluded contract rates and service from the Board's jurisdiction. Under 49 U.S.C. § 10709(c)(1), "[a] contract [for rail services], and transportation under such contract, shall not be subject to [Part A of 49 U.S.C. subtitle IV (the Board's enabling statutes concerning rail transportation)], and may not be subsequently challenged before the Board or in any court on the grounds that such contract violates a provision of [Part A of 49

[10] Furthermore, it would be highly impractical, if not impossible, for the Board to calculate quantitative market dominance for the "whole route" when the challenged rate applies only to one segment. The R/VC calculation would require evaluating the variable costs of non-party railroads, motor carriers, and water carriers that the shipper uses in combination with the challenged rail rate. Cf. TPI, slip op. at 17 (noting "the tremendous empirical difficulties of estimating the variable costs associated with a potential modal alternative").

U.S.C. subtitle IV]." This jurisdictional bar forms the underpinnings of the Board's "Bottleneck" doctrine:

> Plainly we are without rate reasonableness jurisdiction over the rates of any rail transportation provided by contract. Regulation of the entire through route—even if the contract rate were simply treated as a given that cannot be changed—would indirectly result in review of the contract rate, and Congress has declared the rates for that portion of the through-route service to be beyond our reasonableness jurisdiction.

Cent. Power & Light Co. v. S. Pac. Transp. Co. (Bottleneck I), 1 S.T.B. 1059, 1074 (1996), aff'd sub nom. MidAmerican Energy Co. v. STB, 169 F.3rd 1099 (8th Cir. 1999). Thus, because the connecting carriers on the joint-line case lanes provide their joint-line service under contracts with DuPont, the Board's market dominance analysis is limited to the NS rates and the NS transportation covered by those rates.

NS has attempted to circumvent this logic by alluding to outdated precedent that, in the "real world," shippers are only concerned with "the ultimate total costs of transportations as a whole—not the costs of individual segments." NS Reply II-B-66 (underline in original). This is a thinly-veiled allusion to the outdated principle expressed in Great Northern Railway v. Sullivan, 294 U.S. 458, 463 (1935), that "the shipper's only interest is that the charge shall be reasonable as a whole."[11] But, that principle is no longer the law.

As stated by the D.C. Circuit:

> The Great Northern holding—and the broader principle that the reasonableness of rates is to be assessed on a through basis—was based on an understanding that "[t]he shipper's only interest is that the charge shall be reasonable as a whole." This is no longer the case. By permitting a shipper to enter into contracts that are beyond review of the Board, the Staggers Act entitles a contracting shipper to—as FMC puts it—"the benefit of its bargain." Were its

[11] Although NS does not expressly cite to Great Northern, but instead relies upon the testimony of an economist, NS clearly is invoking the same principle.

> position to prevail, Union Pacific would be in a position to recover for itself the "benefit" of FMC's bargain with CSX, as it could set a rate that allowed it to obtain the difference between a reasonable through rate and the FMC-CSX contract price.

Union Pacific, 202 F.3d at342 (internal citations omitted; underline added). The foregoing rationale applies equally to the market dominance and rate reasonableness portions of a bottleneck rate challenge.

By requiring DuPont to prove market dominance for joint line movements based upon "whole-route" competition, NS seeks to immunize its rates from Board review whenever DuPont has successfully obtained a favorable contract for the transportation beyond the interchange point with NS. In other words, NS seeks to raise its rates so that it recovers for itself the benefits obtained by DuPont. DuPont has illustrated this problem at pages I-60 to -61 of its Rebuttal evidence. That example shows that NS could take for itself at least a portion of the competitive bargain negotiated by DuPont in its bottleneck contracts by increasing its rate up to the point where the through rail rate appears to be competitive with the alternative rate, thus immunizing its exercise of market power from challenge through the market dominance determination even before the Board can consider rate reasonableness.

As part of its Opening Evidence, DuPont showed that this is exactly what NS is trying to do. The history of NS rates and connecting railroad rates, for all but a handful of issue movements, showed that NS's rates on joint-line movements increased dramatically (generally high double digits or even triple digits in cumulative percent gain) over just two years, from 2009-11, while the connecting carriers' rates have gone up only slightly (single digits or low double digits in cumulative percent gain) or even decreased in some lanes. See DuPont Op. Ex. II-B-3; Dup. Op. Workpaper "Case Lane Rate History." This has allowed NS to create the

illusion of effective competition after NS already has exercised its market power to take for itself the benefits of DuPont's negotiated contract bargains.

The Board itself has acknowledged this ability of bottleneck rail carriers in joint line movements to seize the benefits of competition on the connecting segment for itself under the "one lump" theory. W. Res., Inc. v. STB., 109 F.3d 782, 784 (D.C. Cir. 1997) (the one-lump theory is "the proposition that there is only one monopoly rent to be gained from the sale of an end product") (internal quotation omitted). See also Kansas City S.—Control—The Kansas City S. Ry., 7 S.T.B. 933, 949 (2004). NS is attempting to force a quasi-vertical integration with the connecting carrier contract transportation service provided to DuPont and then take monopoly profits for the entire through route.

This is what the court in Union Pacific said the carrier may not do. Like UP before it, NS seeks to take for itself the benefit of DuPont's contractual bargain with non-party railroads. By claiming lack of market dominance based upon whole-route alternatives, NS seeks to completely insulate its rate from Board review; thus, preserving for itself all the benefits of competition and contract service on the non-bottleneck segment by raising the NS bottleneck rate. Cf. FMC Wyo. v. Union Pac. R.R. (FMC), 2 S.T.B. 766, 771 (1997) ("there are substantial benefits that derive from a transportation contract that another carrier should not be able to negate").

This would eviscerate the Bottleneck contract exception. Central Power & Light Co. v. Southern Pacific Transportation Co. (Bottleneck II), 2 S.T.B. 235, 245 (1997) ("because we lack jurisdiction to review the reasonableness of the terms associated with the portion of the movement covered by the [non-bottleneck] contract, the rate provided by the bottleneck carrier in these circumstances…would be separately challengeable on rate reasonableness grounds"). See also MidAmerican Energy Co. v. STB, 169 F.3d 1099, 1107 (8th Cir. 1999) (court states that

"the Board's decisions explicitly provide…three potential avenues of recourse" including the option for bottleneck shippers to "obtain contracts for service over the competitive segments of rail"). NS's position would impermissibly give NS the differential pricing profits for an entire movement consisting of a captive tariff rate segment and a competitive contract segment, thus erasing the benefits of the Bottleneck contract exception. Cf. Bottleneck II, 2 S.T.B. at 246 (noting that the AAR proposal would "impermissibly allow the bottleneck carriers to avoid competition").

At the end of the day, the Board already has considered and rejected the NS arguments in Minn. Power, Inc. v. Duluth, Missabe & Iron Range Ry. (DMIR), 4 S.T.B. 64 (1999), on reconsideration, 4 S.T.B. 288 (1999). DuPont's full discussion of that decision clearly lays this out. Dup. Op. Narr. I-12 to -14; Dup. Reb. I-69 to -71. The lengthy NS Reply argument is a multi-pronged attempt to avoid that decision by, first, attempting to distinguish it upon the facts; then, expressing skepticism that the Board meant what it said; and finally, urging the Board to overturn the decision. The Board got it right in DMIR, because that decision is directly based on the statutory language which the Board may not lawfully ignore in this or any other case.

II. THE CHALLENGED RATES ARE UNREASONABLE.

Proper application of the SAC constraint, consistent with Board precedent and real-world practices, demonstrates that the challenged tariff rates are unreasonably high, in violation of 49 U.S.C. § 10701, and that DuPont is entitled to the prescription of lawful rates pursuant to 49 U.S.C. § 10704 and an award of reparations in accordance with 49 U.S.C. § 11704(b). DuPont has presented its SAC evidence in Part III of its Opening and Rebuttal evidence, including the accompanying exhibits and work papers. In this portion of its Brief, DuPont addresses the principal disputes between the parties with respect to SAC, and the proper resolution of those disputes.

A. DuPont Has Developed The Superior Operating Plan Consistent With Board Precedent.

DuPont developed the DRR's operating plan in the same manner as the parties, complainants and railroads alike, have done in every SAC case decided by the Board over the past decade.[12] Those operating plans were based on the waybill, car-event, and train-event data produced by the railroads in discovery. As in past cases, the waybill and car-event data have been used to select the SARR traffic and to calculate revenue divisions. Also as in past cases, train-event data have been used to model the SARR's operations and to develop the operating plan. In other words, DuPont developed its operating plan by operating the same trains as NS, in the same fashion, and with identical consists and routes (except for a few internally rerouted trains), effectively adopting NS's real-world trip plans, car-blocking plans, and train-service plans for the DRR.

DuPont's task, however, was made all the more difficult by multiple flaws and deficiencies in NS's traffic data. Those difficulties are well-chronicled in DuPont Opening Exhibits III-A-2, III-A-3, and III-C-1, and in Rebuttal Exhibit III-C-1. Although NS does not deny the existence of those flaws and deficiencies, it focuses upon each one individually in an attempt to diminish the real magnitude of the challenges faced by DuPont. But NS's critique vastly understates the problem: not only were there flaws in each data set, but the flaws in the data sets were not consistent, thus creating enormous complications and contradictions. They placed DuPont in the position of having to make judgment calls regarding which data set was "more correct" than the other when the data contained in them did not agree. Now NS seeks to

[12] Dup. Reb., at III-C-66.

exploit those complications and contradictions by alleging that DuPont's use of NS's own flawed and deficient data has resulted in a fatally flawed operating plan. NS may not do that.[13]

Although NS spends pages upon pages of its Reply explaining how DuPont allegedly could have compensated for these data deficiencies (largely by developing surrogate data) or could have found the missing data in other sources, NS does not attempt to "correct" or "supplement" DuPont's operating plan for the DRR by following its own advice to DuPont. Instead, NS proposes an entirely new operating plan based upon a proprietary software program, MultiRail, that is a complete departure from the tried and true methodology of prior SAC cases. Whereas the parties in previous SAC cases have modeled the SARR's operations based upon real-world trains identified from the defendant's train-event data, NS disregards actual train- and car-event data in favor of aggregated waybill data for individual movements (data that is essentially devoid of routing information identifying intermediate stations through which the traffic moved in the real world). NS then proceeds to create new blocks of car, uses those blocks to build new trains that operate over different routes, and finally models the operation of those fictional trains that NS's experts have completely untethered from NS's real-world operations. In other words, NS rejected its own existing operations, which are based upon the experience of NS's own operating personnel, in favor of a brand new, made-for-litigation operating plan.

DuPont has continued to adhere to the Board's accepted methodology for developing the DRR's operating plan in Rebuttal based upon NS's real-world operations for the same traffic group. DuPont's use of the same methodology as prior SAC cases is far superior to NS's untested MultiRail methodology, which is completely untethered from reality. When developing

[13] See WFA/Basin I, slip op. at 101-02 (Complainant reasonably relied on evidence produced by defendant, when two discovery documents contained different information and complainant had to choose between them with no information from defendant indicating which was more appropriate).

an operating plan, a simulation or model will be no substitute for the decades of experience and fine tuning employed by NS's own operating experts. For example, there are no factors in MultiRail to account for Amtrak curfews, train routes requiring a turn move, special case customers, rebalancing of locomotives, maintenance outages, or any of the thousands of minute details that real-world experts encounter—and plan for—during NS's day-to-day operations. By emulating NS's own operations, DuPont has developed an operating plan that considers all of those details. Therefore, DuPont's operating plan is superior in both realism and detail to NS's MultiRail-derived operating plan.

Although DuPont rejects the vast majority of NS's criticisms, it has accepted some legitimate claims and modified its operating plan accordingly, which is what NS could and should have done on Reply. The Board, therefore, should adopt DuPont's Rebuttal operating plan, based upon real-world NS operations, over NS's unsupported and unrealistic attempt to create a new operating plan from scratch using MultiRail. DuPont's final position on all aspects of the DRR's operating plan is addressed in Part III-C of its Rebuttal Evidence.

1. DuPont's operating plan, which was developed using established procedures, is feasible, supported and realistic.

As the parties in previous SAC cases have done, DuPont used NS train-event data to identify all of the trains that NS uses to serve the DRR's traffic group over the constructed facilities. DuPont then modeled those trains in its RTC simulation. NS has criticized this approach, however, alleging that DuPont has omitted over 60,000 trains from its operating plan and has failed to accurately and completely model local train operations. According to NS, its train-event data is not an appropriate source for developing the DRR's operating plan because it does not contain critical information. Indeed, NS goes to great lengths to discredit the reliability of its own train-event data—for the first time—in Reply. But if the train-event data is truly as

unreliable and inadequate as NS describes it, the production of such data without disclosing its deficiencies and errors is a textbook case of "sand-bagging," which the Board does not permit.

The Board has long recognized that the "defendant's traffic tapes are a critical component of the Board's SAC analysis . . . ."[14] Furthermore, the Board repeatedly has held that "the parties are entitled to reasonably rely on evidence the other side supplied in discovery, and that defendants cannot impeach . . . evidence with information defendants failed to produce in discovery."[15] Therefore, if a defendant fails to identify flawed, deficient, or incomplete traffic data during discovery, it cannot subsequently cite to those problems to criticize the complainant's use of that data.[16] Even when a complainant might have discovered the problem based upon inconsistencies with other information produced by the defendant, the complainant is not obligated to verify that all materials produced in discovery are in agreement, or to verify that the data is correct and supported.[17] Therefore, DuPont reasonably relied upon the NS traffic data to develop a feasible, realistic, and supported operating plan based upon the best information provided by NS in discovery.

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[14] Duke Energy Corp. v. CSX Transportation Inc. (Duke/CSXT), 7 S.T.B. 402, 451 (2004).

[15] Ariz. Elec. Power Coop. v. BNSF Ry.(AEPCO 2011), STB Docket No. NOR 42113, slip op. at 103 (served Nov. 22, 2011); see also AEP Tex. N. Co. v. BNSF Ry. (AEP Texas), STB Docket No. 41191 (Sub-No. 1), slip op. at 80-81, 83 (served Sept. 10, 2007); Pub. Serv. Co. of Colo. v. Burlington N. & Santa Fe Ry. (PSCo/Xcel), 7 S.T.B. 589, 630-31, 683 (2004); WFA/Basin I, slip op. at 101-02.

[16] Cf. Duke/CSXT, 7 S.T.B. at 450-51 (because defendant identified a problem with its traffic data during discovery and provided supplemental information to address the problem, complainant could not ignore the matter); FMC, 4 S.T.B. at 726-27 (rejecting defendant's additional adjustments to traffic data after discovery); Wis. Power & Light Co. v. Union Pac. R.R. (Wisconsin P&L), 5 STB 955, 975 (2001) (same).

[17] See WFA/Basin I, slip op. at 102, 111 n.395.

a. DuPont has modeled all of the trains that NS's own data indicates are needed to handle the SARR traffic.

According to NS, one of the most serious deficiencies in DuPont's operating plan is the failure to capture 61,610 trains that NS alleges are needed to provide complete origin to destination service for the DRR's traffic group. But DuPont did not "fail" to capture these trains. Rather, the NS train-event data does not indicate that those trains actually move over the DRR and/or handle the DRR's traffic group. Of the 61,610 allegedly missing trains, 41,702, or 68%, were excluded by DuPont, even though they appear in the NS train-event data, because the data does not show any train events on the lines replicated by the DRR.[18] Another 3,296 trains also appear in the train-event data but were excluded because they are Amtrak, haulage, commuter, and foreign trains that do not handle any of the DRR traffic.[19] Another 5,306 allegedly missing trains do not appear in the train-event data at all.[20] Finally, 4,421 trains in the train-event data show just one train event on-SARR, which indicates that the train may cross the SARR, or use a yard along the SARR route, but does not move over the SARR.[21] After thoroughly reviewing NS's criticism, DuPont has agreed that it inadvertently omitted just 6,885 of the more than 60,000 allegedly missing trains, and DuPont has added those trains on Rebuttal.[22]

NS nevertheless claims that, despite what its train-event data shows, the trains omitted by DuPont are needed to complete transportation for the DRR's traffic group. NS claims that, if DuPont had only used the car-event data instead of the train-event data, it would have identified

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[18] Dup. Reb., at III-C-24.

[19] Dup. Reb., at III-C-25. Although NS agrees that DuPont properly excluded those train types, NS inexplicably includes them in its missing train list. NS Reply, at III-C-12 to -13.

[20] Dup. Reb., at III-C-25.

[21] Dup. Reb., at III-C-25 to -26.

[22] Dup. Reb., at III-C-26.

most of the missing trains.[23] But NS cannot impeach its own data in this way. More importantly, the car-event data is not granular enough to be used to determine the routing of individual trains. That is, the reporting of events is so infrequent (and the miles between reported events is often so great) that car-event data is often deficient for purposes of determining on-SARR train routing. Of the 185,568 trains included in DuPont's opening train lists, only 182,296 trains show at least one event on SARR in the NS car-event data.[24] Thus, to the extent that there is any shortage of trains in the DuPont operating plan, it is due to flaws in the NS train-event data, not to DuPont's reliance on the wrong data set.

NS effectively concedes that both its train- and car-event data are flawed or incomplete when it adds 2,081 trains that are not captured at on-SARR locations by either database.[25] NS uses other sources, including train schedules and train lists, to identify these allegedly missing trains. But without any evidence that these trains actually moved over NS, much less the DRR, this is just supposition. DuPont is entitled to rely upon actual train-event data that shows where trains actually moved, not on a piece of paper that merely states where a train is scheduled to move.

NS suggests that DuPont should have used train-event data and car-event data and train schedules to identify all of the necessary trains. DuPont did use the car-event data to supplement

[23] Reply Ex. III-C-7, at 21. Specifically, NS refers to the "DuPont Car/Train Database," which was extracted from the car-event data. Elsewhere, NS incorrectly asserts that the "DuPont Car/Train Database" "linked waybill, train, and car movement data" (id. at 15), when in fact it does not link train-event data. Dup. Reb. Ex. III-C-1, at 7.

[24] Dup. Reb., at III-C-23 to -26. Trains with only a single on-SARR point may cross the SARR, or use a yard along the SARR route, but do not move over the SARR, and thus should not be included in the SARR operating plan. Thus, DuPont's inclusion of such trains in this comparison is conservatively over inclusive.

[25] Dup. Reb., at III-C-26.

the train-event data whenever possible.[26] But there are substantial inconsistencies between the train and car-event-data sets that indicate both cannot be correct.[27] To simply combine two sets of flawed and conflicting data would compound the effects of the flaws that exist in each of them with no purpose other than to increase the DRR train counts. The inconsistencies between the NS train and car event data required DuPont to choose between the conflicting data. Therefore, wherever there was a conflict between the car- and train-event data, DuPont gave precedence to the train-event data which, consistent with the higher level of granularity included in that data set, and the methodology used in past SAC cases, is the logical primary database for modeling train movements in the RTC Model.[28]

NS does not make any attempt to explain why so many of the allegedly missing local trains display none or just one on-SARR point in the train-event data.[29] Nor does NS explain why DuPont should have known that it could not rely upon the train-event data to identify trains that travel over the SARR. Most significantly, NS does not offer any justification for failing to disclose this alleged data deficiency to DuPont during discovery. Such nondisclosure is

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[26] Dup. Reb. Ex. III-C-1, at 9.

[27] See, e.g., id. at 19-34.

[28] Dup. Reb. Ex. III-C-1, at 9-10, 35.

[29] In another pending case, SunBelt Chlor Alkali Partnership v. Norfolk Southern Railway, STB Docket No. NOR 42130, NS has proffered an explanation – one that it did not offer in this proceeding -- as to why so many local trains would show only a single on-SARR point in the train event records. According to NS, "local trains frequently work in and around a single operating station (which, for consistency, is identified in the NS train-event data by a single milepost designation) and travel only a few miles." NS/SunBelt Reply, at III-C-25 (filed Jan. 7, 2013) (underline added). That statement indicates that NS knew but failed to disclose this fact about its own data during discovery in this case, or even in its Reply evidence. Furthermore, because the NS traffic data does not support NS's claim of missing trains, NS may not attempt to impeach its own data produced in discovery and reasonably relied upon by the complainant. See AEP Texas, at 80-81 ("AEP Texas reasonably relied on the information it received from BNSF in developing its evidence, and BNSF may not impeach that evidence with information it failed to produce during discovery.").

particularly egregious because NS should have known that DuPont, like all complainants before it, would rely extensively upon train-event data to develop its operating plan. The NS consultants in this case who prepared the NS traffic data for production to DuPont are the very same consultants who have represented the railroads in all prior SAC cases, in which both parties used the same process and data sources to develop their operating plans. It is incumbent upon NS, not DuPont, to ensure the reliability of its own data and to disclose known errors, flaws and deficiencies in that data.

b. DuPont has properly modeled local train service based upon the NS traffic data.

The NS allegations that the DRR does not provide local service are exaggerated or inaccurate. Those allegations are based on claims that DuPont omitted trains needed to provide local service or failed to accurately model the local trains that it did include so as to allow for the origination and delivery of traffic along the DRR route.

The former allegation is the same argument addressed in the preceding section. DuPont included every local train that could be identified as moving over the DRR in the NS train-event data. DuPont has agreed that 6,855 local and through trains were omitted from its opening evidence, and has corrected that omission in rebuttal. DuPont, however, rejects all of the other trains that NS alleges are missing because there is no evidence in the NS train-event data that those trains actually moved over the DRR. DuPont is entitled to rely upon the data produced by NS in discovery, when that data was produced without any qualifications from NS as to its accuracy. Therefore, if any local trains are missing, it is due to flaws in the NS data, not DuPont errors.

The NS allegations of incomplete local service also are meritless. NS first claims that DuPont failed to stop local trains in "turn" service at customer locations. Although this

statement is accurate, DuPont was unable to do so because of limitations in the NS data. However, based upon a reevaluation of certain discovery data using the NS reply evidence as a reference, DuPont has stopped these trains on rebuttal.[30] NS also claims that DuPont did not change the consists of local trains in "straightaway" service at each stop. Again, while true, this was also due to NS data deficiencies. On rebuttal, DuPont has modified the consist changes at each stop, although DuPont still has significant reservations about the accuracy of the NS data for this purpose. Ultimately, the consist changes have very little effect on the RTC Model, which is the primary reason for showing consist changes in the SAC analysis.[31]

c. DuPont has properly accounted for reciprocal obligations with connecting carriers.

NS argues that DuPont's operating plan does not account for the DRR's reciprocal obligations to connecting carriers consistent with NS's joint use and interline agreements with those carriers. In some instances, DuPont has agreed with NS and made appropriate adjustments on rebuttal.[32] But most of NS's criticisms are simply wrong.

DuPont has agreed that its opening evidence operating plan did not account for the classification of rail cars in many of the DRR's yards. In rebuttal, DuPont has addressed this issue, except that DuPont has rejected NS's car counts because they are based on unsupported data generated through the MultiRail software, and the various sources that NS has provided in response to DuPont's requests for supporting data contain three inconsistent sets of car counts.

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[30] Dup. Reb., at III-C-61 to -62.

[31] Id.

[32] DuPont has eliminated run-through power for those agreements that prohibit it. Dup. Reb., at III-C-29 to -30.

DuPont has developed classification car counts from the NS car-event data using the same methodology described by NS for its car counts.[33]

DuPont has rejected NS's criticism of distributive power ("DP"). DP is not prohibited by NS's existing run-through power agreements and the fact that NS does not use DP in all of its run-through trains does not prohibit the DRR from doing so. Furthermore, the advantages of DP are reflected in current trends toward greater use by all carriers, which will be even more pervasive by the peak period in 2019.[34]

NS wrongly claims that DuPont has assumed that locomotive fueling in interline service would always be the responsibility of connecting carriers. DuPont has shown that nearly every train that DRR provides in interchange will have enough fuel to continue an additional 1,622 miles, which is well within the requirements of NS's existing agreements with connecting carriers.[35]

DuPont has rejected NS's assertion that the DRR must provide car repair facilities in order to make running repairs on foreign cars in compliance with the AAR interchange rules. But the Rules also require the car owner to pay for the repairs. Therefore, it is improper to impose the costs of car repair facilities on the DRR without also including the corresponding revenue.[36]

d. DuPont's operating plan properly handles TIH shipments.

NS poses three criticisms of how the DuPont operating plan handles TIH shipments. DuPont accepts the NS criticism that TIH trains must be limited to 50 mph, and has made that

[33] Dup. Reb., at III-C-28 to -29, -122 to -128.

[34] Dup. Reb., at III-C-30.

[35] Dup. Reb., at III-C-31 to -32.

[36] Dup. Reb., at III-C-32 to -33, III-F-125 to -126.

adjustment to its rebuttal RTC simulation. DuPont, however, rejects the NS criticisms that the DRR cannot track TIH shipments and does not provide the personnel needed to comply with regulations and best practices. The DRR can track and trace TIH shipments both through its PTC communications system and RMI Transportation Management System. The DRR's Manager – Environmental, aided by regional transportation officers and managers are responsible for compliance with TIH rules. NS has unnecessarily attempted to duplicate personnel by creating a separate department for these functions.[37]

e. The DRR's yards are properly designed and sized.

NS is particularly critical of the DRR's yard and network configuration, claiming that "the location, sizing, and configuration of the DRR yards posited by DuPont were based entirely upon a series of unsupported mathematical calculations that are untethered to the workload that the DRR actually would have to perform at each facility."[38] NS has criticized DuPont for not providing any "hump" yards, for under-sizing medium and large yards, and including small yards where no yard at all is necessary.[39] DuPont has accepted NS's claim that DuPont omitted classification switching for carload traffic moving through the operating yards, and corrected that omission in its rebuttal yard sizes, but DuPont rejects the classification car counts used by NS.[40] DuPont rejects all of NS's other criticisms of its yard designs and capacity.

Despite the intense criticism in the NS narrative, the yards in the NS RTC Model look a lot like those in DuPont's evidence.[41] Where NS claims that DuPont's yards are insufficient, in

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[37] Dup. Reb., at III-C-33 to -35.

[38] NS Reply, at III-B-13.

[39] NS Reply, at III-B-13 to -14; III-C-36 to -43.

[40] Dup. Reb., at III-C-121 to -124, -126 to -128.

[41] Dup. Reb., at III-C-117 to -120.

many cases NS's own RTC simulation actually modeled the smaller DuPont yards, not the larger NS yards, and found the DuPont yards to be sufficient. Where NS claimed to eliminate unnecessary small yards, its RTC Model fully uses them. These inconsistencies between NS's narrative, cost calculations, and RTC model are unexplained.

DuPont rejects NS's inclusion of "hump" yards on the DRR.[42] Based upon its rebuttal car classification counts for the DRR, DuPont has determined that, in the Base Year, only one yard will exceed NS's own proposed threshold of 900 cars to justify a hump yard, and then only just barely. Therefore, DuPont decided that the DRR did not require a hump yard. Although car counts will increase over the ten year DCF period, it still would not be proper to build hump yards in the base year. Nor would it be proper to build hump yards later in the DCF model because that would overstate the DRR's costs. Specifically, the model would double-count expenditures by adding the hump yard capital investment when warranted by the volume of cars, without reducing yard crew assignments to reflect the operational savings. Therefore, DuPont has opted to provide adequate yard crews to handle classification in all yards on the DRR, without the use of hump yards, and grow these crews to provide classification service over the life of the DCF model.[43]

f. The NS criticisms of DuPont's RTC Model are minor or inaccurate.

Although NS has criticized various aspects of DuPont's RTC simulation, most of those criticisms are minor or inaccurate. DuPont acknowledges the grade errors identified by NS and corrected them on rebuttal, but notes that the errors were so minor that they caused only 14 of

[42] Dup. Reb., at III-C-127 to -128.

[43] Although the "bowl" hump yard configuration submitted by NS in its Reply is feasible and realistic, NS did not use that design to calculate track feet. Instead, NS used a "trapezoid" flat yard layout that significantly overstates the classification track miles required in each of NS's hump yards. The trapezoid design actually costed by NS is unrealistic and infeasible for use with the hump yards NS has proposed. Dup. Reb., at III-C-125 to -126.

7,210 trains to stall, which was easily resolved by adding power to those trains. Moreover, most of the grade errors were from erroneous NS RTC models that NS itself produced in discovery.[44] DuPont also agrees that it understated the number of track outages, and on rebuttal, DuPont has actually added more outages than NS did in its reply.[45] DuPont also agrees with NS's enforcement of the Amtrak curfew in the RTC Model.[46] In response to NS criticism, DuPont has added stops for local trains operating in "turn" service and reflected consist changes for both general freight and local trains.[47] By modeling consist changes, DuPont also has captured light engine movements.[48] Finally, DuPont accepts NS's adjustments to routes in the Chicago area.[49]

DuPont, however, rejects the following two NS criticisms of the RTC Model.[50] First, there is no need to separately model hi-rail movements on the DRR. Hi-rail vehicles are accounted for in the maintenance outages that DuPont included in the RTC simulation where the hi-rail movements were due to track maintenance. Where hi-rail movements are not part of a maintenance outage, it is common industry practice for the hi-rail vehicle to trail an operating train using that train's clearance or warrant. Furthermore, unlike maintenance outages, railroads time and perform their inspections to follow the prevailing traffic.

Second, DuPont rejects the inclusion of randomly-generated foreign trains in the RTC Model as an inappropriate and inaccurate method to simulate delays encountered by foreign

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[44] Dup. Reb., at III-C-54 to -56.

[45] Dup. Reb., at III-C-56 to -58.

[46] Dup. Reb., at III-C-58.

[47] Dup. Reb., at III-C-61 to -62.

[48] Dup. Reb., at III-C-60.

[49] Dup. Reb., at III-C-59.

[50] Dup. Reb., at III-C-60 to -61.

trains.[51] Because NS's own evidence indicates when and where delays caused by foreign trains actually occurred in the real world, DuPont used those delays in the RTC Model rather than randomly-generated imaginary trains. NS compounds this error by giving the foreign trains priority over most DRR trains.

2. NS's MultiRail-based operating plan is unsupported, infeasible, unrealistic, and unnecessary, and it violates fundamental SAC principles.

Never before has a party to a decided SAC case needed to resort to third-party software, such as MultiRail, to build the trains that operate over the SARR.[52] They have always been able to identify the necessary trains from the defendant's train-event data and to model those trains in a rail-network simulation (*e.g.*, the RTC Model). That is precisely what DuPont has done in this proceeding. NS, however, has disavowed its own train-event data and claimed that DuPont's reliance on that data was misplaced. Instead, NS has taken a brand new and untested approach to developing an operating plan by building all-new fictional trains to handle the DRR's traffic group using the MultiRail software created by the Oliver Wyman consulting group.

Unlike the tried and accepted methodology used by DuPont to develop its operating plan, the NS approach is completely untethered from reality.[53] For that reason alone, the Board should reject NS's operating plan. However, there are ample additional reasons, including the fact that NS's MultiRail evidence is unsupported, infeasible, and unrealistic, and it violates SAC

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[51] Dup. Reb., at III-C-58 to -59.

[52] In Seminole Electric Cooperative v. CSX Transportation, Inc., STB Docket No. 42110, the defendant also chose to use MultiRail. That case settled, however, before the Board issued a final decision.

[53] NS also does not use MultiRail in the real world to block and route traffic across its system, but instead has developed a proprietary model for this purpose. If real-world railroads use proprietary models for this purpose, it would be a step backwards to use MultiRail when the goal is to develop an operating plan for a least cost, most efficient SARR. Dup. Reb., at III-C-84 to -85.

principles. Furthermore, NS's use of MultiRail adds unnecessary cost and complexity to the SAC analysis while not providing any advantage over the established methodology used by DuPont.

a. The MultiRail approach is untethered from reality and contrary to SAC principles.

The Board has repeatedly held that:

> A core SAC principle is that the SARR must meet the transportation needs of the traffic it would serve. Thus, the proponent of a SARR may not assume a changed level of service to suit its proposed configuration and operating plan, unless it also presents evidence showing that the affected shippers, connecting carriers, and receivers would not object.[54]

Despite this clear warning, this is exactly what the NS operating plan does. The NS operating plan provides a completely different level of service through the creation of new trains with new consists and routes that have no connection to real-world operations. Yet, NS presents no evidence that the affected shippers, connecting carriers, and receivers would not object. Indeed, the MultiRail approach is so divorced from reality that there is no way for NS even to demonstrate that its operating plan provides service that is equivalent to NS real-world operations.[55] In contrast, because DuPont's operating plan is built around existing NS trains, consists and routes, DuPont is able to demonstrate that it provides the same level of service, as measured by average train speeds, that NS provides today.[56]

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[54] Carolina Power & Light Co. v. Norfolk S. Ry. (CP&L), 7 S.T.B. 235, 255 (2003), citing W. Tex. Utils. Co. v. Burlington N. R.R. (WTU), 1 S.T.B 638, 667 (1996), aff'd sub nom. Burlington N. R.R. v. STB, 114 F.3d 206 (D.C. Cir. 1997); accord FMC 4 S.T.B. at 736; McCarty Farms, Inc. v. Burlington N., Inc.(McCarty Farms), 2 S.T.B. 460, 476 (1997).

[55] Dup. Reb., at III-C-98 to -99.

[56] Dup. Reb., at III-C-62 to -65.

The MultiRail process unavoidably distances its output from NS's real-world operations. MultiRail has four main inputs: (1) the network of rail lines; (2) the SARR traffic group; (3) the blocks to which the carload traffic is assigned; and (4) the trains available to move the various blocks of traffic. In addition, there are numerous user-defined adjustments and assumptions within the model that determine how the data in these four inputs is processed. Notably, all four of these inputs also are inherent in DuPont's operating plan, either explicitly or implicitly through DuPont's use of actual NS traffic data. Therefore, the initial building blocks for NS's MultiRail-based plan are no different from DuPont's traditional plan.[57] From that point, however, MultiRail requires adjustments that deviate further and further from NS's real-world operations with each step.

First, although NS begins with the same carload traffic from the same waybill file as DuPont, it must convert that data into a format required by MultiRail to function properly. This conversion required NS to alter the origin and/or destination station for 39% of the merchandise carload traffic data by way of terminal substitutions, which began the process of divorcing the MultiRail operating plan from NS's real-world operations. It is this mismatch that also makes it nearly impossible for NS to demonstrate that the MultiRail operating plan provides rail service that is equivalent to actual NS service.[58]

Second, although NS begins with a real-world carload-blocking plan, that plan is for traffic moving over its system in April 2012, which NS must modify for its 2010 traffic needs. These modifications add another layer of separation from NS's actual operations in 2010.[59]

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[57] Dup. Reb., at III-C-97.

[58] Dup. Reb., at III-C-97 to -99.

[59] Dup. Reb., at III-C-99.

Third, MultiRail assigns each carload to the foregoing traffic blocks. The process is manipulated by user assumptions. The ultimate block assignments made by MultiRail have no relation to real-world block assignments.[60]

Finally, NS must manually assign each car block to a train.[61] Although NS uses real-world train schedules as a starting point, there is no link between the blocks that NS assigns to each train and the blocks that actually move in those trains. DuPont has demonstrated that this process frequently resulted in extremely circuitous routes and external reroutes.[62]

Ultimately, MultiRail is an unnecessary tool that only serves to further complicate an already inherently complicated SAC process by creating made-for-litigation data where actual data already exists. Although MultiRail nominally starts with actual traffic data, it morphs that data into daily average statistics to be moved in generic blocks on trains with no actual dates or operations, instead of using the real movement and train data that already exists. NS started with actual traffic data, and altered it to make it compatible with MultiRail. NS started with actual NS blocking plans, manipulated them for use in MultiRail, and assigned cars to blocks without any consideration of how those cars move in the real world. NS started with actual NS train schedules and substituted the blocks that actually moved on them with other blocks based on the judgment of NS's witness, effectively substituting that witness's judgment for the collective judgment of NS's actual operations planning staff.

This fundamental flaw in NS's operating plan flies directly in the face of Board precedent that abjures litigants to base their operating plan on real-world operations. For example, in FMC, the agency rejected a shipper's operating plan because it did not utilize actual railroad practices

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[60] Dup. Reb., at III-C-99 to -100.

[61] Dup. Reb., at III-C-103 to -104.

[62] Dup. Reb., at III-C-100 to -103.

regarding the length of trains, and consolidated multiple car shipments into unit train shipments.[63] Similarly, in Duke/CSXT, the Board rejected the shipper's operating plan that was "different from how CSXT conducts its coal-hauling operations in the Central Appalachian Region . . ." and because it did not provide the same level of service that the incumbent provided to its customers.[64] For the reasons exhaustively set out in DuPont's Rebuttal, the exact same situation exists with respect to NS's MultiRail-based operating plan.[65]

Finally, by untethering the operating plan for the DRR from NS's own operations, NS has made it impossible for the Board to benchmark that operating plan against real-world conditions. If the Board accepts NS's gambit, which is directly contrary to the Board's consistent precedent, it will become a prisoner of evidence developed by computer software and dueling experts, that is "untethered" from real-world railway operations, and thus without any objective means to assess what is or is not realistic.

b. NS's criticisms of DuPont are a smokescreen to conceal the deficiencies in its own traffic data and to justify its unprecedented MultiRail-based approach to developing the DRR operating plan.

NS has not offered an explanation as to why it deviated from the methodology used by previous SAC parties to develop operating plans and, instead, chose to proceed down the MultiRail path. After claiming that DuPont used the wrong data source and asserting that every one of the trains that DuPont missed could be found in the car-event data,[66] along with all of the other information needed to model local-train service,[67] NS should have had all the information

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[63] FMC, 4 S.T.B. at 736-737.

[64] Duke/CSXT, 4 S.T.B. at 426.

[65] Dup. Reb., at III-C-65 to -108.

[66] NS Reply, at III-C-30 to -31, -61.

[67] NS Reply, at III-C-32 to -33, -35 to -36, -61,-64, -66.

it needed to correct the alleged deficiencies in DuPont's operating plan. Since DuPont's operating plan was based upon NS's real-world operations, if NS believed that the DuPont plan failed to provide the service that NS provides in the real-world, it could have fixed the alleged flaws without resorting to an operating plan utterly divorced from NS's own operations. By adding all of the alleged missing trains and modeling local-train service in accordance with its own critique, NS should have been able to develop a "corrected" operating plan using the same established methodology that DuPont used. But instead, NS summarily concluded that DuPont's operating plan was "irreparably deficient," and that "[r]ather than attempting to modify or supplement that plan, NS developed, from the ground up, a complete Operating Plan that is capable of meeting the service requirements of the DRR's customers."[68]

NS does not explain why DuPont's operating plan is irreparably deficient. Although NS generally argues that DuPont cannot model a carload railroad using train-event data, this is just another smokescreen in NS's attempt to avoid the use of its own train-event data and to persuade the Board to use its MultiRail-based operating plan. If all the trains are captured in the NS traffic data, then so must all the individual cars that moved in those trains (i.e., the NS train-event data are also "built from the ground up"). Nevertheless, NS creates the false impression that a carload operating plan requires the preparation and development of individual trip plans, car blocking plans, and train service plans <u>from the ground up</u>, and that DuPont's failure to do so was fatal.

NS also suggests that a trip plan is essential in order to satisfy customer requirements.[69] This claim is a red-herring, however, because the mere preparation of a trip plan says absolutely nothing about whether the plan satisfies the customer's requirements. That assessment still requires some benchmark comparison with real-world service.

[68] NS Reply, at III-C-155.

[69] NS Reply, at III-C-53, -56.

Furthermore, the fact that DuPont modeled trains from the NS train-event data does not mean that the DRR lacks trip plans, car-blocking plans, or train-service plans. It simply means that the DRR has adopted the same trip plans, the same car-blocking plans, and the same train-service plans as the real-world NS.[70] NS's attempt to create new plans is an unnecessary reinvention of the wheel that removes the NS operating plan several steps from reality.[71] Moreover, by operating the same trains as the real-world NS, DuPont can compare the DRR's average train speeds against NS reported average train speeds to determine if the DRR provides an equivalent level of service.[72] NS cannot make a similar comparison, because it has completely untethered its operating plan from the real world.[73]

Even though NS failed to explain why it rejected the only proven methodology for developing operating plans in favor of its new and untested MultiRail-based methodology, several explanations are quite obvious. First, as described above, all of the allegedly missing trains could not in fact be found in the car-event data, and there were significant conflicts between the train- and car-event data that could not be reconciled. Consequently, if NS had tried to rely upon that data, it would have had to concede that its data is flawed and incomplete and its criticism of DuPont would be exposed for the smokescreen that it is. Second, NS could not get the SAC answer it wanted, *i.e.* the stand-alone cost greater than stand-alone revenues, simply by correcting for DuPont's alleged errors. Therefore, in order to increase its train count to desired levels, NS needed to untether the DRR traffic from NS's real-world trains, which it could only

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[70] Dup. Reb., at III-C-9, -70 to -71.

[71] Because MultiRail substitutes the routes that it generates for NS's real-world routes, it distorts the SAC analysis by creating off-SARR reroutes and failing to reconcile off-SARR routing with NS's actual off-SARR operations. Ironically, NS has fallen into the very same trap that it warned against during the discovery phase of this proceeding. See Dup. Reb., at III-C-71 to -73.

[72] Dup. Reb., at III-C-64.

[73] Dup. Reb., at III-C-98 to -99.

do by completely starting over. In summary, NS used the overhyped deficiencies in the DuPont operating plan both as a smokescreen to conceal the inadequacies in its own data production to DuPont and as an excuse to discard DuPont's operating plan altogether in order to start fresh with a process that enabled it to better manipulate the final answer.[74]

c. NS's MultiRail-based operating plan is unsupported.

The Board should reject NS's operating plan evidence as unsupported, because NS developed the foundation of its operating plan using the MultiRail computer program; NS has not submitted MultiRail as part of its evidence; and without the MultiRail program, identifying the NS assumptions, modifications, and program overrides that influence the MultiRail outputs is not possible. Thus, by presenting its operating evidence without the MultiRail program or any significant documentation on its algorithms, NS has made it impossible for DuPont or the Board both to verify that NS's operating plan evidence is supported and to restate the evidence.[75] This deficient presentation frustrates "the ultimate goal of the SAC process: a proper evaluation of whether the rate being charged is reasonable." Duke Energy Corp. v. Norfolk S. Ry. (Duke/NS), 7 S.T.B. 89, 101 (2003).

First, the NS operating plan is unsupported because NS has not submitted the MultiRail software as part of its evidence. Although NS offered to provide the Board with a temporary copy of a fully functional, read-write version of MultiRail preinstalled on a laptop, the Board stated that it was unable to accept this offer.[76] Furthermore, DuPont objected to that NS offer on

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[74] Dup. Reb., at III-C-66 to -67.

[75] Ironically, while NS has slandered DuPont's operating plan as a purely "mathematical approach," the MultiRail software and its dependence upon algorithms, is the ultimate mathematical approach. Indeed, the limits of MultiRail's mathematical approach prevented NS from modeling a peak week in the RTC simulation. Dup. Reb., at III-C-92 to -96.

[76] See Letter from Rachel D. Campbell, STB, to G. Paul Moates, NS Counsel (Feb. 11, 2013).

the grounds that provision of MultiRail to the Board would constitute an impermissible *ex parte* contact because NS refused to provide the same version of MultiRail to DuPont under the same terms.[77] Because NS had a proper means available to it for providing MultiRail to the Board, which would be to include the software in its evidentiary submission, as parties in prior cases have done, NS has no legitimate excuse for failing to support its MultiRail evidence.[78]

Second, the Board cannot identify the assumptions underlying the MultiRail evidence and verify the evidence. For example, NS can (and did) adjust the standard algorithms in MultiRail by adding flow constraints and control parameters.[79] NS can (and did) also influence how MultiRail assigns cars to blocks by inputting penalties on the use of yards, yard activities, and routes.[80] NS can (and did) even adjust dwell times.[81] But without the MultiRail program, which NS has not provided, the Board cannot identify these adjustments and the assumptions that NS baked into its MultiRail-generated model of the DRR. The MultiRail program provides the only interface through which any NS adjustments can be identified because the MultiRail data files that NS provided do not contain linking conventions that identify the adjustments and the parameters and data elements to which they relate.

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[77] See Complainants' Joint Reply to Def.'s Pet. for Clarification.

[78] Tex. Mun. Power Agency v. Burlington N. & Santa Fe Ry.(TMPA), 6 STB 573, 646 (2003) (rejecting computer model to evaluate SARR's main-line track configuration because defendant did not provide the computer program); WFA/Basin I, slip op. at 37 (rejecting fuel consumption study as unsupported because defendant did not provide the computer program used to perform the study).

[79] Dup. Reb., at III-C-94 to -95.

[80] Dup. Reb., at III-C-99 to -100.

[81] Dup. Reb., at III-C-95.

Also, the software is needed to verify NS's representations about the sources of its evidence.[82] For example, there is no possibility for DuPont or the Board to replicate or verify NS's determination of the cars requiring classification in any of DRR's yards. Without the MultiRail program, NS's operating plan evidence simply cannot be verified.

Third, NS fails to provide any explanation of how it derived the MultiRail-generated evidence, including how it balanced competing inputs. There are multiple user inputs that influence how MultiRail assigns railcars to blocks and processes data.[83] NS, however, does not explain how these inputs were chosen or how they influenced the MultiRail model. In addition, without the read-write version of the MultiRail program, neither DuPont nor the Board can adjust NS's inputs to determine how they affect the MultiRail outputs and downstream analyses, and gain insight into how NS derived its evidence.

Fourth, NS has not provided essential documentation to the Board supporting its use of MultiRail to generate evidence. It failed to provide documentation identifying the parameters it set within MultiRail to influence the outputs.[84] It failed to provide documentation on the assumptions that it baked into the MultiRail model.[85] It failed to provide documentation on whether or how it balanced the service requirements of different shippers.[86] It failed to provide sufficient documentation that explains how MultiRail works and the meaning of its outputs, such as MultiRail's user manual. Such documentation is all the more essential because NS has not provided the software itself, which would be the only other means to ascertain this information.

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[82] Dup. Reb., at III-C-105 to -107.

[83] Dup. Reb., at III-C-94 to -95.

[84] See Dup. Reb., at III-C-95.

[85] Id.

[86] See Dup. Reb., at III-C-87 to -88.

Without the foregoing documentation, it would not be possible for the Board to even know that there are parameters and assumptions that the user can input into the model, much less what are those parameters and assumptions.

Finally, NS's failure to submit MultiRail as evidence prevents DuPont and the Board from restating the MultiRail outputs, if necessary. In SAC cases, the Board is not limited to the role of a passive arbiter in carrying out its duty to determine if the challenged rate is reasonable based on a well-developed evidentiary record. Pub. Serv. Co. of Colo. v. Burlington N. & Santa Fe Ry., STB Docket No. 42057, slip op. at 3-4 (served Jan. 19, 2005). It is not simply "an umpire, calling balls and strikes for the adversaries appearing before it." Id. at 3. Instead, the Board is guardian of the public interest. Id. at 4. As such, the Board has the power to investigate a challenged rate and must ensure that the record is sufficient for it to determine the reasonableness of the rate. Id. at 5. Thus, when the Board finds defects in evidence submitted in rate cases, it may substitute new data into the spreadsheets and models underlying the evidence.[87] See Tex. Mun. Power Agency v. Burlington N. & Santa Fe Ry., STB Docket No. 42056, slip op. at 2 n.3 (Feb. 6, 2002) (recognizing that the Board often restates evidence). But such restatement is impossible if the substituted data does not cascade through the SAC analysis. For this reason, the Board has stated that it must be able to manipulate the data that a party submits and have the ability to re-run a party's calculations on such data. Id.; Gen. Procedures for Presenting

[87] In fact, the Board often restates operating plan evidence. AEPCO 2011, slip op. at 41 (accepting the railroad's operating plan, but adjusting its operating statistics); WFA/Basin I, slip op. at 15 (using the shipper's operating plan, with modifications); Otter Tail Power Co. v. BNSF Ry. (Otter Tail), STB Docket No. 42071, slip op. at C-6 (served Jan. 27, 2006) (using the shipper's operating plan, but restating the number of personnel required); TMPA, 6 S.T.B. at 606 (using the railroad's operating plan, but the Board's own time estimates for train loading, servicing and fueling, interchanging, and unloading); Wisconsin P&L, 5 S.T.B. at 980 (using the railroad's operating plan, with adjustments); FMC, 4 S.T.B. at 738 (using an adjusted version of the railroad's operating plan "to address certain concerns expressed by [the shipper] on rebuttal and to exclude certain overstatements [] discovered in reviewing [the railroad's] evidence.").

Evidence in Stand-Alone Cost Rate Cases (General Procedures), 5 S.T.B 441, 444-45 (2001); Duke/CSXT, 7 S.T.B. at 449-50 (criticizing defendant for submitting hard-coded work papers); see also 49 C.F.R. § 1104.3(b)(2) ("In order to fully evaluate evidence, all spreadsheets must be fully accessible and manipulable."). But NS has chosen to develop and present its operating plan evidence in a manner that makes the Board a prisoner to NS's submissions. See PSCo/Xcel II, slip op. at 4. Specifically, NS has chosen to present evidence based on MultiRail without also including the MultiRail program as part of its submission to the Board. Thus, the Board is stuck with the operating plan evidence that NS provided and cannot restate it.

d. MultiRail produces infeasible and unrealistic SAC results.

The acceptability of computer model evidence turns not only on the use of an acceptable program, but also the manner in which a party uses it. Therefore, even if MultiRail provided an acceptable means to develop an operating plan (which it does not), NS has not used the software in a manner that produces a feasible or realistic plan. Moreover, the NS operating plan's substantial deviation from NS's own operations has caused the NS evidence to run afoul of basic SAC principles.

In TMPA, 6 S.T.B. at 594-95, the Board held that, when rerouting non-issue traffic, the SAC analysis "must either take responsibility for the entire movement from origin to destination or fully account for the ramifications of requiring the residual carrier to alter its handling of the traffic." Several of the new routes that the MultiRail software calculates for some of the DRR traffic group constitute this very type of impermissible external, or off-SARR, reroute.[88] Some of those reroutes also are much longer than the real-world routes. Thus, NS has committed two

[88] Dup. Reb., at III-C-69, -74 to -84.

fundamental fouls by imposing the costs of external reroutes on the residual NS and by creating much longer routes that cannot possibly serve the needs of the affected shippers.

The NS MultiRail model also fails to consider downstream impacts of the DRR operating plan on both the DRR's traffic and other non-selected NS traffic. First, as noted above, MultiRail has created alternate routes for many DRR movements that require the DRR to interchange traffic with the residual NS at points that are not on the real-world route of movement, which results in externally rerouted traffic.[89] Second, MultiRail has created alternate routes for many DRR movements that convert what would be a cross-over movement using the real-world route into a local DRR movement, while still sharing revenue with the residual NS that does not provide any service at all for that movement in the NS model.[90] Third, NS only modeled carload traffic on MultiRail without giving any consideration to the impacts by, and upon, unit trains that also operate over the DRR.[91] Finally, the MultiRail exercise ignores the requirements of the real-world NS traffic that DuPont did not select for the DRR traffic group, and simply assumes away any interference that the MultiRail operating plan may impose upon that traffic.[92] Because DuPont's operating plan is based on the real-world NS operations, it does not contain any of the foregoing flaws.

Next, a feasible operating plan must provide complete transportation for the entire traffic group. But NS's MultiRail evidence reveals that traffic was not assigned to blocks and blocks were not assigned to trains, effectively stranding tens of thousands of carloads.[93] Also, NS's

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[89] Dup. Reb., at III-C-86.

[90] Dup. Reb., at III-C-86 to -87.

[91] Dup. Reb., at III-C-87 to -88.

[92] Dup. Reb., at III-C-88.

[93] Dup. Reb., at III-C-88 to -92.

own MultiRail evidence indicates that over 30% of the carloads in MultiRail could be reassigned to alternate car blocks to increase efficiency by reducing the number of intermediate handling events required.[94] This proves that the NS operating plan does not provide either the complete or efficient service that NS claims makes its operating plan superior to DuPont's. Instead, NS has used MultiRail to bake significant inefficiencies into its operating plan in order to artificially inflate the DRR's operating and investment costs.

Finally, MultiRail contains significant limits that are inconsistent with use in a SAC analysis. The most significant limit is that MultiRail models operations on an average basis, whereas the SAC analysis models peak operations.[95] Although actual railroad operations are highly variable over the course of a year, MultiRail models *average daily railroad operations*, down to fractions of a rail car. In contrast, DuPont's operating plan is based on actual trains and operations that vary considerably from day to day. This difference ultimately is manifested in the very different peak period train lists using the DuPont and NS methodologies. To develop its peak week, NS simply used the busiest hour of an average day during the peak year. Although NS claims that it did this to be "conservative," the fact is that NS did this because MultiRail's algorithms would not permit NS to do anything else.

MultiRail is a tool, and like all tools, the person wielding it has more to do with its efficacy than the tool itself. To the extent that the user entered the wrong inputs, or made the wrong adjustments, or failed to put enough effort into identifying and correcting inefficiencies, there will be errors and inefficiencies. In this proceeding, NS has wielded MultiRail as a tool for inflating the DRR's expenses beyond those of the real-world NS. DuPont was able to identify a large number of errors and inefficiencies in NS's MultiRail-based operating plan. However, NS

[94] Dup. Reb., at III-C-100 to -103.

[95] See Dup. Reb., at III-C-92 to -94.

attempted to ensure that the inefficiencies baked into its operating plan were unassailable by providing DuPont with only a limited-functionality version of MultiRail that does not even allow DuPont to ascertain the level of those inefficiencies, much less eliminate them and properly restate the NS analysis. Furthermore, the Board also lacks that ability. DuPont's operating plan, which is based on actual NS train movements, is based upon the years of experience that NS operating personnel have fine tuning those operations. By severing the DRR's operations from actual NS operations through the use of MultiRail, NS is leading the Board down a path whereby it will become impossible for the Board ever to determine the feasibility of a SARR operating plan by comparing that plan to reality.

e. The NS RTC Model contains numerous flaws.

For the reasons stated in the preceding section, the NS RTC simulation is fatally flawed from the outset because it relies upon unsupported, infeasible and unrealistic output from the MultiRail software to generate the trains and other inputs to the RTC Model. Another fatal flaw is NS's decision to model an average week rather than the required peak period, because MultiRail is incapable of generating peak period statistics for the RTC simulation.[96] DuPont also has identified additional errors that render NS's RTC simulation useless to test the configuration of the DRR.

First, NS incorrectly modeled foreign trains that cross DRR lines. Instead of using actual data on the number of foreign train crossings over the real-world NS system, NS concocted greatly inflated surrogate numbers based upon outdated FRA data for highway, not rail, crossings and that expressly may not be used in litigation proceedings.[97] Compounding this

[96] Dup. Reb., at III-C-93 to -94.

[97] Dup. Reb., at III-C-108 to -111.

error, NS gave foreign trains a higher priority than DRR trains in every single instance, which has an enormous impact upon operating and investment costs. [98]

Second, due to the inability of MultiRail to identify highly inefficient "turn" movements and NS's failure to make simple network adjustments to prevent unnecessary "turn" moves in the RTC Model, the NS RTC simulation unnecessarily requires the DRR to make 2,731 "turn" movements during the modeled period, which is a 91% increase over DuPont's Rebuttal RTC simulation.[99] Each unnecessary "turn" move increases cycle times, locomotive hours, locomotive miles, car miles, car hours, crew hours, fuel consumption, and it places unnecessary burdens on network congestion and potentially slows down other trains that might encounter the turning train. This system-wide error universally increases the costs associated with operating NS's DRR, creating a gross overstatement of the DRR's operating costs.

B. "Leapfrog" traffic is consistent with SAC principles and an established part of everyday railroad operations.

The vehemence and vitriol of NS's attack on DuPont's operating plan is matched only by NS's assault on the DRR's traffic base. Although NS accepts most of the traffic DuPont has selected for the DRR, it strongly objects to internal cross-over traffic, for which NS has coined the term "Leapfrog" traffic. Despite its objections, NS does not actually model the DRR without Leapfrog traffic in its SAC analysis, but instead suggests that the Board should solicit supplemental evidence if it accepts the NS position.[100] This abject failure of proof alone warrants rejection of NS's arguments. In addition, NS's objections to Leapfrog traffic are meritless on their face.

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[98] Dup. Reb., at III-C-58 to -60.

[99] Dup. Reb., at III-C-112 to -116.

[100] NS Reply, at III-A-55 note 50.

"Leapfrog" traffic is simply cross-over traffic that exits and then later reenters the DRR system. There is nothing untoward, sinister, or manipulative about it. Indeed, it is so prevalent in real-world NS operations that NS created an entire category of traffic identified as such in its handling line database.[101] Other railroads also engage in Leapfrog movements, of which the most well-known probably is the Leapfrog segment that Montana Rail Link operates between points on BNSF.[102] DuPont has identified numerous examples of Leapfrog movements on the real-world NS involving tens of thousands of carloads moving over a dozen intermediate carriers annually, including movements with multiple Leapfrog segments.[103] These facts expose the hypocrisy of NS's critique. More importantly, it is essential to the SAC analysis that the DRR have the ability to handle traffic in the same manner as NS or any other real-world railroad.

The DRR, which has over 8,000 route miles and was designed around the routes of 138 issue movements, effectively is an amalgam of 138 SARRs with many overlapping and non-overlapping line segments. By designing the DRR with a focus upon the facilities needed to serve the issue traffic, it was inevitable that some cross-over traffic would move in Leapfrog service with the residual NS serving as a bridge carrier between points on the DRR. The inevitability of Leapfrog traffic is illustrated by the fact that NS's own operating plan contains Leapfrog movements, in addition to the Leapfrog traffic in DuPont's operating plan.[104] Moreover, Leapfrog traffic is absolutely essential if the DRR is to operate the same trains over the same routes as the real-world NS in order to provide equivalent service for much of the cross-over traffic. This is illustrated by the fact that NS's attempts to reroute its own real-world

[101] Dup. Reb., at III-A-21 to -22.

[102] Dup. Reb., at III-A-5.

[103] Dup. Reb., at III-A-5 to -22; III-C-44 to -47.

[104] Dup. Reb., at III-A-21 to -22; III-C-44 to -47.

Leapfrog traffic on the DRR resulted in much longer, inefficient movements.[105] NS is fully aware of this fact and thus has devised objections to Leapfrog traffic solely for the purpose of depriving the DRR of this cross-over revenue.

NS concocts several arguments to persuade the Board that Leapfrog traffic is a manipulation of the SAC analysis that is inconsistent with the purpose of cross-over traffic. First, NS claims that Leapfrog cross-over movements do not fulfill the purpose of cross-over traffic by reducing the geographic scope of the DRR. That is flatly wrong because, if the DRR were to construct the residual NS Leapfrog segments, that would add 2,545 route miles to the DRR that are not needed to serve the issue traffic.[106]

Second, NS claims that Leapfrog traffic would complicate the SAC analysis due to the need for additional interchanges between the DRR and the residual NS. But all cross-over traffic requires such interchanges and any complications are far outweighed by the complications associated with adding 2,545 miles to the DRR.[107] NS's claim that Leapfrog traffic also complicates the ATC and MMM analysis also is incorrect, as both parties have managed to perform both analyses without difficulty, and DuPont in particular has performed the ATC analysis three different ways (*e.g.*, original-, modified-, and alternate-ATC).

Third, NS claims that Leapfrog traffic violates the Board's rerouting rules. This is absurd because the Leapfrog traffic exists because DuPont has chosen <u>not</u> to reroute it, and a fundamental predicate of the rerouting rules is that there first be a reroute.[108] Moreover, the Board's rules are directed at the cost shifting imposed by external reroutes, of which the DRR

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[105] <u>Id.</u>

[106] Dup. Reb., at III-C-38.

[107] Dup. Reb., at III-C-40.

[108] Dup. Reb., at III-C-42 to -44.

has none. Ironically, it is NS, not DuPont, that has introduced externally-rerouted Leapfrog segments to the SAC analysis.[109] DuPont has used the real-world route of the Leapfrog traffic with the DRR providing service over the line segments shared with the issue traffic and the residual NS providing service over the other line segments, which is precisely the point of cross-over traffic. The rerouting rules do not offer any rational reason for treating Leapfrog cross-over traffic different from all other cross-over traffic.

Finally, NS inaccurately contends that Leapfrog traffic creates opportunities to "game" the SAC analysis "to avoid building and operating integral portions of a SARR network that have high construction costs and/or low traffic densities."[110] But the fact of the matter is that the SARR must include all of the lines necessary to serve the issue traffic, no matter what the cost or density of those lines.[111] Thus, there is no opportunity to game the fundamental contours of the SARR. Moreover, the facts of this case do not even remotely suggest gaming by DuPont, because the end-points of the Leapfrog segments are all on lines that serve the issue traffic.[112] Thus, the nefarious motives that NS ascribes to DuPont simply do not hold up under scrutiny.

Ultimately, however, the foregoing dispute over the merits of Leapfrog traffic is rendered moot by NS's failure to develop an operating plan that excludes that traffic from the SAC analysis. Buried in a footnote, NS admits that it has not calculated the operating and investment expenses associated with "Leapfrog" traffic and has not modeled a SARR without this traffic. Instead, NS suggests that the Board should disallow all "Leapfrog" traffic in this case and should

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[109] Dup. Reb., at III-C-44 to -47.

[110] NS Reply, at III-C-114.

[111] Dup. Reb., at III-C-49.

[112] Dup. Reb., at III-C-38 to -39, -48 to - 49.

order the parties to conduct further analyses.[113] Aside from the fact that it is ludicrous for NS to vehemently complain about the inclusion of "Leapfrog" traffic and then fail to model even an alternate SARR without it, thus saddling DuPont with the consequences of NS's failure of proof, such a course of action is flatly inconsistent with Board precedent and warrants rejection of NS's argument outright. In Duke/NS, 7 S.T.B. at 101, the Board stated that a railroad may not "submit[] reply evidence that . . . presents criticism without appropriate evidence that can be used in the Board's SAC analysis." (Emphasis added). This is exactly what NS has done here, and its arguments should be rejected.[114]

C. NS Understates the DRR's Stand-Alone Revenue.

The primary differences between DuPont and NS in their calculation of the DRR's revenue fall into three main categories. First, NS is highly critical of DuPont's use of Modified-ATC to calculate cross-over revenue divisions. Second, NS incorrectly attempted to fix a technical error in DuPont's development of ATC percentages. Third, NS understates intermodal revenue from its Triple Crown Service and Thoroughbred Intermodal Service ("TCS/TDIS") subsidiaries. DuPont's final position on the DRR's revenue is addressed in Part III.A of its Rebuttal Evidence.

1. The Board should use Modified-ATC for cross-over traffic revenue divisions.

In this proceeding, the Board has been presented with three versions of ATC to calculate the cross-over traffic revenue divisions. In both its Opening and Rebuttal Evidence, DuPont

[113] NS Reply, at III-A-55, n.50.

[114] See also Ariz. Elec. Power Coop. v. Burlington N. & Santa Fe Ry., 7 S.T.B. at 225 (The Board has held that "[o]perating in an industry subject to regulatory oversights of rates charged on captive traffic, railroads have a responsibility to provide information needed by the Board.")

used Modified-ATC as adopted by the Board in WFA/Basin I,[115] recently reconfirmed on remand in WFA/Basin II,[116] and described as the Board's "current Modified-ATC approach" in Rate Regulation Reforms (Ex Parte 715), STB Docket No. EP 715, slip op. at 18 (served July 25, 2012). Despite all of the foregoing Board affirmations of Modified-ATC as the current approach for pending rate cases, NS argues on procedural grounds that Original-ATC is the only lawful approach that the Board may use. In the alternative, NS has suggested that the Board apply Alternate-ATC, which the Board has proposed as a possible replacement for Modified-ATC in Ex Parte No. 715. DuPont has demonstrated that, as a matter of both law and economics, Modified ATC is superior to both Original-ATC and the Alternate ATC, and the use of Original-ATC would be arbitrary and capricious.[117]

NS contends that, as a matter of law, the Board improperly adopted Modified ATC in an adjudicatory proceeding. Because Original-ATC was adopted in a formal rulemaking proceeding, NS contends that it could only be modified in another rulemaking. The adoption of Modified ATC in WFA/Basin I did not require a public rulemaking proceeding, however, because Modified ATC was a refinement of Original-ATC necessitated by the objectives of both ATC and Coal Rate Guidelines, Nationwide, 1 I.C.C. 2d 520 (1985), aff'd sub nom. Consolidated Rail Corp. v. United States, 812 F.2d 1444 (3rd Cir. 1987). Because administrative agencies are permitted, via adjudication, to refine their application of so-called "legislative" or "substantive" rules adopted in rulemaking proceedings, there was nothing improper about the

[115] W. Fuels Ass'n v. BNSF Ry. (WFA/Basin I), STB Docket No. 42088, slip op. at 14 (served Sept. 10, 2007).

[116] W. Fuels Ass'n v. BNSF Ry. (WFA/Basin II), STB Docket No. 42088, slip op. at 2 (served June 15, 2012).

[117] Dup. Reb., at I-89 to -95; III-A-43 to -55.

Board's adoption of Modified ATC in the WFA/Basin adjudication.[118] The Board's action in WFA/Basin was a reasonable clarification of an existing rule to accomplish the stated goals and intent of ATC; hence, it was a permissible interpretive rule.

Furthermore, the application of Original-ATC to this proceeding would be arbitrary and capricious. The Board has never applied Original-ATC in any proceeding because, in the very first attempted application of Original-ATC in a specific case, the Board encountered a set of facts that it had not contemplated in the original rulemaking that produced "an illogical and unintended result." WFA/Basin at 14. That result was contrary to the fundamental ATC objective "to equitably distribute [cross-over] revenues in relation to the cost incurred to generate those revenues…." Major Issues in Rail Rate Cases (Major Issues), STB Ex Parte No. 657, slip op. at 25 (served Oct. 30, 2006) . According to the Board, "[s]uch a result would plainly conflict with our express purpose to find a non-biased, cost-based method." WFA/Basin I, at 14 (citing Major Issues, at 32). Thus, even if NS has correctly identified a procedural defect in the adoption of Modified-ATC, it nevertheless would be arbitrary and capricious for the Board to resort to the discredited Original-ATC as a replacement.

Finally, it would be inappropriate for the Board to apply Alternate-ATC because it is just a proposal that may not even be adopted. Indeed, DuPont has demonstrated that, as a matter of economics, Modified-ATC is superior to both Original and Alternate-ATC.[119] Several commenters in Ex Parte No. 715 have presented similar arguments. Therefore, the Board ultimately could reconfirm Modified-ATC in Ex Parte No. 715, thereby rendering NS's procedural objections moot.

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[118] 5 U.S.C. § 552(b)(3)(A); PPL Mont., LLC v. STB, 437 F.3d 1240, 1247 ("notice is not required before every clarification or extension of an agency's principles to novel scenarios").

[119] Dup. Reb., at III-A-45 to -56.

2. NS took inappropriate shortcuts to correct a technical error in DuPont's ATC calculation.

In order to apply the ATC methodology for allocating cross-over revenue, DuPont applied a complex set of procedures to manipulate the raw NS traffic and revenue data to develop the variable and fixed costs used to calculate the revenue percentages based on the ATC methodology. As described in DuPont Opening Exhibits III-A-2 and -3, these procedures were necessitated by deficiencies in the NS traffic data. NS generally accepted those procedures, but identified a single technical error in DuPont's calculation of off-SARR mileages that was caused by an improper filter in the SQL coding for the shipment mileage algorithm.[120] Although DuPont agrees with NS's description of the error, DuPont rejects NS's attempted correction, which took inappropriate shortcuts.[121]

Although NS has not explained how it corrected the SQL coding error, DuPont was able to painstakingly recreate or impute the process, which was further complicated by the fact that NS's electronic work papers were not linked to other dependent files and/or were devoid of active formulas, which is a violation of Board rules and ignores explicit missives that spreadsheets links should be functional and documented.[122] Rather than fix the coding error and re-run the subsequent steps in the process, NS took inappropriate shortcuts that resulted in the following errors:

- NS improperly adjusted the mileage calculations used as inputs to the variable cost calculations to reflect the rerouted mileage of the route of movement rather than the actual mileage.[123]

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[120] NS Reply, at III-A-79 to -83.

[121] Dup. Reb., at III-A-37 to -43.

[122] 49 C.F.R. § 1104.3(b)(2); General Procedures, slip op. at 4.

[123] Dup. Reb., at III-A-40.

- NS updated the DRR and non-DRR miles by implementing a formulaic short-cut based on the utilization of average DRR and non-DRR miles instead of summing the actual miles for each segment from NS's own data.[124]

- NS calculated fixed costs for the DRR and non-DRR segments based on a formulaic short-cut that used average fixed cost per ton mile instead of the actual fixed cost per ton and actual miles from NS's own data, which is an approach that the Board previously has rejected.[125]

- NS made multiple non-mileage related adjustment to the URCS Phase III variable cost inputs to address its production of incomplete electronic data in this case. But DuPont already had made the necessary adjustments and NS does not assert that, much less explain why, DuPont's adjustments were incorrect.

All of the foregoing errors could have been avoided if NS simply had utilized the methodology developed by DuPont, after correcting for the SQL coding error. DuPont has demonstrated the proper process on rebuttal. Therefore, the Board should accept DuPont's correction of the SQL coding error.

3. NS uses accounting gimmicks to understate intermodal revenue.

NS has used accounting gimmicks to deny the DRR intermodal revenue from TCS/TDIS activities that NS itself reports as rail revenues to the Securities and Exchange Commission, the STB, and its shareholders.[126] Because the NS revenue waybill data does not include all rail-related revenues associated with the movement of intermodal traffic via TCS/TDIS, which are NS subsidiaries, DuPont was forced to develop accurate intermodal revenue from other sources provided by NS in discovery. DuPont calculated what it reasonably assumed to be net rail revenue for TCS/TDIS shipments, excluding revenue associated with non-rail activities, such as trucking and lift service. NS criticized these revenue adjustments as inadequate and reduced intermodal revenue to include only the line-haul and train starts revenue that TCS/TDIS transfer

[124] Dup. Reb., at III-A-41.

[125] Dup. Reb., at III-A-41.

[126] Dup. Reb., at III-A-56 to -61.

directly to NS to cover NS operating costs associated with intermodal shipments, while denying the DRR any revenue above this cost recovery device.[127]

DuPont has accepted NS's critique to the extent DuPont erroneously included revenue for non-rail services or non-NS rail segments, but DuPont rejects NS's attempt to eliminate the lion's share of TCS/TDIS revenues that NS reports as rail revenue on its own books every year. Rebuttal Exhibit III-A-2 shows that NS has understated TCS/TDIS intermodal revenue by 134% solely based on an accounting device designed to deny the DRR revenue that NS itself claims as rail operating revenue.

D. DuPont's Operating Expenses are Reasonable.

The vast majority of the difference in operating expenses between DuPont and NS is attributable to their different operating plans, which DuPont has addressed in Part II.A, above. However, significant differences also exist in two areas that are largely independent of the operating plan: General & Administrative ("G&A") and Maintenance of Way ("MOW") expenses. In both instances, NS has improperly attempted to burden the DRR with costs based upon NS's larger and more diverse traffic base and its much older infrastructure. Other differences not addressed in this brief are locomotive lease costs, maintenance expenses, and fuel consumption; operating personnel; insurance; and ad valorem taxes. DuPont's final position on the DRR's operating expenses is addressed in Part III.D of its Rebuttal Evidence.

1. DuPont's G&A expenses are appropriate for the DRR's size and traffic.

In its Reply Evidence, NS proposes to more than triple the G&A staffing level that DuPont proposed on Opening, to more than 820 personnel, thereby almost exactly tripling DuPont's G&A cost estimate. In Rebuttal Exhibit III-D-1, DuPont carefully and exhaustively

[127] NS Reply, at III-A-61 to -64.

confronts and discusses why, in virtually all cases, NS's evidence is wrong and should be rejected by the Board. In addition to the details discussed minutely in DuPont's Rebuttal, there are certain broad issues that the Board should keep in mind in its examination of NS's G&A proposals.

First, the underlying premise of NS's G&A evidence is that "NS's current staffing levels are likely the best evidence of what an efficient SARR that is also a Class I railroad would need" and that "NS's own G&A spending is . . . the best evidence of what a real-world DRR would have to spend on G&A."[128] This premise is utterly flawed for a variety of reasons, but especially because it is flatly at odds both with the entire concept of a SARR as an efficient and least-cost railroad, as well as unequivocal Board precedent that the SARR can be designed "in a manner different from, and more efficient than, the incumbent carrier's service."[129]

Second, NS's premise is flawed because the G&A "benchmark" that it uses – its own G&A costs and those of CSXT, UP and BNSF[130] – is inappropriate due to substantial differences between the DRR and major Class I carriers. Although the DRR is the largest SARR that the Board has considered to date, its 8,000 miles of track is still only about a third of NS's own system and that of other major Class I railroads. The DRR operates only 508 trains daily, which is small compared to other Class I railroads, and it employs only a small fraction of NS's total personnel,[131] which are facts that affect the level of G&A support. When the DRR's G&A costs are "benchmarked" against more relevant comparisons – similar-sized current and past Class I rail carriers, such as the Chicago and North Western, the NW, the ICG, and the SOU, all of

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[128] NS Reply, at III-D-75.

[129] McCarty Farms, 2 S.T.B. at 468; see also AEPCO 2011, slip op. at 10.

[130] NS Reply, at III-D-193

[131] Id. at 37.

which are or were similar in route miles and revenue - the DRR's G&A staffing of 218 personnel is exactly on target.[132]

There also are differences in traffic and related factors that support a level of G&A costs substantially smaller than what NS has proposed for the DRR. For example, over 60 percent of the DRR's traffic is overhead traffic,[133] which is substantially more than the major Class I railroads. NS's real-world traffic, for example, is more than three-quarters local or originated traffic and less than one-quarter overhead or received traffic.[134] Overhead traffic is less "G&A intensive," since a number of activities required by originating traffic are not necessary for overhead traffic. Moreover, the DRR's traffic base contains a large percentage of coal and intermodal traffic, where prices are set by contract, usually for relatively long periods, thus reducing the need for frequent price negotiations by a large marketing department.[135] Unlike NS and other large Class I railroads, the DRR will be privately held and will not have numerous corporate subsidiaries, which affect a number of G&A functions, including the number and compensation for the members of the Board of Directors, public relations, tax preparation, etc.[136] Moreover, unlike NS, the DRR is not burdened with a corporate history that includes many mergers and consolidations, necessitating the "marriage" of each merging partner's overhead and the retention of multiple layers of management.[137]

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[132] Dup. Reb., at Ex. III-D-1, at 5.

[133] Dup. Reb., at Ex. III-D-1, at 14.

[134] Id. at 20.

[135] Id. at 22. Other G&A functions will also be affected by the large percentage of coal traffic, such as claims, where coal has a very low claim rate. Id. at 43.

[136] See, e.g., Dup. Reb. Ex. III-D-1, at 18, 19, 33-34.

[137] Id. at 12-13.

Finally, the NS's G&A staffing plan is simply bloated—filled with unnecessary and overlapping functions, seemingly proposed just to increase its size and cost. For example, in its Marketing Department, NS proposes 73 employees just for the General Freight section, with 30 Product Managers and 40 National Account managers. But the responsibilities described by NS overlap, and there is no attempt to describe why such a large force is necessary.[138] In some cases, NS's plans for the DRR even exceed its own "benchmark." For example, within its proposed Intermodal Group of the Marketing Department, the real-world NS is divided into three sections, Premium, Domestic, and International. In the DRR's world, however, NS adds a completely unnecessary fourth section, Planning and Yield Management.[139]

2. DuPont's MOW plan is designed for a newly-constructed railroad, whereas NS assumes a legacy railroad constructed over many decades.

DuPont designed its MOW plan for a brand new railroad, constructed in accordance with the latest materials and techniques, and without track or bridge defects. DuPont's plan reflects the reduced tasks and costs associated with a newly constructed railroad operation, factors in the use of new materials, considers the projected annual tonnage, separates the tasks and costs of capital projects performed by contractors, and considers the ten-year life of the DRR. The details are addressed in DuPont Opening Exhibit III-D-3 and Rebuttal Exhibit III-D-2.

In contrast, NS has designed a MOW plan for NS's existing system, which is a larger system than the DRR that is comprised of older infrastructure constructed to lower standards; has been subjected to phases of deferred maintenance, roadbed and track joint pumping, and archaic construction techniques; and has existing defects and age-related maintenance needs. NS cannot even begin to develop a realistic MOW plan until it first acknowledges the real physical

[138] Dup. Reb. Ex. III-D-1, at 25.

[139] Id. at 26.

condition of the brand new DRR infrastructure and the substantially reduced maintenance needs of such infrastructure during the 10-year life of the DRR. Nowhere has NS acknowledged this fact, much less accounted for it in developing the DRR's MOW plan.

The next greatest driver of the different MOW costs of DuPont and NS is Roadmaster territories. NS has created territories of approximately 100 miles, which is half the size of DuPont's territories, and is based on practices NS followed 30 or 40 years ago.[140] NS then automatically doubles the personnel and equipment in each territory, without explaining or attempting to justify this adjustment.[141] Many Class I railroads, including NS itself, have Roadmaster territories close to 200 miles long even where the infrastructure is much older than the DRR. Therefore, DuPont's average territory size of 200 miles for a newly-constructed railroad is conservative.

NS also creates three completely unnecessary departments for the DRR.[142] First, there is no need for a design and construction division because the entire DRR has been designed and built for the proper peak period capacity and the costs related to the design and construction of the DRR already have been included in the road property investment. Second, there is no need for an industrial development department because the DRR has been designed for the industries included in the DRR traffic group and those costs already have been included in the road property investment. Third, there is no need for the technical services group because the entire DRR has been surveyed, mapped, and designed for the proper peak period capacity and those costs already have been included in the road property investment.

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[140] Dup. Reb. Ex. III-D-2, at 16-23 and App. B, 7-12.

[141] Dup. Reb. Ex. III-D-2, at 12-13.

[142] Dup. Reb. Ex. III-D-2, at 10-11, app. A 1-2.

Finally, NS attempts to show that DuPont's MOW plan is unreasonable by comparing DuPont's 10.4 track miles per MOW employee with previous SAC decisions.[143] The disparity with other cases, however, reflects the economies of scope and scale that accompany a SARR that has more than three times the track miles of the next longest SARR among the five decisions reviewed by NS.[144] The 3,326-mile SARR in AEPCO 2011 had 5.9 track miles per MOW employee,[145] whereas the NS reply evidence in this case proposes just 4.7 track miles per MOW employee on a 10,639-mile DRR. The fact that NS proposes a lower ratio for the much larger DRR exemplifies its attempt to pad the DRR with unnecessary MOW costs.

E. DuPont's Road Property Investment for the DRR Is Realistic, Feasible, and Consistent With Precedent.

NS argues that DuPont's road property investment costs are greatly understated, and proposes total road property investment costs that are 59% higher than those presented by DuPont in its Rebuttal Evidence. There are numerous differences between the DuPont and NS road property investment costs that account for this wide disparity, the full details of which are addressed in Part III.F of DuPont's Rebuttal Evidence. But there is at least one consistent pattern: on issue after issue, NS ignores or flouts consistent Board precedent governing many elements of road property investment costs, such as the following:

- NS proposes stripping costs that are inconsistent with the agency's recent decisions in PSCo/Xcel, 7 S.T.B. at 671, AEP Texas, slip op. at 79, and AEPCO 2011, slip op. at 84-85. See Dup. Reb., at III-F-43.
- NS includes undercutting costs, an item repeatedly rejected by the Board. See WFA/Basin I, slip op. at 83; AEP Texas, slip op. at 79; CP&L, 7 S.T.B. at 313; Duke/NS, 7 S.T.B. at 176. See Dup. Reb., at III-F-44.

[143] NS Reply, at III-D-198 to -199.

[144] Dup. Reb. Ex. III-D-2, app. B. 12-13.

[145] AEPCO 2011, slip op. at 32, 65.

- NS advocates a final grading additive that has been rejected in at least four past agency decisions, in AEP Texas, slip op. at 82-83, CP&L, 7 S.T.B. at 313-314, Duke/CSXT, 7 S.T.B. at 480, and Duke/NS, 7 S.T.B. at 176. See Dup. Reb., at III-F-48.
- NS includes an adjustment for "swell" that was rejected in AEPCO 2011, slip op at 92. See Dup. Reb., at III-F-49.
- NS supports an increase in retaining wall quantities that was specifically rejected in the Board's recent decisions in AEPCO 2011, slip op. at 95-96, and AEP Texas, slip op. at 84. See Dup. Reb., at III-F-61.
- NS includes over $265 million for lighting costs for night time work, an additive rejected by the Board in Otter Tail, slip op. at D-18. See Dup. Reb., at III-F-69.
- NS added costs to account for alleged lost production due to winter cold and rainfall. But this additive flies in the face of Board precedent in Otter Tail, where the Board rejected a similar added cost for winter construction (in a far more challenging weather zone), slip op. at D-18, and in McCarty Farms, 2 S.T.B. at 484, n.52. Dup. Reb., at III-F-146.

As discussed in DuPont's Rebuttal, in no case did NS carry its burden of proof to show that the Board should depart from its clear precedent. In this Brief, however, DuPont focuses upon five matters, which are among the most consequential to the SAC analysis.

1. NS has used deeply flawed methodologies to inflate land values.

The difference between the DuPont and NS land values is over $1.1 billion. Most of this is attributable to a seriously flawed appraisal by NS. However, NS also uses the unprecedented application of a land mobilization fee to artificially inflate the DRR's land acquisition costs and a made-for-litigation land inflation index that disregards established precedent.

As a preliminary matter, NS attempts to discredit DuPont's land appraisal by disingenuously accusing DuPont of using 2009 real estate values for land that the DRR would acquire in 2007.[146] Although the appraisal valuation date is June 1, 2009, DuPont adjusted the

[146] NS Reply, at III-F-4.

2009 valuation back to the DRR construction period beginning in 2007.[147] This methodology has been used by shippers and railroads alike in past cases.[148]

The errors and distortions committed by the NS appraiser are too numerous to discuss them all in this Brief. DuPont's appraisers present a thorough critique of the NS methodology and a full defense of their own methodology in Rebuttal Exhibit III-F-2.[149] The most egregious NS errors are discussed below.

The first of these errors in the NS appraisal is the use of an arithmetic mean rather than a weighted average mean.[150] As a general rule, the larger the parcel, the lower the unit price. Consequently, producing an average value using an arithmetic mean, which gives equal weight to large and small parcels, will tend to overstate the land value that is applied to a wide variety of parcel sizes. DuPont measured the impact of this error by testing the same 364 sales data sets used by NS in six of the SARR states. In 94% of the cases, the NS average land value overstated the actual sales prices of the 364 sales, and 75% of the overstatements were by more than 25 percent, and 34% of the overstatements more than doubled the actual sales price.[151] Finally, in a blatantly misleading attempt to discredit DuPont's appraisers, NS quoted the Appraisal Institute's book, "The Appraisal of Real Estate," completely out of context to give the false

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[147] See Dup. Op. Ex. III-H-1, Table C (showing that the June 2009 appraisal values were adjusted back in time to $3.329 billion as of June 1, 2007). At page III-H-2 of its Reply, NS acknowledges that "DuPont's land valuation witness estimated 2009 land values and discounted those values back to the DRR construction period…."

[148] Dup. Reb., at I-130 to -131.

[149] DuPont's appraisers have presented a summary of their review of the NS appraisal, with page references to their more detailed analysis, at pages 15-22 of Rebuttal Exhibit III-F-2. In addition, they also have summarized their responses to NS's critique, also with page references to the more detailed discussion, at pages 23-25 of Rebuttal Exhibit III-F-2.

[150] Dup. Reb. Ex. III-F-2, at 29-37.

[151] Dup. Reb. Ex. III-F-2, at 46-54.

impression that the Institute has rejected the weighted average mean in favor of the arithmetic average.[152]

Next, NS compounded the above error by arbitrarily excluding high end sales prices as outliers, but not low end prices. There is no logic to this approach or support in general appraisal practice. Furthermore, there is no explanation or apparent pattern in how NS identified these outliers. By starting with the arithmetic mean (which favors higher unit price sales), and then excluding a varying proportion of higher unit price sales, NS produced a land value conclusion that was disconnected from the sales data, which means that any resulting value conclusions are unsupported and unreliable.[153] While both have their place in the appraisal process, the weighted average mean is a far more accurate and reliable form of averaging when attempting to determine a reasonable value for a large number of widely varying properties.[154]

NS also inflated land values by using average land values for the entire route when faced with few or no sales for a county. Because most routes include at least one urban area, where sales data typically is available, this methodology effectively transfers urban land values to rural communities.[155]

NS, for its part, has proffered unfair criticisms of DuPont's appraisal. The most overstated criticism is that DuPont's physical inspections were deficient and that NS's were superior because NS physically inspected more of the DRR route. This is a red-herring. Because the railroad always conducts its appraisal after the complainant, it can always inspect more property than the complainant. That fact alone, however, does not make its appraisal

[152] Dup. Reb. Ex. III-F-2, at 36-37.

[153] Dup. Reb. Ex. III-F-2, at 40-45.

[154] Dup. Reb. Ex. III-F-2, at 38-39.

[155] Dup. Reb. Ex. III-F-2, at 54-59.

superior. Advance preparation is essential to maximizing the value of time spent in the field. DuPont's appraisers spent twice as much time in the office preparing for its physical inspections as they spent in the field. While in the field, they had very powerful tools at their disposal that enhanced their efficiency and productivity. A simple comparison of time spent in the field simply is not a reliable indicator of the accuracy of an appraisal.

NS also maligns DuPont's use of powerful computer tools, such as Google Earth aerial imaging and other online tools, as a "desktop appraisal." Such criticism is nonsense because it is the responsibility of an appraiser to use all available tools and techniques to improve the accuracy of the appraisal.[156] Moreover, considering that the railroad right-of-way often is difficult to access without trespassing on private property or is in remote areas, computer imaging actually provides better access than driving around in a car.

Beyond its appraisal errors and distortions, NS attempts to add nearly $112 million in extra mobilization costs to cover asserted "real estate acquisition costs," such as title work, negotiations, expert appraisals, recording fees, and numerous other added costs.[157] The Board, however, consistently has held that mobilization only applies to construction costs.[158] The justification provided by NS for this departure from established precedent is that the DRR is

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[156] Dup. Reb. Ex. III-F-2, at 99-102.

[157] NS Reply, at III-F-285 to -290.

[158] See AEPCO 2011, at 132 ("Mobilization involves the marshaling and movement of people, equipment, and supplies to the various construction sites and other pre-construction coordination and activities"); FMC, at 818 ("Mobilization costs reflect the cost of assembling equipment, personnel and facilities at designated places so that construction may commence"); Ariz. Pub. Serv. Co. v. Atchison, Topeka & Santa Fe Ry., 2 STB 367, 401 (1997) ("Mobilization costs cover expenses associated with moving personnel, materials, supplies, and equipment to job sites and the establishment of offices and other facilities prior to commencement of a construction project.")

purchasing a "massive amount of real estate" in an "incredibly short period of six months."[159] But, as stated by the ICC, "any restriction in the supply of resources necessary to construct the SARRs in the minimum time dictated by technological feasibility represents a barrier to entry."[160] This also is a classic barrier to entry because NS has not shown, or even attempted to show, that it actually incurred these types of costs when it (or its predecessors) originally acquired the right-of-way that the DRR must purchase.[161]

Finally, NS has rejected DuPont's land inflation index, which adheres to established precedent, in favor of a made-for-litigation forecast prepared by NS's appraisers.[162] Instead of relying upon Board precedent for estimating future land values, NS relied on the unsupported position of its real estate consultant that rural and urban land values would increase only at the general rate of inflation. With respect to rural land values, DuPont shows that the basis for NS's position, that declining farm income will lead to declining farm land values, is not supported by recent studies.[163] For example, current USDA research has shown little correlation between farm

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[159] See NS Reply, at III-F-286. This argument is reminiscent of the effort of past defendants to include an assemblage factor in real estate acquisition – an effort that has been rejected by the Board unless the defendant can show that it paid such a cost. See Duke/NS, at 169 n. 97 (assemblage factor is an impermissible barrier to entry unless the defendant railroad can show that it incurred such costs for the rail line at issue); see also WTU, at 672-673 ("the cost of needed permits, licenses and environmental compliance also must be considered as a barrier when that cost was not incurred by the incumbent.").

[160] See Coal Trading Corp. v. Baltimore & Ohio R.R.(Coal Trading), 6 I.C.C. 2d 361, 413 (1990); see also WTU, at 471 (rejecting assertion of inflated costs because "[e]xisting railroads were built on a piecemeal basis, and were not saddled with a need to marshal, in such a short period of time, the resources required to construct a 1,400-mile rail system.")

[161] See McCarty Farms, at 506 ("Only when the incumbent carrier has incurred a sunk cost should that cost be included in the SAC analysis."); Coal Trading, at 413 ("Defendants' argument that they too would face these costs if they entered the market today is irrelevant to the question of whether entry barriers exist for this market. The entry process actually faced by the incumbent was quite different from that hypothesized for the new entrant.").

[162] See Dup. Reb., at III-G-8 to -10; Dup. Reb. Ex. III-G-1.

[163] Dup. Reb. Ex. III-G-1, at 2-5.

values and farm income, and nonagricultural factors (such as the possibility of farmland development) are a much greater influence on farmland value than they have been historically. Similarly, with respect to urban land values, DuPont shows that NS's projections are based on the use of data with a limited timespan; that the data is misused; and that the data that NS used was neither final nor representative of the values claimed.[164]

2. The Trestle Hollow project is superior to the Means Handbook for earthwork unit costs.

Major differences impacting road property investment costs in this case are the construction unit costs, particularly those for earthwork. Rather than rely upon the Means Handbook for most of these costs, DuPont has used actual costs from the recent Trestle Hollow project in Tennessee, which is more representative of the costs that the DRR would incur.[165] NS, instead, has relied upon the Means Handbook, which has been used in prior SAC cases in the absence of actual real-world construction costs.

The use of actual costs is preferable to Means Handbook costs because Means does not, and cannot, recognize the economies of scale of large railroad projects such as the DRR.[166] Indeed, Means itself recognizes that "[e]conomies of scale can reduce costs for large projects."[167] The DRR clearly would be a large project with economies of scale resulting in lower costs than those in the Means Handbook. The recent WFA/Basin I and AEPCO 2011 decisions reinforce the notion that actual earthwork costs bid by contractors for actual projects are in fact lower than average costs from the Means Handbook.[168]

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[164] Id. at 6 to 12.

[165] Dup. Reb., at III-F-15 to -27.

[166] Dup. Reb., at III-F-16 to -17.

[167] See Dup. Reb., at III-F-17.

[168] AEPCO 2011, slip op. at 86-88; WFA/Basin I, slip op. at 86.

NS attempts to avoid this fact by disparaging the Trestle Hollow project as "tiny in size and scope in comparison to the DRR."[169] But any real-world project would be tiny in comparison to the 8,000 mile DRR. Moreover, NS's argument actually undermines its reliance upon Means because Means does not capture the economies of scale that can reduce costs for large projects. This acknowledgement by Means also suggests that the relatively smaller size of Trestle Hollow overstates the true costs that the DRR would incur for its much larger scale construction project.

NS also suggests that, because the Trestle Hollow project was a shortline project, it is substandard or not relevant to the DRR.[170] This is nonsense. The costs and challenges of building a railroad are not dependent upon the size of the railroad doing the building. The Trestle Hollow project involved construction of a complicated, new alignment for the South Central Tennessee Railroad in difficult conditions, including steep terrain requiring deep cuts and high fills. The hilly terrain, ridges and valleys along the alignment, and the fact that much of the land had not been accessed for decades, presented difficult challenges. The elevation change of the project from end to end was well over 100 vertical feet. The contractor used scrapers, assisted by bulldozers, and large excavators with trucks to perform the earthwork. In fact, the Trestle Hollow project was more difficult than most of the terrain that the DRR would encounter. Yet DuPont applied these unit costs only to non-adverse common excavation and then increased them for adverse territory.[171]

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[169] NS Reply, at III-F-39.

[170] NS Reply, at III-F-40.

[171] Dup. Reb., at III-F-18 to -20.

Having exhausted its direct assault on the Trestle Hollow project, NS offers up its own Keystone Project as an alternate real-world source for unit costs that DuPont could have used.[172] But unlike the Trestle Hollow project, the Keystone unit costs are based on a preliminary estimate rather than actual bids from contractors.[173] More significantly, the Keystone project is located in territory that both DuPont and NS have classified as "adverse."[174] Therefore, it would be inappropriate to use those costs for non-adverse common excavation.

DuPont used the Trestle Hollow Project unit cost because it is a supportable, feasible and superior real-world substitute for the Means Handbook costs for common earthwork. The Trestle Hollow Project unit costs reflect the use of actual earthwork costs from a contractor's bid in the same way that actual costs were substituted for Means Handbook costs in WFA/Basin I and AEPCO 2011. As shown in both of those cases and this proceeding, actual bids from contractors are lower than Means Handbook costs. This should be expected as the Means Handbook costs do not include any projects comparable in size to the DRR.

3. The DRR can and will install PTC in 2009.

There is a significant difference between the DuPont and NS cost for signals and communications because DuPont installs PTC at the beginning of DRR operations in 2009, whereas NS installs CTC in 2009 and then installs an overlay PTC system in 2015. DuPont's proposal is what a least-cost, optimally efficient rail carrier would do, because it would make no sense to install a CTC system that will be obsolete in just six years.[175] NS does not contest that logic, but instead argues that the technology to install PTC did not exist in 2009 and that the

[172] NS Reply, at III-F-47.

[173] Dup. Reb., at III-F-25.

[174] Id.

[175] Dup. Reb., at III-F-108 to -109.

market could not supply the required systems because of simultaneous demand from all railroads. NS is wrong.

NS has confused the technology to install PTC on a new railroad with the technology to install PTC as an overlay to an existing CTC system that is interoperable with other Class I railroads. DuPont has shown that not only did PTC technology exist in 2009, but railroads in the U.S. and around the world were using PTC well before then.[176] The challenges and the costs are much greater for installing an overlay system that must be interoperable with other railroads in the midst of on-going rail operations. Because there are costs associated with making PTC interoperable across railroads by 2016, DuPont has included such costs in addition to the original PTC installation costs in 2009.[177] To the extent that NS also contends that the DRR must install a CTC/PTC overlay system because that is what NS must do, such argument is inconsistent with the entire CMP concept underlying the SAC analysis.[178]

4. Partially-Owned Lines.

NS attempts to add $492 million[179] of costs in an unprecedented attempt to require the DRR to construct the lines of third party non-defendant railroads over which the DRR operates pursuant to trackage rights. These lines are the Conrail Shared Asset Areas ("Conrail"), the Terminal Railroad Association of St. Louis ("TRRA"), Indiana Harbor Belt ("IHB"), and the Belt Railway of Chicago ("BRC"). NS argues that, because NS is an equity owner of these lines,

[176] Dup. Reb., at III-F-109 to -110.

[177] Dup. Reb., at III-F-112, 118.

[178] Dup. Reb., at III-F-109, 112 to 113.

[179] Dup. Reb., at III-F-161

the DRR must pay a portion of the hypothetical construction costs of the segments, equal to the NS ownership percentage in the lines, in addition to the applicable trackage rights fee.[180]

NS incorrectly invokes AEPCO 2005,[181] which addresses a very different scenario, to support its position. The AEPCO 2005 case concerned a BNSF-UP joint line movement, where both railroads were co-defendants. The complainant designed a SARR that partially rerouted the issue traffic over a route that included a UP line segment over which BNSF possessed trackage rights.[182] Rather than construct that line segment, the complainant assumed that the SARR could use BNSF's trackage rights. The Board rejected that assumption because, in evaluating the reasonableness of the joint UP-BNSF rate, "it is the collective revenue requirements of UP and BNSF that are being tested, [and thus] all necessary costs of providing facilities for the Vaughn-to-El Paso portion of the joint line movement must be taken into account."[183]

The facts of this case are very different. DuPont has not challenged the joint rates of NS and any carrier over which NS operates via trackage rights. Therefore, the collective revenue requirements of NS and the landlord carriers are not being tested. As the Board explicitly and properly acknowledged in AEPCO 2005, slip op. at 10:

> Complainants…have long been permitted to hypothesize a SARR that would utilize trackage rights…where those trackage rights have replicated how the defendant railroad was actually moving the issue traffic, and where the line has belonged to a third-party, i.e., a railroad that was not a defendant in that rate case. In those cases, use of trackage rights was allowed in the SAC analysis because the third-party carrier was not responsible for providing the service and the revenue requirements of the third-party carrier were not at issue in the rate case.

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[180] NS Reply, at III-F-298 to -316.

[181] Ariz. Elec. Power Coop., Inc. v. Burlington N. & Santa Fe Ry. (AEPCO 2005), STB Docket No. 42058 (served March 15, 2005).

[182] Id., slip op. at 4.

[183] Id., slip op. at 11.

Conrail, IHB, TRRA, and BRC are not defendants in this case, their rates have not been challenged, and their revenue requirements are not at issue.

Nevertheless, NS contends that its partial ownership in these lines somehow puts their revenue requirements at issue. But Conrail and IHB are not even partially owned by NS, but rather by NS Corporation, which is the parent holding company of all three railroads.[184] Although NS does directly hold a partial ownership interest in the TRRA and BRC, that ownership interest still does not make their revenue requirements relevant to this case. Indeed, NS's position directly conflicts with its arguments in this case concerning another partially-owned company, TTX Company, for which NS correctly recognized that the DRR is not required to acquire an ownership stake in order to step into the NS's shoes for the purpose of moving intermodal traffic.[185]

However, if the Board were to require the DRR to acquire partial ownership rights in any of those four railroads, DuPont has shown that NS improperly substitutes replacement costs for ownership costs in calculating the amount that the DRR would have to pay.[186] Because NS's ownership stake in these entities is not based upon replacement costs, the imposition of such a requirement on the DRR would be a barrier to entry. Furthermore, if the DRR must purchase an ownership interest, it also is entitled to receive the same revenue that NS receives by virtue of its ownership stake.[187] DuPont provides the Board with information to calculate NS's ownership

[184] Dup. Reb., at III-F-149 to -153.

[185] Dup. Reb., at III-F-153 to -154.

[186] Dup. Reb., at III-F-155 to -159.

[187] Dup. Reb., at III-F-159 to -164.

costs and earnings that would be attributable to the DRR if the Board requires the DRR to acquire an ownership stake in these assets.[188]

F. DuPont Has Performed the DCF and MMM Analyses Consistent with Board Precedent and Real-World Practice.

This Brief addresses five major areas of difference between NS and DuPont in their performance of the DCF and MMM analyses. These are equity flotation costs, the DRR's debt capital structure, bonus depreciation, the present value of future interest payments, and TIH-related modifications to the MMM analysis. With respect to the debt capital structure and future interest payments, DuPont has advocated modifications to the practice in prior cases based upon real-world practice and a newly-identified flaw, respectively. In contrast, NS has engaged in result-oriented deviations from Board precedent that has consistently rejected equity flotation costs, barriers to entry that deny the SARR the ability to pay the same market prices as the defendant, and MMM variable cost adjustments.

1. NS improperly adds equity flotation costs to the DRR's cost of capital.

Although the Board has consistently rejected railroad attempts to include equity flotation costs in the SARR's cost of capital, NS claims that the Board "changed its approach" in AEP Texas.[189] NS's characterization is incorrect.

The Board's inclusion of equity flotation costs in AEP Texas is easily distinguished from all of its other decisions rejecting such costs. In AEP Texas, the complainant agreed to an equity flotation cost as part of its plan to have the SARR refinance its construction costs soon after the construction was completed.[190] Thus, there was no dispute for the Board to resolve.

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[188] Dup. Reb., at III-F-164.

[189] NS Reply, at III-G-3 to -4.

[190] Dup. Reb., at III-G-4 to -5.

Furthermore, the equity flotation fee was only 0.13%, which stands in stark contrast to the 2.1% fee proposed by NS based on an inappropriate comparison with the Facebook IPO.

In cases after AEP Texas, the Board has continued to reject equity flotation costs. Indeed, the Board explicitly rejected the very same argument that NS has made in this proceeding, that the Board "changed its approach" in AEP Texas.[191] In AEPCO 2011, slip op. at 138, the Board specifically stated that its "longstanding precedent" required rejecting the equity flotation fee proposed by BNSF and UP. That "longstanding precedent" recognized that, if the Board were to use a flotation fee as requested by NS, then the Board would also have to replace the railroad industry cost-of-capital in the DCF model:

> A serious argument that an equity flotation cost should be included for a stand-alone railroad would require a re-examination of the use of the general rail industry cost-of-capital rate in the DCF model. Because of the complexities associated with such an endeavor, the parties to SAC cases have found it preferable to use the rail industry's cost-of-capital rate as a surrogate for that of the stand-alone railroad.[192]

NS has not proposed any replacement for the rail industry cost-of-capital in the DCF model and, consequently, the Board should reject the inclusion of an equity flotation cost.

2. The DRR's debt capital structure is the same as real-world railroads.

DuPont has set a target capital structure for the DRR and maintained that structure throughout the DCF model. The DRR would make coupon payments on its debt consisting solely of fixed interest payments. To reflect this steady capital structure, the DRR would reissue debt as older debt is retired, which results in consistent interest payments as reflected in the DCF model. Although this is different from past cases in which the SARR has issued debt similar to a typical home mortgage loan (*e.g.*, quarterly payments that contain a principal and interest

[191] AEPCO 2011, slip op. at 138,

[192] Wisconsin P&L, 5 S.T.B at 1040 n.200.

component), DuPont has designed the DRR's capital structure in the same manner as real-world railroads, including NS, and other large corporations.[193] This capital structure also is consistent with the Board's DCF model, which assumes the capital structure does not change over time.

NS has mischaracterized DuPont's evidence when it states that "DuPont improperly assumes that the DRR could be financed with a single debt instrument that has a 20-year term, while also assuming that the terms of the instrument would reflect the railroad industry cost of debt, which is calculated based in part on instruments with much shorter intervals to maturity and, thus, correspondingly lower yields."[194] DuPont never stated that it was relying upon a single 20-year debt instrument to finance the DRR. DuPont stated only that the debt would be financed over 20 years. The financing would include a mix of short-, medium-, and long-term instruments that the DRR would replace with new debt as each expired, thereby maintaining a constant capital structure, just as NS and other railroads do.

3. The DRR is entitled to bonus depreciation.

Consistent with Board precedent and contestable market theory, the DRR must be permitted to take advantage of the "bonus" depreciation provisions enacted as part of the Economic Stimulus Act of 2008 and the American Reinvestment and Recovery Act of 2009. NS alleges that it would be inappropriate to permit the DRR to avail itself of these bonus depreciation benefits for virtually all of the DRR's road property investment.[195] Although NS acknowledges that the SARR is entitled to <u>some</u> bonus depreciation benefit, it attempts to limit that benefit based upon the extent to which NS itself has benefited from those provisions. But,

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[193] Dup. Reb., at III-H-2 to -4.

[194] NS Reply, at III-H-2 to -3.

[195] NS Reply, at III-H-5 to -6.

the Board would impose an impermissible barrier to entry, in violation of contestable market theory, if it restricted the SARR's access to bonus depreciation.

The NS argument attempts to turn contestable market theory on its head by claiming that bonus depreciation should be restricted because it places the DRR at an advantage relative to NS. The fact that the DRR might have an advantage relative to NS is a red-herring. By virtue of being a least-cost, optimally efficient new entrant, a SARR necessarily will have many advantages over the incumbent. If the objective of a SAC analysis were to establish parity between the defendant and the SARR, then a SARR would be required to use the same production techniques that the defendant used to build the original rail lines a century ago, rather than more efficient modern techniques.[196]

The SAC analysis requires the SARR to pay current prices at the time of construction regardless what the defendant may have paid. This is because "[t]he crucial feature of a contestable market is its vulnerability to hit-and-run entry,"[197] which means that the SARR must be able to enter the market within the minimum amount of time dictated by technological feasibility for the most complex and time-consuming project on the SARR, and pay current market prices for construction, without regard for resource constraints.[198] That means a SARR must pay market rates for land, material, and labor, which are sometimes higher than the defendant paid and at other times lower. Tax depreciation is a temporal cost factor just like these

[196] Dup. Reb., at III-H-6.

[197] William J. Baumol, Contestable Markets: An Uprising in the Theory of Industry Structure, Am. Econ. Rev., March 1982, at 1, 4.

[198] Dup. Reb., at III-H-6 to -7.

other costs that the SARR incurs. It would be arbitrary to deny the DRR the benefit of "current market prices" for just this one factor simply because this factor reduces the DRR's costs.[199]

4. DuPont has corrected a flaw in the calculation of the present value of future interest payments in the terminal value calculation.

DuPont has identified and corrected a flaw in the current methodology for calculating the present value of future interest payments in the terminal value calculation.[200] Because the DCF model explicitly assumes that the SARR's capital structure will remain constant into perpetuity, the amounts of common equity and debt carried on the SARR's financial statements will remain the same forever. However, the DCF model also assumes that, after year 20 and until the first assets are replaced in the replacement level of the DCF model, the railroad has no debt and no tax shielding interest payments. This creates an irreconcilable mismatch between the SARR's cost of capital and its cash flows. The cost of capital assumes that the SARR is carrying debt, and its associated interest payments, but the cash flows reflect no benefits from the interest tax shields.

Although NS recognized that such a disconnect exists, it refused to accept that a correction is needed because the disconnect is allegedly a "mainstay of the Board's DCF model since Coal Trading and McCarty Farms."[201] NS did not provide any citations to these two cases, so it is not entirely clear why NS mentioned them. In Coal Trading, the ICC allowed the debt-equity mix to change over time as debt was paid off;[202] conversely, McCarty Farms involved use of a constant capital structure.[203] Neither case included a statement by the agency approving, let

[199] Dup. Reb., at III-H-7.

[200] Dup. Reb., at III-H-10 to -13.

[201] See NS Reply, at III-H-9.

[202] See Coal Trading, at 379-380.

[203] See McCarty Farms, at 522, n.123.

alone recognizing, the existence of the disconnect that DuPont has identified. NS also incorrectly claims that the Board "affirmed" this disconnect in the Major Issues proceeding.[204] The Board, however, did not even address tax shielding interest payments or the SARR's debt-equity mix beyond Year 20, which is at the heart of the disconnect described by DuPont. Finally, the simple fact that an error has existed for several years is not a legitimate justification for its continued existence. An error, regardless of how long it has existed, should be corrected.

5. The Board should reject NS's radical modifications to the MMM analysis.

DuPont has applied the Board's MMM analysis consistent with the Major Issues decision, in which the Board adopted MMM. In contrast, NS has proposed a radical departure from Major Issues purportedly to "properly allocate the unique variable costs of TIH transportation solely to the DRR's TIH movements."[205] The only allegedly unique TIH cost that NS has identified for different treatment in the MMM model, however, is PTC. The Board should reject the NS modifications to MMM both as a matter of fact and law.

Factually, NS inaccurately describes PTC costs as unique to TIH transportation. There are three independent problems with this assertion.[206] First, because PTC is the only signal system used by the DRR, as opposed to a PTC/CTC overlay, PTC unequivocally is used by all of the DRR's traffic, not just TIH traffic. Second, because the Rail Safety Improvement Act of

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[204] See NS Reply, at III-H-9.

[205] NS Reply, at III-H-13 to -17, -19 to -31. NS's attempt to modify the MMM analysis is extremely hypocritical. The Board adopted the MMM analysis in the same notice and comment rulemaking in which it adopted the Original-ATC methodology for allocating cross-over traffic revenue. Elsewhere in its Reply Evidence, NS argues that, because the Board adopted ATC in that formal rulemaking, it can only modify ATC through another formal rulemaking, and that therefore the Board improperly adopted Modified ATC in an adjudicatory proceeding. Yet, when it comes to modifying the MMM process in this adjudicatory proceeding, NS has no such qualms. If NS is correct that the Board could not modify ATC except in a formal rulemaking, then the same logic would prohibit it from modifying the MMM analysis.

[206] Dup. Reb., at III-H-22 to -24.

2008 does not require PTC to be installed on a rail line unless there is both (a) the presence of TIH traffic and (b) at least 5,000,000 gross tons of total traffic, it would be inaccurate for NS to contend that, but for TIH traffic, PTC would not be required. Third, even if the presence of TIH traffic were the sole basis for requiring PTC, the benefits of PTC are not limited to just TIH traffic. Thus, the entire factual predicate for NS's MMM modifications is erroneous.

As a matter of law, the NS modifications constitute movement-specific adjustments to URCS, which are prohibited by Board precedent and are inconsistent with the purpose of MMM.[207] In WFA/Basin, the Board rejected a similar adjustment to the variable costs used in the MMM model. Moreover, even if NS were correct that the variable costs for TIH shipments should be adjusted to allocate PTC related costs to only TIH movements, equity would require that other movements' variable costs be adjusted to better allocate costs specific for those movements. To not allow such adjustments for all movements would skew the revenue and cost relationships between different shipments on which MMM relies.[208]

NS's attempt to find support in the Board's June 24, 2011 AEPCO decision is profoundly misplaced.[209] In AEPCO June 2011, the Board expressed concern over the differences between how the SARR handled the same traffic as the defendant, which resulted in different costs for the SARR and the defendant.

> In the proceeding before us, the Board is concerned with how the parties have developed the variable costs for the traffic movements on the SARR submitted by AEPCO. Here, most of AEPCO's

[207] Dup. Reb., at III-H-19 to -21.

[208] This is also the same reason why NS's assertion that movement specific cost adjustments for SAC purposes but not market dominance purposes is incorrect. Under NS's approach, a movement could exceed the 180% jurisdictional threshold level for market dominance purposes, but have an R/VC ratio well below the Jurisdictional Threshold level for SAC purposes. Such an approach is nonsensical, and could open the process to gaming from all parties involved.

[209] NS Reply, at III-H-13.

> traffic group moves in trainload service, but most of the variable costs calculated for that group are costed assuming it is moved in carload and multi-car service.[210]

Therefore, the Board directed the parties to submit revised variable cost calculations that reflected the actual operating characteristics of the movements on the SARR, as opposed to the defendant. When dealing with the TIH traffic in this case, however, NS has not identified any TIH-related cost or handling differences between the SARR and the defendant. Therefore, the issue identified by the Board in AEPCO June 2011 does not arise in the context of TIH handling costs.

G. NS has not met its burden to demonstrate the existence of a cross-subsidy on the DRR.

NS has not presented any evidence or argument that alleges either a so-called "PPL" or "Otter Tail" cross-subsidy issue with the DRR.[211] Because NS has the burden of proof with respect to these issues, its failure to present cross-subsidy evidence as part of its Reply constitutes a waiver of these claims.

On January 3, 2013, however, a full month after the submission of its Reply Evidence, NS belatedly asserted that, because its Reply Evidence shows that the DRR costs exceed its revenue, it was not possible for NS to conduct a cross-subsidy analysis because "no meaningful, rational, or accurate internal cross-subsidy analysis can be conducted on the DRR unless and until the Board were to issue an initial decision detailing its findings regarding all relevant costs and revenues, and finding—contrary to NS' Reply Evidence—that the present value of SAC

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[210] See Ariz. Elec. Power Coop. v. BNSF Ry. (AEPCO June 2011), STB Docket No. NOR 42113, slip op. at 2 (served June 27, 2011).

[211] Both analyses take their name from the decisions in which they were adopted. See PPL Mont., LLC v. Burlington N. & Santa Fe Ry., 6 S.T.B. 286 (2002), reconsideration denied, STB Docket No. NOR 42054, slip op. (served Mar. 24, 2003), aff'd sub nom. PPL Mont. v. STB, 437 F.3d 1240 (D.C. Cir. 2006); Otter Tail.

revenues would exceed SAC costs."[212] Therefore, NS claims an unprecedented "right to conduct and submit an internal cross-subsidy analysis based on the DRR revenues and costs as determined by the Board," if the Board finds that the DRR's revenues in fact do exceed its costs.[213] NS has no such right under Board procedures.

As an initial matter, NS has not presented a valid reason for not performing a cross-subsidy analysis in its Reply Evidence. NS is not the first defendant to submit reply evidence showing that the stand-alone railroad costs exceed its revenues. Indeed, every defendant's reply evidence attempts to make that showing. Many of those defendants nevertheless have performed a cross-subsidy analysis in accordance with the Board's procedures and there is no reason why NS should be treated differently.

The proper time for NS to have submitted cross-subsidy evidence was in its Reply Evidence. As the Board noted in WFA/Basin I, slip op. at 10, a defendant which does not demonstrate an internal cross-subsidy based upon the PPL or Otter Tail tests in its reply evidence "has not met its burden to demonstrate that the SAC presentation rests upon an improper internal cross-subsidy." Therefore, having failed to perform a cross-subsidy test in its reply evidence, NS has no basis to insist upon a right to submit such evidence in a subsequent round of pleadings after the Board determines the final DRR costs and revenues.

Any doubt as to this fact in the mind of NS should have been erased by the Board's decision in AEPCO. In that case, the defendants did perform a cross-subsidy analysis on their own version of the SARR, but not on the complainant's SARR. Because the Board adopted the complainant's SARR configuration, it held that the defendants had not met their burden to demonstrate an internal cross-subsidy:

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[212] Letter from G. Paul Moates, NS Counsel, to Cynthia Brown, STB, (Jan. 2, 2013) 1.

[213] Id. at 2.

> Defendants do state that the Board should conduct a PPL Montana cross-subsidy analysis on the ANR to determine whether the revenues generated by traffic using the Vaughn-El Paso segment cover the costs of that segment, and also an analysis of the prescribed rate to ensure that the rate reduction does not itself result in an impermissible cross subsidy, in accordance with guidance in Otter Tail Power Co. However, defendants make no effort to perform these analyses themselves. Defendants have performed a cross-subsidy analysis on the ANR-NM SARR, and give no reason why they have not repeated their efforts on the ANR submitted by AEPCO. Defendants could have also easily performed the Otter Tail Power Co. analysis by using the revenues associated with AEPCO's opening evidence, but have not provided the Board with evidence that the prescribed rate would necessarily have to rise to avoid creating a cross subsidy.
>
> As the Board accepts the ANR SARR configuration, defendants have failed to challenge the relevant SARR utilizing the Board's internal cross-subsidy test. As the Board found in Western Fuels Ass'n v. BNSF Railway (Western Fuels Ass'n 2007), NOR 42088, slip op. at 10 (STB served Sept. 10, 2007), when a defendant fails to identify a section of the SARR that is not self-supporting, it has not met its burden to demonstrate an internal cross subsidy, and the disputed traffic shall be included in the SAC analysis.[214]

Thus, NS was clearly on notice that it must perform a cross-subsidy analysis in its Reply Evidence in order to meet its burden. In this case, NS did not perform a cross-subsidy analysis on either its version of the DRR or the DuPont version. NS's January 2nd letter, filed more than a month after its Reply Evidence, is a post hoc rationalization of its failure, which the Board should reject.

III. CONCLUSION.

For the foregoing reasons, the Board should issue a decision finding that NS possesses market dominance over all 138 movements to which the challenged rates apply, and that those rates are unlawful because they exceed a maximum reasonable level. The Board should order

[214] AEPCO 2011, slip op. at 15-16 (footnotes omitted).

NS to establish and maintain rates for the issue movements at levels no higher than those shown by DuPont's Rebuttal Evidence for each of the years from June 1, 2009 through May 31, 2019, and to pay DuPont reparations equal to the difference between the maximum prescribed rate levels and the freight charges actually paid by DuPont on all shipments from June 1, 2009 through the date of NS's compliance with the Board's order, together with compensatory interest.

Respectfully submitted,

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June 14, 2013

CERTIFICATE OF SERVICE

I hereby certify that this 14th day of June 2013, I served a copy of the Final Brief of E.I. du Pont de Nemours and Company upon Defendant via hand delivery at the address below:

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Exhibit A

(Redacted)