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BEFORE THE
SURFACE TRANSPORTATION BOARD

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

OPENING EVIDENCE AND ARGUMENT OF

E.I. DU PONT DE NEMOURS AND COMPANY

Volume I:
Counsel's Argument and Summary of Evidence

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CASE GLOSSARY

AEP Texas 2006	*AEP Texas Northern Co v. BNSF Ry.*, STB Docket No. 41191 (Sub-No. 1) (served Nov. 8, 2006)
AEP Texas	*AEP Texas Northern Company v. BNSF Railway,* STB Docket No. 41191 (Sub-No. 1) (served Sept. 10, 2007)
AEPCO	*Arizona Electric Power Cooperative, Inc. v. BNSF Railway Company and Union Pacific Railroad Company,* STB Docket No. 42113 (served Nov. 22, 2011)
APS	*Arizona Pub. Serv. Co. and Pacificorp. v. The Atchison, T. and Santa Fe Ry.*, 2 S.T.B. 367 (1997)
Bottleneck Decision	*Central Power & Light Company v. Southern Pac. Transp. Co, et al.*, 1 STB 1059 (1996), aff'd sub nom. *MidAmerican Energy Company v. Surface Transportation Board,* 169 F.3d 1099 (8th Cir. 1999)
Coal Rate Guidelines or Guidelines	*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)
Coal Trading Corp.	*Coal Trading Corp. v. The Baltimore & Ohio R.R., et al.*, 6 I.C.C. 2d 361 (1990)
Consolidated Papers	*Consol. Papers, Inc. v. Chi.& Nw. Transp., Inc.*, 7 I.C.C.2d 330 (1991)
CP&L	*Carolina Power & Light Co. v. Norfolk Southern Ry,* STB Docket No. 42072 (served Dec. 23, 2003)
DMIR I and II	*Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry.*, 4 S.T.B. 64 (1998), on reconsideration, 4 S.T.B. 288 (1999)
Duke/CSXT	*Duke Energy Corp. v. CSX Transportation Inc.,* STB Docket No. 42070 (served Feb. 4, 2004)
Duke/NS	*Duke Energy Corp. v. Norfolk Southern Railway,* STB Docket No. 42069 (served Nov. 6, 2003)

CASE GLOSSARY

DuPont (Nitrobenzene)	*E.I. du Pont de Nemours and Company v. CSX Transportation, Inc.*, STB Docket No. 42101 (served June 30, 2008)
DuPont (Plastics)	*E.I. du Pont de Nemours and Company v. CSX Transportation, Inc.*, STB Docket No. 42099 (served June 30, 2008)
FMC	*FMC Wyo. Corp. v. Union Pacific Railroad Company*, 4 S.T.B. 699 (2000)
General Electric	*Gen. Elec. Co. v. Balt.& Ohio R.R.*, No. 38125S, 1984 ICC LEXIS 206 (ICC served Oct. 12, 1984)
General Procedures	*General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases*, STB Ex Parte No. 347 (Sub-No. 3) (served March 12, 2001).
IPA	*Intermountain Power Agency v. Union Pacific Railroad Company*, STB Docket No. 42127 (Public Version of UP Reply dated Nov. 10, 2011)
KCPL	*Kansas City P & L Co. v. Union Pac. R.R. Co.*, STB Docket No. 42095 (served May 19, 2008)
Major Issues	*Major Issues in Rail Rate Cases*, STB Ex Parte No. 657 (Sub-No. 1) (served Oct. 30, 2006)
Market Dominance Determinations	*Mkt. Dominance Determinations & Consideration of Prod. Competition*, 365 I.C.C. 118 (1981)
McCarty Farms	*McCarty Farms v. Burlington N., Inc.*, 3 I.C.C.2d 822 (1987)
Nevada Power II	*Bituminous Coal – Hiawatha, Utah to Moapa, Nevada*, 10 I.C.C.2d 259 (1994)
OG&E	*Oklahoma Gas & Electric Co., v. Union Pacific Railroad Company*, STB Docket No. 42111 (served July 24, 2009)
Otter Tail	*Otter Tail Power Co., v. BNSF Ry.*, STB Docket No. 42071 (served Jan. 27, 2006)

CASE GLOSSARY

PP&L	*PPL Montana, LLC v. The Burlington Northern and Santa Fe Ry. Co.*, 6 S.T.B. 286 (2002)
PSCo/Xcel	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served June 8, 2004)
PSCo/Xcel II	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served Jan. 19, 2005)
Special Procedures	*Special Procedures for Making Findings of Mkt. Dominance as Required by the R.R. Revitalization and Regulatory Reform Act of 1976,* 353 I.C.C. 874 (1976)
TMPA	*Texas Municipal Power Agency v. Burlington Northern and Santa Fe Railway,* 6 S.T.B. 573 (2003)
WFA/Basin	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Sept. 10, 2007)
WFA/Basin II	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Feb. 18, 2009)
Wisconsin P&L	*Wisconsin Power and Light Co., v. Union Pacific Railroad,* 5 S.T.B. 955 (2001)
West Texas Utilities	*West Texas Utilities Co. v. Burlington Northern Railroad,* 1 STB 638 (1996), aff'd sub nom. *Burlington Northern Railroad v. STB,* 114 F.3d 206 (D.C. Cir. 1997)

ACRONYMS

The following acronyms are used:

AAR	Association of American Railroads
AASHTO	American Association of State Highway Officials
AEI	Automatic Equipment Identification
AEO	EIA's Annual Energy Outlook Forecast
AHM	Anhydrous Methylamines
AII-LF	All-Inclusive Less Fuel Index, published by AAR
AQM	Aqueous Methylamines
AREMA	American Railway Engineering and Maintenance-of-Way Assoc.
ARRA	American Reinvestment and Recovery Act of 2009
ATC	Average Total Cost
ATF	Across-the-Fence
ATV	All-Terrain Vehicle
B&B	Bridge and Building
BNSF	Burlington Northern Santa Fe Railway Company
C&S	Communications and Signals
CAGR	Compound Annual Growth Rate
CFS	2007 Commodity Flow Survey
cmp	Corrugated Aluminized Metal Pipe
CMP	Constrained Market Pricing
CN	Canadian National Railway
CNW	Chicago & NorthWestern
COBRA	Consolidated Omnibus Budget Reconciliation Act
CPI	Consumer Price Index
CSXT	CSX Transportation, Inc.
CTC	Central Traffic Control
CWR	Continuous Welded Rail
CY	Cubic Yards
DCF	Discounted Cash Flow
DFE	Difluoroethane
DME	Dimethyl Ether
DMF	Dimethyl Formamide
DMS	Dimethyl Sulfate
DOT	U.S. Department of Transportation
DP	Distributed Power
DRR	DuPont Stand-Alone Railroad
DTL	Direct to Locomotive Fueling
EDI	Electronic Data Interchange
EEO	Equal Employment Opportunity
EIA	Energy Information Administration
EOTD	End of Train Device
FED	Failed-equipment Detector
FRA	Federal Railroad Administration
FSC	Fuel Surcharges

G&A	General and Administrative
GDP-IPD	Gross Domestic Product – Implicit Price Deflator
GWR	Gross Weight on Rail
HCl	Hydrochloric Acid (a/k/a Muriatic Acid)
HDF	On-Highway Diesel Fuel Index
HR	Human Resources
ICC	Interstate Commerce Commission
IDC	Interest During Construction
IDS/IPS	Intrusion Detection System/Intrusion Prevention System
ISS	Interline Settlement System
IT	Information Technology
KCS	Kansas City Southern Lines
LAN	Local Area Network
MACRS	Modified Accelerated Cost Recovery System
MIT	Massachusetts Institute of Technology
MGT	Million Gross Tons
MLO	Manager of Locomotive Operations
MMF	Monomethyl Formamide
MMM	Maximum Markup Methodology
MOW	Maintenance of Way
MTO	Manager of Train Operations
NCREIF	National Council of Real Estate Investment Fiduciaries
NDGPS	Nationwide Differential GPS
NPI	NCREIF Property Index
NS	Norfolk Southern Railway Company
NT/PC	Network Personal Computer
O/D	Origin/Destination
OS	Operating Station
OSHA	Occupational Safety and Health Administration
PDO	Bio-Propanediol
Pet Coke	Calcined Petroleum Coke
PPI	Producer Price Index
PTC	Positive Train Control
R/VC	Revenue to Variable Cost
RCAF-A	Rail Cost Adjustment Factor, adjusted for productivity
RCAF-U	Rail Cost Adjustment Factor, unadjusted for productivity
RMI	A GE Transportation Company
RMS	RMI's Revenue Management Services System
ROW	Right of Way
RSIA	Rail Safety Improvement Act of 2010
RTC	Rail Traffic Controller Model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
SEC	Securities Exchange Commission
SO3	Sulfur Trioxide
SPLC	Standard Point Location Code
STB	Surface Transportation Board

STCC	Standard Transportation Commodity Code
STEO	Short-Term Energy Outlook
T&E	Train and Engine
TCS	Triple Crown Services
TDIS	Thoroughbred Direct Intermodal Services
TiCl4	Titanium Tetrachloride
TiO2	Titanium Dioxide
TMS	RMI's Transportation Management Services System
TRN	NS Train Event Train Symbol
UP	Union Pacific Railroad
UPS	Uninterruptible Power Supply
URCS	Uniform Railroad Costing System
WAN	Wide Area Network
WFL	Waste, Flammable Liquid
WTI	West Texas Intermediate

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21. Lane B18 – Belle, WV to Garyville, LA
22. Lane B49 – Dowling, TX to Fort Mill, SC
23. Lane B82 – Orange, TX to Greenville, SC
24. Lane B84 – Pascagoula, MS to Fort Mill, SC
25. Lane B85 – Pascagoula, MS to Lemoyne, AL
26. Lane B89 – Belle, WV to Gainesville, GA
27. Lane B90 – Belle, WV to Port Bienville, MS
28. Lane B91 – Belle, WV to Theodore, AL
29. Lane B93 – Bellwood, VA to Fort Mill, SC
30. Lane B99 – Loudon, TN to Graingers, NC
31. Lane B100 – Loudon, TN, Graingers, NC
32. Lane B106 – Miami Fort, OH to Pepper, VA
33. Lane B107 – Natrium, WV to Belle, WV
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7. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 1Q10

8. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 2Q10

9. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 3Q10

10. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 4Q10

11. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 1Q11

12. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 2Q11

13. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 3Q11

14. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 4Q11

15. Comparison of NS Tariff Rates and STB Maximum Rates Per Car for DuPont Movements - - 1Q12

Part I

PUBLIC VERSION

PART I

COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

Pursuant to the procedural schedule served by the Surface Transportation Board ("Board" or "STB") in this docket on January 13, 2012, E.I. du Pont de Nemours and Company ("DuPont") hereby submits its Opening Evidence and Argument on both market dominance and stand-alone costs ("SAC").[1] DuPont challenges the reasonableness of common carrier rail rates established by Norfolk Southern Railway Company ("NS") for 138 issue movements involving the transportation of the following 26 commodities:

1. Acid, Glycolic
2. Acid, Sulfuric
3. Acid, Spent Sulfuric
4. Acid, Fuming Sulfuric ("Oleum")
5. Acid, Muriatic ("Hydrochloric Acid")
6. Aniline Oil
7. Bio-Propanediol ("PDO")
8. Caustic, Potassium ("Caustic Potash")
9. Caustic, Sodium ("Caustic Soda")
10. Chlorine
11. Dimethyl Ether ("DME")
12. Difluoroethane ("DFE")
13. Dimethyl Formamide ("DMF")
14. Dimethyl Sulfate ("DMS")
15. Lime
16. Methylamines, Anhydrous ("AHMs")
17. Methylamines, Aqueous ("AQMs")
18. Monomethyl Formamide ("MMF")
19. Petroleum Coke ("Pet Coke")
20. Polyethylene
21. Sodium Methylate
22. Sulfur Trioxide
23. Titanium Dioxide
24. Titanium Tetrachloride ("TiCl")
25. Waste, Flammable Liquid ("WFL")
26. Zircon Sand

[1] Throughout DuPont's Opening Evidence, all text within single brackets is {CONFIDENTIAL} and all text within double brackets is {{HIGHLY CONFIDENTIAL}} pursuant to the Protective Order adopted in the Board's decision served on January 11, 2011 in this proceeding.

The 17 movements identified in Exhibit A to DuPont's Third Amended Complaint, filed December 5, 2011, are single line NS movements from origin to destination. The 121 movements identified in Exhibit B to that Complaint are joint line movements for which DuPont has challenged just the NS bottleneck segment rate. DuPont has lawfully challenged just the NS portion of the through movement rates, pursuant to the "contract exception" to the Board's "bottleneck" rule. See Cent. Power & Light Co. v. S. Pac. Transp. Co. (Bottleneck Decision), 1 S.T.B. 1059, 1078 (1996), aff'd sub nom MidAmerican Energy Co. v. STB, 169 F.3d 1099 (8th Cir. 1999). DuPont has entered into contracts with the connecting line-haul carriers.[2]

DuPont's Opening Evidence follows the format set forth in General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases, STB Ex Parte No. 347 (Sub-No. 3) (served March 12, 2001) [hereinafter General Procedures]. As shown in Part II of this Opening Evidence, NS possesses market dominance over each of the issue movements, pursuant to 49 U.S.C. §§ 10701(d)(1) and 10707. Part II-A establishes that the challenged rates exceed 180% of variable costs. Part II-B establishes the absence of effective competition from alternative transportation providers. Part III of this Opening Evidence demonstrates that the challenged rates are unreasonable because they exceed the SAC rate. In Part IV, DuPont sets forth the qualifications of its witnesses for both the market dominance and SAC evidence.

The remainder of this Part I presents the legal argument and a summary of DuPont's Opening Evidence in the following structure:

Part I-A.1 addresses quantitative market dominance
Part I-A.2 addresses qualitative market dominance
Part I-B summarizes the SAC evidence
Part I-C summarizes DuPont's request for relief

[2] See Dup. Op. Workpaper "Rail Contracts" folder.

A. MARKET DOMINANCE EVIDENCE AND ARGUMENT.

"Market dominance" is defined as "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). "Effective competition" means that, "if a carrier raises the rate for such traffic, then some or all of that traffic will be lost to other carriers or modes." CF Indus., Inc. v. STB, 255 F.3d 816, 821 (D.C. Cir. 2001) (quoting Mkt. Dominance Determinations & Consideration of Prod. Competition, 365 I.C.C. 118, 129 (1981) [hereinafter Market Dominance Determinations], aff'd en banc sub nom. W. Coal Traffic League v. United States, 719 F. 2d 772 (5th Cir. 1983)). There is both a quantitative and a qualitative component to market dominance. Market Dominance Determinations, 365 I.C.C. at 131-32. First, the Board must find that the challenged rate is at least 180% of the carrier's variable cost of providing the service. 49 U.S.C. § 10707(d)(1)(A). Second, the Board must determine that neither other rail carriers nor other modes are effective competitive constraints upon the challenged rates. DuPont has satisfied both of these requirements in this Opening Evidence.

1. NS Possesses Quantitative Market Dominance.

A rail carrier has the burden of proof to establish the absence of quantitative market dominance (*i.e*, its revenue/variable cost ratio is below 180%). 49 U.S.C. § 10707(d)(1)(B). DuPont has established NS's quantitative market dominance in Part II-A, which calculates R/VC ratios for the issue movements that exceed 180% and are as high as 1043%. See Exhibits II-A-1 through 12.

On December 22, 2011, DuPont and NS filed their "Joint Submission of Operating Characteristics" in this proceeding. See Exhibit II-A-13. Although they were able to agree upon six of the nine traffic and operating inputs to calculate the variable cost of each issue movement, they were not able to agree upon loaded miles, tons per car, and car type (for just three

movements). In this Opening Evidence, DuPont now accepts the NS car type (*e.g.* tank car > 22,000 gallons) for the three movements that were in dispute, which leaves mileage and tons per car still in dispute.

DuPont has used the predominant route miles to calculate the variable cost for all but 20 of the issue movements. DuPont adopted the predominant route convention in order to address significant anomalies in the NS traffic data. For any given movement, the NS data frequently contained miles that ranged from zero miles to many multiples of the predominant route mileage. Exhibit II-A-14 provides examples of these anomalies. The NS traffic data contained so many of these mileage variations and other data anomalies that DuPont adopted the predominant route convention as the best means to address these problems. The justification for using the predominant route mileage is that the route followed most often by NS for each issue movement represents the most efficient route. For consistency, DuPont also has used the predominant route analysis to calculate the weighted average tons per car.

DuPont applied one exception to the predominant route analysis for 20 issue movements in order to address extraordinarily long back-haul movements in the NS traffic data. In this case, DuPont is using the term "back-haul" in reference to movements where a rail car travels in the opposite direction of the destination and then doubles back to reach the destination (*e.g.*, a point B to C movement that first travels to points A and/or D before ending at point C). Although DuPont understands that some back-hauls are an inherent part of a network system, and has included back-haul miles in the predominant route analysis, there are 20 issue movements that have such extraordinarily long back-hauls, either in absolute miles or as a proportion of total distance, that there was no obvious network efficiency justification for them and NS has not provided any other justification.

In Exhibits II-A-17 through 36, for each of the 20 issue movements with extraordinarily long back-haul miles, DuPont identifies the back-haul miles, provides an overview of the impact of including these miles on NS variable costs, provides a schematic of the NS route, and explains how it determined the miles that it used for the variable cost calculation. DuPont used the following alternative methodologies to determine miles for these 20 issue movements:

- If the NS car event data contained instances where NS had handled the issue movement on routes without back-haul miles, DuPont used those miles.
- If the NS car event data did not contain any instances of the issue movement without back-haul miles, DuPont subtracted the back-haul segment miles from the predominant route miles.

2. NS Possesses Qualitative Market Dominance.

Qualitative market dominance has two components: intramodal and intermodal competition. As the party with the burden of proof on this issue, DuPont must make a *prima facie* showing and NS "then must rebut that showing or suffer the consequence." McGraw Edison Co. v. Alton & S. Ry., 2 I.C.C. 2d 102, 106 (1986). DuPont has made a *prima facie* showing that there is no effective intramodal or intermodal competition for any of the issue movements.

a. Intramodal competition does not exist for the issue movements.

Because "[i]ntramodal competition refers to competition between two or more railroads transporting the same commodity between the same origin and destination," there can be no intramodal competition where NS is the sole rail carrier at either the origin or destination. Ariz. Pub. Serv. Co. v. Atchison, Topeka & Santa Fe Ry., 2 S.T.B. 367, 373 (1997) [hereinafterAPS]; see also, Market Dominance Determinations, 365 I.C.C. at 132; W. Tex. Utils. Co. v. Burlington N. R.R.., 1 S.T.B. 638, 645 (1996) [hereinafter West Texas Utilities]; Consol. Papers, Inc. v.

Chi.& Nw. Transp., Inc., 7 I.C.C.2d 330, 341 (1991) [hereinafter Consolidated Papers] ("In analyzing the possible presence of intramodal competition, we may eliminate movements from consideration on any of three bases: (1) the lack of more than one independent route. . . .").

For each of the 138 issue movements, NS is the only rail carrier that serves the origin, the destination, or both. All 17 issue movements in Exhibit A to DuPont's Third Amended Complaint are captive to NS at both the origin and destination. Eighty-four issue movements in Exhibit B to the Complaint involve origins where NS is the only railroad that can provide service. Thirty-seven issue movements in Exhibit B involve destinations where NS is the only railroad that can provide service. There is no intramodal competition possible for any of these lanes because NS is the sole railroad that serves either the origin or destination, or both. Therefore, it is impossible to use rail transportation for any of the issue movements without obtaining a portion of that service from NS.

b. Intermodal Competition either does not exist or is not an effective competitive constraint upon the challenged rates.

Intermodal competition "refers to competition between rail carriers and other modes for the transportation of a particular product between the same origin and destination." Market Dominance Determinations, 365 I.C.C. at 133. To the extent intermodal transportation alternatives exist for the issue movements, they are mostly in the form of direct truck transportation, rail-to-truck transloading, or in a very small number of lanes, barges. The fact that alternative transportation modes may be possible, however, 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) [hereinafter General Electric]. Even though such alternatives may exist, the Board must determine whether they are an "effective" constraint upon

NS's pricing. West Texas Utilities, 1 S.T.B. at 646. Although the Board will consider potential competition, in addition to actual or historical competition, the potential competition must be "sufficiently realistic to effectively constrain the rail rates." Dayton P&L Co. v. Louisville & Nashville R.R., 1 I.C.C. 2d 375, 383 (1985).

The Board has provided guidance in the form of a non-exclusive list of evidence that the parties may present to address market dominance. Among the factors relevant to determining whether effective competition from trucks exists are: (i) the physical characteristics of the product in question that may preclude transportation by motor carrier; (ii) the amount of the product in question that is transported by motor carrier where rail alternatives are available; (iii) the amount of the product that is transported by motor carrier under transportation circumstances (*e.g.*, shipment size and distance) similar to rail; and (iv) the transportation costs of the rail and motor carrier alternatives. Market Dominance Determinations, 365 I.C.C. at 133. For water carriage, those factors include: (i) the number of alternatives involving different carriers; (ii) feasibility, as evidenced by pertinent physical characteristics, for the product in question, of the transportation or routing associated with each alternative; (iii) feasibility as evidenced by the access of both the shipper and receiver to each alternative; and (iv) the transportation costs of each alternative. Id.

The Board has also noted that:

> If a market is to be truly competitive, shippers must be able to respond quickly to changes in transportation charges. They must be in a position to shift their demand from one rail carrier to other rail carriers or carriers of other modes. Such a shift in demand requires not only the availability of carriers ready to provide a comparable service, but also the ability of shippers to take advantage of that service.

Special Procedures for Making Findings of Mkt. Dominance as Required by the R.R. Revitalization and Regulatory Reform Act of 1976, 353 I.C.C. 874, 929 (1976) [hereinafter

Special Procedures]. All of the above considerations strongly demonstrate NS's market dominance over the issue movements.

(1) Trucking of hazardous materials is undesirable as a matter of public policy when rail is a viable option.

Safety concerns are a relevant factor in determining the feasibility of an alternative transportation mode. See General Electric, 1984 ICC LEXIS 206, at *4-5 (stating that "[s]afety considerations also contribute to the unfeasibility of the motor carriage alternative" and "a test of feasibility must include considerations of economic and physical practicality, as well as safety"). For example, the agency has considered whether a "significant diversion of traffic to motor carriers would result in substantial highway movement, loading, and unloading of a hazardous commodity" to be a factor that undermines the feasibility of truck alternatives. Id. Such considerations are consistent with the rail transportation policy "to operate transportation facilities and equipment without detriment to the public health and safety." 49 U.S.C. § 10101(8).

Of the 26 issue commodities, 19 are regulated as hazardous materials by the U.S. Department of Transportation ("DOT"), and of those, 5 are toxic inhalation hazards ("TIHs"). Those commodities fall within the following DOT hazard classes:

Class 2.1: Flammable Gases
Anhydrous Methylamines
Difluoroethane
Dimethyl Ether

Class 2.3: Poisonous Gas
Chlorine**

Class 3: Flammable and Combustible Liquid
Aqueous Methylamines
Dimethyl Formamide
Liquid Flammable Waste
Sodium Methylate

Class 6.1: Poisonous Materials
Aniline Oil
Dimethyl Sulfate**

Class 8: Corrosive Material
Fuming Sulfuric Acid**
Glycolic Acid
Hydrochloric (Muriatic) Acid
Potassium Caustic
Sodium Caustic
Spent Sulfuric Acid
Sulfuric Acid
Sulfur Trioxide**
Titanium Tetrachloride**

**Indicates a TIH Material

The hazardous nature of these commodities makes bulk truck transportation particularly undesirable. Because rail cars hold 4-5 times more volume than bulk trucks, truck transportation requires 4-5 times more handling than rail transportation in the form of more connections for loading and unloading. Transloading adds 1-2 more connections at the bulk terminal, which increases the total number of additional connections to 5-7. Each connection increases the potential for a release of these hazardous materials. Moreover, 4-5 times more truck than rail shipments means 4-5 times more risk of an accidental release on the nation's highways. Therefore, DuPont, its suppliers, and its customers greatly prefer to ship and receive hazardous materials by rail.

In addition, with respect to TIH commodities, the DOT has stated that "[t]he public interest would be ill served if there were a significant shift to the transportation of these commodities by truck."[3] According to the DOT, because four tank trucks are needed to transport the equivalent volume of a single rail tank car, "and trucks operate in close proximity with

[3] See Comments of the U.S. Dep't of Transp. 6 (filed May 12, 2012 in Union Pac. R.R.—Pet. for Declaratory Order, Finance Docket No. 35504). At page 12, DOT also declared that "[d]iversion of TIH materials traffic from rail to the highways is neither practicable nor consistent with public safety."

passenger vehicles[,] [s]hifting the movement of the TIH commodities to highways would lead to increased fuel consumption, air pollution, and costs of essential goods, and would likely result in more deaths and injuries since trucks are involved in many more accidents than rail tank cars."[4] While TIH materials pose greater risks than many other hazardous materials, the concerns expressed by DOT also are relevant to other hazardous materials. Indeed, the Board itself has noted that "[f]or many hazardous materials . . . , rail is the safest and most efficient mode of transportation."[5]

Consistent with these conclusions, DuPont attempts to minimize truck shipments for most of the issue commodities that are hazardous, if it ships by trucks at all, and it never transloads any of the TIH commodities or most of the hazardous materials. To the extent that DuPont uses trucks to transport the issue commodities that are hazardous materials, it does so primarily over short distances, to serve non-rail customers, or to expedite a shipment to a rail-served customer. DuPont uses the greatest caution when shipping by trucks—historically at greater cost than rail shipments, until recently when extraordinary NS rate increases actually have made trucks a lower-priced alternative for many of the hazardous material issue movements. However, even after NS rates became higher (in some cases dramatically higher) than truck rates for some of the issue movements, DuPont has not switched to trucks because rail is safer.

DuPont's use of trucks for mostly shorter distance movements is consistent with national shipping patterns for hazardous materials, as reflected in the federal government's 2007

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[4] Id. See also, Office of Freight Mgmt. and Operations, Fed. Highway Admin., Freight Facts and Figures 200853 (2008), available at http://www.ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/08factsfigures/table5_3.htm. The number of large truck accidents was 367,920 in 2006 vs. 2962 for rail; less than one percent of truck.

[5] Common Carrier Obligation of Railroads—Transportation of Hazardous Materials, 73 Fed. Reg. 32,786 (June 10, 2008).

Commodity Flow Survey ("CFS").[6] The CFS shows a dramatic difference in the average miles per hazardous material shipment by truck versus rail.[7] Trucks averaged 59 miles per hazardous material shipment, while rail averaged 578 miles. This is consistent with two facts: (1) trucks compete with rail almost exclusively at distances of just a few hundred miles, and (2) shippers attempt to minimize truck shipments of hazardous materials over long distances.

The CFS also broke out truck shipments by "for-hire" and "private" truck. The average distance of "for-hire" truck shipments was 214 miles, while the average distance of private truck shipments was just 32 miles. Because private trucks also accounted for 59% of the total truck tons, it is clear that the distribution of total truck shipments was heavily weighted with more shipments below the average total truck distance of 59 miles, offset by a smaller number of outlier distances above the average. This is consistent with most truck movements being short distances, except for shipments to non-rail customers and a few expedited shipments to rail customers at longer distances.

Another informative point from the survey is the mileage differential between all commodities and just hazardous materials.[8] Across all commodities, the average distance per shipment was 580 miles, in contrast to just 96 miles for hazardous materials, which is an 83% decline. This reflects greater reluctance to transport hazardous materials over long distances. More striking, however, is this differential when broken out by truck and rail. For just trucks, the average distance per shipment for all commodities was 187 miles, in contrast to 59 miles for hazardous materials, which is a reduction of 68%. For just rail, the average distance per shipment for all commodities was 691 miles, in contrast to 578 miles for just hazardous

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[6] See Bureau of Transp. Statistics, Commodity Flow Survey, http://www.bts.gov/publications/commodity_flow_survey/index.html (last visited April 22, 2012).
[7] See Dup. Op. Workpaper "CFS_2007-00H01.pdf" in the "CFS" folder.
[8] Compare Dup. Op. Workpapers "CFS_2007-00H01.pdf" and "CFS_2007-00P1.pdf" in the "CFS" folder.

materials, which is a reduction of 16%. It is notable that there is a much sharper decline in average truck miles than average rail miles, which is consistent with a much greater reluctance to ship hazardous materials long distances by truck.[9]

The hazardous characteristics of a commodity are highly relevant factors that should be carefully considered among the market dominance factors. Most hazardous material shippers like DuPont still choose rail whenever it is a viable option, even if truck rates are lower, because rail is the safer mode. The Board, therefore, should carefully consider the consequences of concluding that market dominance is lacking for hazardous materials solely on the basis of lower transportation rates for trucks or transloading. If a shipper were to select trucks solely on the basis of a lower price, that would be contrary to a public policy that favors rail over truck transportation of hazardous materials in order to minimize the risk to the general public of an accident and release of those materials. The Board should not send a message to shippers that trucking of hazardous materials is acceptable solely to obtain a better price. Furthermore, the Board should not signal rail carriers who may not want to handle a particular hazardous material that they can increase their rates to levels that would provide incentives to shippers to use lower-priced truck alternatives and avoid regulatory scrutiny of those higher rail rates.

(2) Alternative transportation for joint line movements must be between the origin or destination served by NS and the interchange point with the connecting carrier.

Congress has required the Board to determine "whether the rail carrier proposing the [challenged] rate has market dominance over the transportation to which the rate applies."[10] For each of the Complaint Exhibit B movements, because DuPont has challenged "bottleneck" rates,

[9] An alternative way to analyze the CFS data is to compare just "Basic Chemicals" with all commodities. For Basic Chemicals, the average truck miles declined by 37 % versus average truck miles for all commodities. But average rail miles increased by nearly 16% versus average rail miles for all commodities, which reflects an overall smaller reliance upon trucks and a greater reliance upon rail for these hazardous shipments. See Dup. Op. Workpaper "Commodity Flow Survey.pdf," Table 7, in the "CFS" folder.

[10] 49 U.S.C. § 10707(b).

market dominance is to be evaluated solely between the origin and destination covered by the bottleneck rate.

In Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry., 4 S.T.B. 64 (1998), on reconsideration, 4 S.T.B. 288 (1999) [hereinafter "DMIR I" and "DMIR II"], the complainant challenged the defendant rail carrier's rate for the transportation of coal from the interchange with BNSF at Keenan, Minnesota to a power plant at Laskin, Minnesota.[11] BNSF transported the coal from the origin mines to the Keenan interchange pursuant to a contract.[12] The defendant sought discovery of an alleged intermodal alternative to its rail service that involved rerouting the complainant's traffic on BNSF to a different location than the Keenan interchange and transloading from rail-to-truck at that location for final delivery to Laskin, thereby by-passing the interchange altogether.[13] The Board denied the defendant's motion to compel discovery regarding this alternative because the alternative represented geographic, not intermodal, competition.[14] In explaining its decision, the Board observed that:

> The position advocated by DMIR is contrary to both our *Bottleneck* and *Product and Geographic II* decisions. Under 49 U.S.C. 10707, our market dominance inquiry is limited to whether there are effective competitive alternatives "for the transportation to which [the rate at issue] applies." In the *Bottleneck* decisions, the Board concluded that, where there is a contract over the non-bottleneck segment of a through movement, a rate challenge must necessarily be confined to the bottleneck segment. Thus, the transportation to which the separately challengeable bottleneck-segment rate applies is not the full through movement (from the mines to Laskin), but rather only DMIR's movement (from Keenan to Laskin). Accordingly, under the circumstances presented here, the fact that the coal MPI receives at Laskin comes from the Montana and Wyoming mines served by BNSF is irrelevant. Because the transportation to which the rate at issue applies is limited to the movement between Keenan and Laskin,

[11] DMIR I, 4 S.T.B. at 64.
[12] DMIR II, 4 S.T.B. at 291.
[13] Id.
[14] DMIR I, 4 S.T.B. at 66; DMIR II, 4 S.T.B. at 291-92.

> transportation alternatives involving service to or from other points would constitute geographic competition.[15]

Thus, the Board held that "evidence as to a trucking alternative from any point other than Keenan may not be considered."[16]

Therefore, for the joint line issue movements in Complaint Exhibit B, the Board should evaluate market dominance only for the NS segment of the movement. Where the NS segment is from the origin to an interchange, the alternative transportation must be from the same origin to the same interchange, as opposed to being from the origin to the final destination or to an alternate interchange. Similarly, where the NS segment is from an interchange to the destination, the alternative transportation must be from the same interchange to the same destination, as opposed to being from an alternate interchange to the destination. While this may not always be the most efficient or lowest cost alternative for the entire through movement, this is the analysis required by both the Board's Bottleneck Decision[17] and Product and Geographic II[18] decision.

(3) Higher-Priced transportation alternatives provide conclusive evidence of NS's market dominance.

If a transportation alternative charges rates that are substantially more than the issue rail rates, that alone is sufficient to demonstrate that the alternative transportation is not an effective competitive constraint. FMC Wyo. Corp. v. Union Pac. R.R., 4 S.T.B. 699, 719 (2000) [hereinafter FMC] ("Given the substantial rate disparity between the two modes, we are satisfied that trucking is not an effective competitive alternative for those shipments that can be received

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[15] DMIR II, 4 S.T.B. at 292 (footnotes omitted) (emphasis added).
[16] Id.
[17] Cent. Power & Light Co. v. S. Pac. Transp. Co. (Bottleneck Decision), 1 S.T.B. 1059, 1074 (1996) ("[W]hen one of the components of service over the through route is embodied in a transportation contract, we cannot assess the reasonableness of the through rate in its entirety. . . . In a complaint against a bottleneck proportional rate that operates in combination with a contract rate, . . . we may consider **only** the reasonableness of the bottleneck rate.") (emphasis in original).
[18] Mkt. Dominance Determinations—Prod. & Geographic Competition, 3 S.T.B. 937, 950 (1998) (declaring that the Board will not consider geographic competition in its market dominance determinations).

by rail."); Ariz. Pub. Serv. Co. v. United States, 742 F.2d 644, 650-51 (D.C. Cir. 1984) [hereinafter Arizona] (holding that, because of the significant rate difference, complainants receipt of oil by both trucks and railroad did not make trucks an effective competitive alternative); Atchison, Topeka & Santa Fe Ry. v. ICC, 580 F.2d 623, 636 (D.C. Cir. 1978) ("Shippers must be able to make the choice to use an alternative service without absorbing substantial economic loss."). Although the Board has not defined the term "substantial rate disparity," it has concluded that a 10% rate disparity after a substantial rail rate increase was sufficient to demonstrate a lack of effective competition. E.I. du Pont de Nemours & Co. v. CSX Transp., Inc., STB Docket No. 42099, slip op. at 7 (served June 30, 2008) [hereinafter DuPont (Plastics)].

Indeed, NS itself has provided some of the most compelling evidence of its market dominance over the issue movements through its extremely aggressive pricing. For almost every issue movement with a multi-year rate history, NS has increased the issue rate dramatically in just the past two years, in many cases taking back-to-back years of double- and even triple-digit rate increases since 2009.[19] For the Complaint Exhibit A single-line movements, the cumulative four-year impact of the NS rate increases is as high as 433%. For the joint line movements in Complaint Exhibit B, the double- and triple-digit NS rate increases in the two years since NS began Rule 11 pricing {{[redacted]}}. DuPont has evaluated each lane where this occurs in greater detail in the discussion of each commodity in Part II-B. See also infra Part I-A.2.b.(4).

[19] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder). Of the 138 case lanes, 26 lack at least two years of rate history to evaluate.

In the following subsections, DuPont provides an overview of the issue movements where the alternative transportation options charge rates that are at least 10% more than the rail rates even after substantial rate increases by NS. DuPont has compared its direct rail transportation costs with the costs of direct truck alternatives, truck-rail transload alternatives, and where physically possible, barge alternatives. Where available, DuPont has used the rates from its contracts with motor carriers and other railroads. Otherwise, DuPont requested rates from the service provider.

(a) Higher-cost direct trucking alternatives.

In Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs," in the "Rates" folder), DuPont has estimated the rates for trucking directly from the origin to the destination for each issue movement and compared those rates with its direct rail rates. As noted in Part I-A.2.b.(2), supra, direct trucking from the origin to the destination is not alternative transportation for the NS bottleneck segment of the joint line issue movements in Complaint Exhibit B. Rather, direct trucking may only be considered for the NS-direct movements in Complaint Exhibit A. In principle, direct trucking for a bottleneck segment is in fact a transload at the rail interchange point. Nevertheless, DuPont has evaluated direct trucking alternatives for all of the issue movements where trucking is possible, because that option may be the most efficient, and thus lowest cost, alternative regardless if it conforms to the DMIR and Bottleneck Decision.[20]

[20] In the interest of being complete, DuPont also has calculated direct trucking rates to or from the NS interchange locations, consistent with the DMIR and Bottleneck Decision. See Dup. Op. Workpaper "Alternate Truck Cost Analysis" in the "Rates" folder. In that analysis of the Complaint Exhibit B lanes (which are all bottleneck segments), DuPont calculated the cost of trucking directly to/from bulk terminals served by the connecting rail carriers in the vicinity of the current rail interchange. The total number of issue movements evaluated by the "Alternate Truck Cost Analysis" is 63. Of those 63 movements, DuPont was able to identify only 16 with a bulk terminal served by the connecting carrier within the vicinity (*i.e.*, a 25 mile radius) of the rail interchange with NS. Consequently, DuPont concluded that there is no direct truck option that complies with DMIR for the other 47 movements to/from the interchange, because of the inability to transload to/from the connecting carrier in the vicinity of the rail interchange location.
The remaining 58 Complaint Exhibit B movements were excluded altogether from the "Alternate Truck Cost Analysis" for one of two reasons. First, 54 lanes were excluded because the issue commodity cannot be transloaded

Of the 138 issue movements, DuPont determined the direct truck costs for 134 movements. DuPont excluded the 4 chlorine movements because the distances were too great to seriously consider trucking alternatives for this TIH commodity. Of the 134 evaluated movements, 74 have direct truck alternatives that are at least 10% more costly than direct rail service. These movements include 3 of 19 anhydrous methylamine movements, 4 of 5 aqueous methylamine movements, 1 of 3 bio-propanediol movements, both difluoroethane movements, 2 of 7 dimethyl ether movements, 4 of 5 dimethylformamide movements, 1 of 3 dimethyl sulfate movements, the glycolic acid movement, the monomethyl formamide movement, 1 of 4 aniline oil movements, 4 of 5 petroleum coke movements, all 4 polyethylene movements, both sand zircon movements,[21] 6 of 9 sodium caustic movements, 16 of 26 sulfuric acid movements, 21 of 25 titanium dioxide movements, and 1 of 2 flammable waste movements.

Therefore, 78 of the issue movements (the 74 higher-priced truck movements plus 4 chlorine movements) do not have an effective direct truck alternative based upon the cost differential alone. As discussed in greater detail in the evidence for each commodity in Part II-B.2, even those issue movements with lower priced direct truck alternatives are not subject to effective competition due to a multitude of other factors that preclude direct trucking. Furthermore, as discussed in Part I-B.2.b.(4), infra, aggressive NS rate increases over the past few years show that comparable or lower truck rates are not an effective constraint upon NS rates, but actually are evidence of NS exercising its market power.

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due to various reasons that are described in the discussion of each commodity in Part II-B and summarized in Part I-A.2.b.(3)(b), infra. Second, in Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis," in the "Rates" folder), which is discussed in Part I-A.2.b.(3)(b), infra, DuPont has evaluated origin-to-destination transload alternatives for 4 of the issue movements (Lanes B-93, 99, 100, and 118) based upon the same routing (*e.g.*, truck to/from bulk terminal at rail interchange) as the "Alternate Truck Cost Analysis." Therefore, DuPont has not duplicated those lanes in the "Alternate Truck Cost Analysis."

[21] DuPont has calculated a rate for sand zircon in both bulk trucks and in bags. While only the bulk truck rate exceeds the rail rate, bags are not a practical option for this movement, as discussed in Part II-B.2.z., infra.

(b) Higher-cost truck transloading alternatives.

In Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis," in the "Rates" folder), DuPont has estimated the rates for alternative transportation involving a rail-truck transload combination from the origin to the destination for each issue movement and compared those rates with its direct rail rates. DuPont did not consider transloading alternatives for any of the Complaint Exhibit A movements because those lanes, which are captive to NS at both the origin and destination, would require at least two transloads in order to by-pass NS.

Nor did DuPont evaluate transload alternatives for every Complaint Exhibit B movement because several of the issue commodities have characteristics that make transloading difficult and/or highly undesirable. For example, DuPont does not transload any of the 5 TIH issue commodities (*e.g.* chlorine, DMS, Oleum (>30%), sulfur trioxide, and titanium tetrachloride). In addition, anhydrous methylamines, aqueous methylamines, aniline oil, and Oleum (<30%)[22] are not transloaded because few commercial terminals, if any, will handle them due to their hazardous traits and extremely noxious odor. DFE and DME require highly specialized transload facilities that are operated by DuPont distributors, which in fact are the destinations for most of those issue movements. Flammable liquid waste is not handled by most commercial bulk terminals because it is a highly flammable hazardous waste that is regulated by the Environmental Protection Agency. DuPont could not find bulk terminals within close proximity to the captive NS facilities that would or could handle the issue movements of caustic potash, lime, or DMF. Thus, DuPont's transload cost analysis is limited to joint line movements of 11 issue commodities: glycolic acid, Oleum (<30%),[23] sulfuric acid, spent sulfuric acid, petroleum

[22] DuPont initially was provided a transload rate for the Oleum (<30%) movement, Lane B-106, but subsequently was informed by the bulk terminal that it could not handle the commodity because of its hazardous traits. Nevertheless, DuPont has retained Lane B-106 in Exhibit II-B-2, with the original rate quote.

[23] Id.

coke, polyethylene, bio-propanediol, sand zircon, caustic soda, sodium methylate, and titanium dioxide.

As noted in Part I-A.2.b.(2), supra, transloading that bypasses the interchange point of the joint line issue movements in Complaint Exhibit B is not a true alternative for the transportation to which the NS bottleneck rate applies. For all but 20 joint line issue movements of the evaluated commodities, DuPont in fact has used the same rail interchange as the issue movement for its transload alternative, consistent with DMIR. For those 20 movements, DuPont could not use the issue movement rail interchange because either the alternative rail carrier could not physically interchange with the connecting carrier at the same location, or routing protocols of the alternative carrier would not permit DuPont to interchange with the connecting carrier at the same location.[24] DuPont submits that its inability to use the direct rail interchange for transloading alternatives precludes consideration of those alternatives in the market dominance analysis. Nevertheless, DuPont has evaluated transloading alternatives for those 20 lanes though they cannot conform to DMIR and the Bottleneck Decision.

Of the 68 issue movements included in DuPont's transload analysis, 41 have rates that are at least 10% higher than the direct rail rates between the origins and destinations. These movements include the Oleum (<30%) movement, 4 sulfuric acid movements, the spent sulfuric acid movement, 1 petroleum coke movement, the MMF movement, all 4 polyethylene movements, both joint line bio-propanediol movements, both sand zircon movements, 6 caustic soda movements, the sodium methylate movement, and 18 titanium dioxide movements.

Therefore, transloading is not an effective competitive alternative to NS for 41 of the Complaint Exhibit B issue movements based upon the cost differential alone. Nor is it an

[24] See Dup. Op. Workpaper "Alternate Transload Cost Analysis" in the "Rates" folder for a list of the 20 lanes and the reason why DuPont could not use the direct rail interchange.

effective alternative for an additional 53 Exhibit B movements due to the practical or physical inability to transload the issue commodities at all. Furthermore, as discussed in greater detail in the evidence for each commodity in Part II-B.2, even the remaining 27 Complaint Exhibit B movements with a comparable or lower priced transload alternative are not subject to effective competition due to a multitude of other factors that render transloading infeasible and/or uneconomic. Finally, as discussed in Part I-B.2.b.(4), infra, aggressive NS rate increases over the past few years show that comparable or lower transloading rates are not an effective constraint upon NS pricing, but actually are evidence of NS exercising its market power.

(c) Higher-cost barge alternatives.

DuPont has estimated direct barge, or barge-to-truck/rail transload, costs for the following 6 issue movements of caustic potash, caustic soda, and DMF:

- Lane B-9: Barge DMF from Belle, WV to Joliet, IL (which is 60 miles from the NS/BNSF rail interchange) and transload to rail for delivery to City of Commerce, CA. See infra Part II-B.2.m.
- Lane B-29: Barge DMF from Belle, WV to Joliet, IL (which is 60 miles from the NS/BNSF rail interchange) and transload to rail for delivery to St. Paul, MN. Id.
- Lane B-47: Barge caustic soda from Charleston, TN to Memphis, TN (which is the NS/CN interchange) and transload to trucks for delivery to Woodstock, TN. See infra Part II-B.2.i.
- Lane B-81: Barge caustic soda from McIntosh, AL to Memphis, TN (although the actual NS interchange is at Mobile, AL) and transload to trucks for delivery to Woodstock, TN. Id.
- Lane B-107: Barge caustic soda directly from Natrium, WV to Belle, WV (although the through rail movement is interchanged to NS at Cincinnati, OH). Id.
- Lane B-125: Barge caustic potash from Charleston, TN to Memphis, TN (which is the NS/CN interchange) and transload to trucks for delivery to Woodstock, TN. See infra Part II-B.2.h.

DuPont was able to combine the volumes in the Lane B-9 and B-29 DMF movements to merit consideration of a barge-rail transload option for both lanes. Although the barge-rail rates

were {{[redacted]}} below the through rail rates, that was without considering a portion of the terminal costs (which could not be estimated on a per ton basis) or any of the {{[redacted]}} infrastructure costs required to enable barge loading of DMF at Belle. Moreover, the barge terminal is approximately 60 miles from either of the issue movement interchange destinations, which creates a DMIR issue as to whether the barge-rail option is an alternative to the issue movements. DuPont contends that, because the connecting rail carrier's rates from Joliet to the final destination are different from its rates from the actual issue movement interchange, these barge alternatives do not comport with DMIR.

The barge alternatives for the Lane B-47 and B-81 caustic soda movements and the Lane B-125 caustic potash movement all involve barge shipments from the various origins to the same barge terminal in Memphis, TN, which is within 7 miles of the Woodstock, TN destination. For Lanes B-47 and 81, because the barge-truck transload alternative rates are {{[redacted]}} higher than the through rail rates, respectively, even before adding any of the terminal costs, this alternative cannot be an effective competitive constraint upon the NS rail rates. For Lane B-125, the barge-truck transload alternative rate is {{[redacted]}} higher than the through rail rate after considering the barge, truck, and terminal costs.

The only issue movement with significantly lower barge transportation rates is caustic soda over Lane B-107. Although the direct barge rate is {{[redacted]}} less than the through rail rate, that is after NS increased its rates by {[redacted]} since just 2009, clearly demonstrating that NS is not constrained by barge competition. Moreover, this rate differential does not include the {{[redacted]}} of infrastructure investment that is required before Belle could unload caustic soda from barges. Furthermore, direct barging is not alternative transportation to the issue

movement under the DMIR precedent, because the challenged NS rate is from the Cincinnati, OH interchange with CSXT to Belle.

Although other issue movements originate and/or terminate on or near navigable waterways, there are a multitude of predicate reasons, which are discussed throughout DuPont's opening evidence, as to why barging is not an option. One of the most significant reasons is the enormous cost of infrastructure investments that would be required to make use of barges. See infra Part I-A.2.b.(5). Another significant set of reasons, which affect all barge shipments to/from Edge Moor and Reybold, DE, are the restrictions imposed by the Delaware Coastal Zone Act. See infra Part I-A.2.b.(7). Some commodities also have product quality concerns associated with transloading that would be required for some barge alternatives. See infra Part I-A.2.b.(6). Many issue movements also do not involve sufficient volumes to fill a barge. Finally, the TIH commodities, aniline oil, and the anhydrous and aqueous methylamines are not transloaded because of their dangerous product characteristics and/or noxious odors; barge transloading options for these commodities were not considered.

(4) Extremely aggressive NS rate increases prove that comparable, or even lower, rates for alternative transportation modes are not an effective competitive constraint.

The presence of similar, or even lower, rates for alternative modes of transportation cannot, by itself, prove the existence of effective competition. Amstar Corp. v. Atchison, Topeka & Santa Fe Ry., No. 37478, 1987 ICC LEXIS 47, at *19 (ICC Nov. 23, 1987) ("[S]imilarity of rates alone does not indicate that motor carriers provided an effective constraint. . . . [T]he fact that motor carrier rates constrain rail rates at some arbitrary level does not necessarily indicate that an effective competitive constraint is in place."). In this proceeding, similar rates are in fact evidence that NS is setting its prices to match those of much higher cost alternatives, and thus, those alternative do not effectively constrain NS's rail rates. Indeed, NS's

willingness and ability to impose enormous rate increases upon DuPont in a short—2-year—span of time without a loss of the issue traffic to alternative modes is among the most compelling evidence of NS's market dominance.

In DuPont (Plastics), STB Docket No. 42099, slip op. at 7-8, the Board declared that:

> Even if we were to find that the cost of trucking the product is similar to the cost of using rail after the CSXT rate increase, it does not follow that the threat of trucking is evidence of effective competition. After all, even a monopolist finds that there is a profit-maximizing price beyond which it cannot raise prices without adversely affecting its bottom line. A carrier possessing market power might set its rates so high that it would begin to lose business to a higher-cost alternative (such as a trucking company). As the Board has previously noted, while this may create an "outer limit" constraint, it does not necessarily mean that effective competition is present.

Id. (emphasis in original) (footnotes omitted). See also, Arizona, 742 F.2d at 650-51 (a pricing constraint does not equate to effective competition). Consequently, the fact that a truck or transload rate is less than or comparable to NS's rates may merely demonstrate that NS has priced up to the nearest, higher cost alternative, not that such alternative constitutes effective competition.

This principle is highly relevant to the issue traffic because NS has increased the challenged rates significantly over the past two years while continuing to maintain a dominant market share. See FMC, 4 STB at 718 (2000) ("the fact that [carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition for the traffic at issue"). In Special Procedures, 353 I.C.C. at 929, the ICC held that "the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance. A firm with market power also can raise its prices without a net loss of revenue, and a rate increase of 20% has been considered "well

above the standard usually employed to signal a substantial degree of market power" under this standard. CF Indus., Inc. v. STB, 255 F.3d 816, 823-24 (D.C. Cir. 2001).

The rate history from 2007-11 for all of the issue movements, including the break-down between the NS rate and the connecting carrier rates on joint line movements, is presented in Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).[25] As discussed in the preceding subsections, DuPont's rate comparison analyses in Exhibits II-B-1 and -2 show that many of the issue movements have truck or transload rates that are comparable to or below direct rail rates. But as Exhibit II-B-3 shows, for virtually every issue movement where this is the case, it is a very recent phenomenon that has occurred only after NS imposed extremely large rate increases on the issue traffic.

Moreover, many of the issue movements where the alternative rates are lower than the rail rates are truck movements over several hundred miles, which is well outside any range at which trucks are considered to be cost-competitive with rail. For example, the Board has long recognized that "the cost-competitiveness of truck transportation decreases with increasing distance." Consolidated Papers, 7 I.C.C.2d at 337; see also, General Electric, 1984 ICC LEXIS 206 at *5 (finding that "substantial, long-distance truck transportation... would [not] be feasible."). Yet, the challenged rates are higher than truck rates for many of the issue movements at distances between 300 and 1500 miles. DuPont has found this to be true for nearly all of the issue movements covering 21 of the 26 issue commodities.[26]

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[25] Where an issue movement does not have a rate history dating back to 2007, DuPont has shown the earliest date for which a rate is available.

[26] The 5 issue commodities for which recent NS rate increases have been less extreme are PDO, lime, MMF, polyethylene, and sand zircon, which are all non-hazardous materials. See Exhibit II-B-3. For all of those issue movements, except lime, however, the truck and/or transload rates are too high anyway to be a constraint upon NS's rail rates. See Exhibits II-B-1 and 2. In addition, DuPont did not consider truck alternatives at all for chlorine, and thus did not compare alternative transportation rates for that commodity.

In the discussion of each issue commodity in Part II-B.2, DuPont presents evidence, summarized in Exhibit II-B-3, of the very high percentage rate increases that NS has imposed upon the issue movements in just the last 2-3 years. For the joint line movements, DuPont contrasts the NS rate increases with much more moderate rate increases, and in some cases decreases, by the connecting carriers. When those increases are compared against the potential savings from using alternative transportation modes, it is quite clear that those alternative modes were far more expensive than rail service prior to the NS rate increases. In other words, in the past few years, NS has chosen to exploit its market power over the issue movements by increasing its rates so significantly that they now match or exceed the rates charged by much higher cost alternatives, which has reversed the historical price relationship between the modes.

The NS rate increases of the past few years have been indiscriminate in that they have occurred in lanes where alternative transportation options had much higher rates and where they had much lower rates. By increasing its rates so significantly despite the existence of lower alternative transportation rates, NS has demonstrated that those lower rates had no influence on its pricing, and thus are not a constraint at all, much less an effective competitive constraint. Moreover, in other lanes, by increasing its rates so significantly to the point that much higher alternative transportation rates have now become much lower, NS also has demonstrated the absence of any effective constraint upon its pricing from such alternatives.

Although Exhibit II-B-3 shows that this is pervasive across nearly all the issue movements covering 21 of the issue commodities, the following examples stand out as particularly egregious abuses of NS market power:

- For 13 anhydrous methylamine movements, direct truck alternatives have lower rates than rail by as much as 58% at distances ranging from 520 to 1058 road miles. Indeed, 6 of those movements are longer than 900 miles. Of the 5 issue movements with higher truck rates, all of them are longer than 1100 miles and 2 of those movements have a rate

differential of less than 2%. It is inconceivable that trucks would be competitive with rail at such distances due to higher labor, fuel and equipment costs. See infra Part II-B.2.p.

- The two issue movements of flammable liquid waste illustrate the indiscriminate and arbitrary nature of NS's pricing. Lane A-16 has a direct truck alternative that is {{[redacted]}} more expensive than rail. By contrast, the direct truck alternative in Lane B-76 is {{[redacted]}} less expensive. Moreover, this much lower direct truck rate for Lane B-76 is the product of an {[redacted]} NS rate increase since just 2009, while the connecting carrier's rate increased by {{[redacted]}}. See infra Part II-B.2.y.

- After a cumulative two year increase of {[redacted]} in the NS rate and a {{[redacted]}} increase in the connecting rail carrier's rate, the truck rate for titanium tetrachloride (which is a TIH) in Lane B-54 is {{[redacted]}} less than the rail rate for a movement that is 1472 road miles. See infra Part II-B.2.x.

- For petroleum coke, although 4 of 5 issue movements have transload rates that are {{[redacted]}} less than direct rail rates, this is only after NS increased its rates over just 2 years by {[redacted]}. See infra Part II-B.2.s.

- For aniline oil, Lanes B-84 and 115 are alternate rail routes between the same origin-destination pair. Over Lane B-115, the combination of a {[redacted]} NS rate increase and a {{[redacted]}} from the connecting carrier has resulted in {{[redacted]}} truck and rail rates. For Lane B-84, after a {[redacted]} NS rate increase and an {{[redacted]}} connecting carrier rate increase, trucks now cost {{[redacted]}} less. This is inconceivable for trucks shipments that must travel over 600 miles. See infra Part II-B.2.f.

- Both issue movements of muriatic acid, which are direct NS rail movements, have truck alternatives that are {{[redacted]}} lower than the NS rail rates. But this is only after NS increased its rates in these lanes over just 2 years by {[redacted]}, respectively. See infra Part II-B.2.e.

- The issue movement of aqueous methylamines in Lane B-33 has a truck alternative that is {{[redacted]}} lower than the rail rate, despite a road distance of 800 miles, after a {[redacted]} NS rate increase in just 2 years. See infra Part II-B.2.q.

- NS increased the caustic soda rate on Lane B-107 by {[redacted]} in just 2 years to the point where direct trucking is now {{[redacted]}} less. Lanes B-79 and 80 also have {{[redacted]}} lower truck rates after NS rate increases of {[redacted]}. See infra Part II-B.2.i.

- Lanes B-111 and 124 are titanium dioxide movements where the truck rates are within {{[redacted]}} of the through rail rate, after NS increased its rate by {[redacted]} in just 2 years. See infra Part II-B.2.w.

- Lanes B-67 and 68 are titanium dioxide movements where the direct truck rates are lower than the rail rates, despite road distances of 1188 and 759 miles, respectively This is after NS increased its rate in Lane B-68 by {[redacted]} in just 2 years. Id.

- Four sulfuric acid movements stand out as particularly striking examples of NS pricing up to less efficient, higher cost alternatives. For Lane B-134, although the truck distance is nearly 1100 miles, the direct truck rate is just {{ [redacted] }} higher than the through rail rate, after NS increased its rate by {[redacted]} since just 2009, contrasted against just a {{[redacted]}} increase by the connecting carrier over the same time period. Similarly, in Lane A-2, although the truck distance is 686 miles, the direct truck rate is {{ [redacted] }} lower than the rail rate, after NS imposed back-to-back rate increases of {[redacted]} in each of the past two years. Moreover, in Lane B-92, although the truck distance is 546 miles, the direct truck rate is {{[redacted]}} lower than the through rail rate, after NS increased its rate by { [redacted] } since just 2009, contrasted against a {{[redacted]}} cumulative increase by the connecting carrier. In Lane B-101, although the truck distance is 435 miles, the direct truck rate is {{ [redacted] }} lower than the through rail rate, after NS increased its rate by {[redacted]} since just 2009, contrasted against a {{[redacted]}} by the connecting carrier. See infra Part II-B.2.d.

Comparable or lower rates for alternative transportation have been found to constitute evidence of effective competition when railroads have reduced their rates to meet the competitive threat, not increased them. For example, in Consolidated Papers, 7 I.C.C.2d at 337-38, the ICC found trucking to be effective competition based upon the fact that a defendant had lowered its rail rates due to truck competition while also losing market share. In FMC, 4 S.T.B. at 713-14, the Board noted that FMC had used the threat of switching to trucks credibly in the past to obtain rail rate reductions. See also Allied Chem. Corp. v. Ann Arbor R.R. Sys., 1 I.C.C.2d 492, 506-07 (1985) (noting that "[w]idespread price reductions [to keep or attract this traffic] reflect the workings of a competitive marketplace."), rev'd on other grounds, Gen. Chem. Corp. v. United States, 817 F.2d 844 (D.C. Cir. 1987). To the extent that the challenged NS rates are comparable to the rates of alternative modes, this observation is after NS substantially increased its rates, as opposed to a rate decrease in response to a competitive threat.

In some cases, the agency has found market dominance even despite evidence of rail rate reductions in response to lower rates from alternative modes. For example, in McCarty Farms v. Burlington N., Inc., 3 I.C.C.2d 822, 830-31 (1987) [hereinafter McCarty Farms], the ICC found market dominance even though the record showed that BN had reduced its rates to meet truck

and truck/barge competition, because the issue "is whether McCarty has made its case that the BN lacks *effective* competition, *i.e.*, competition adequate to restrain its rates at or below a maximum reasonable level." (italics in original) A critical element in that determination was "the vigor of intermodal competition," which the ICC found lacking because, "even with truck and truck/barge competition, BN has been able to capture the vast majority of the total transportation market" and "its rates have significantly exceeded . . . the BN's costs of providing service." Id. at 831-32. In this case, NS has captured all, or nearly all, of the issue movement volumes at rates with extraordinarily high R/VC ratios.[27]

For the issue movements in this case, NS has not reduced a single rate in response to competition from alternative transportation modes. In fact, it has increased the issue rates at double-, and even triple-, digit rates over just 2 years. There is no evidence that NS's rates have been constrained by alternative modes. It has raised rates dramatically across the board regardless whether its rates were above or below the rates of alternative modes. Moreover, the level of the NS rate increases has stood in stark contrast to the rate increases, and even a few decreases, taken by connecting rail carriers on the joint line issue movements. In many cases, the NS rate increases have reversed the historical relationship between rail and truck rates. Indeed, after the recent NS rate increases, trucks are less expensive at distances far exceeding the those at which truck rates historically have been competitive with rail rates.[28] Moreover, all of

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[27] See Exhibits II-A-1 through 12. Although evidence that rail revenues substantially exceed variable costs by itself does not indicate market dominance, when such data is supported by other evidence, as is the case in this proceeding, it "may serve to buttress a finding that the existing level of competition may not be effective to constrain rail rates to a reasonable," DuPont (Nitrobenzene), slip op. at 5 (served June 30, 2008) (citing McCarty Farms, 3 I.C.C.2d at 832).

[28] 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 &

this has occurred without any loss of the issue traffic to alternative modes. Since "effective competition" means that, "if a carrier raises the rate for such traffic, then some or all of that traffic will be lost to other carriers or modes,"[29] it would be arbitrary to conclude that comparable or lower rates from potential alternative modes have imposed any constraint upon NS in the face of such significant rate increases.

(5) The high cost of infrastructure needed to increase, or in some cases enable, the use of alternative modes renders even lower-priced alternatives uneconomical.

In addition to comparing alternative transportation rates with the challenged rates, the Board considers the costs of converting a facility to enable use of the alternative mode. Int'l Minerals & Chemicals Corp. v. Burlington Northern, Inc., 1986 ICC LEXIS 300, *11 (May 12, 1986). For 16 of the 26 issue commodities, significant infrastructure investments are required before DuPont even could use alternative transportation modes or increase its current use. Although several DuPont facilities in this proceeding are located on navigable waterways, they either do not have any barge facilities at all or do not have facilities that are capable of originating or receiving the issue commodity by barge. Many of the issue DuPont facilities also do not have the capacity to load or unload large numbers of trucks without making significant

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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).

[29] CF Industries, Inc. v. STB, 255 F.3d 816, 821 (D.C. Cir. 2001), quoting, Market Dominance Determinations, 365 I.C.C. at 129.

investments in costly infrastructure. In some cases, special equipment also must be purchased or leased. All of these infrastructure costs would be over and above the alternate transportation costs calculated by DuPont.

(a) Anhydrous Methylamines.

Costly infrastructure is required for trucking, transloading, and barging all 19 AHM issue movements, which originate at DuPont's Belle, WV facility. See infra Part II-B.2.p.

Belle has only a single truck loading rack that is capable of loading 5 trucks in 24 hours. But this loading rack also is shared with DME production, and thus is not available to the AHM business around the clock. Belle's 2010 AHM rail shipments would have required nearly {[redacted]} trucks, which is equivalent to 5 additional truck loadings per day, every day of the year. The cost to build an additional loading rack, scale, and concrete pad would be {{[redacted]}}. Because AHMs move in a private fleet of specialized trucks, DuPont also would have to purchase 5 additional trucks at a cost of {{[redacted]}} each. Finally, in order to operate the new truck rack 24/7, DuPont would need to hire 5 additional personnel at an annual cost of {{[redacted]}} per operator. All of these costs apply to both direct trucking and transloading. None of the above considers how DuPont even would manage such a sizeable increase in truck traffic through the Belle facility.

Although Belle, has barge docks, it does not have the infrastructure to ship AHMs by barge. DuPont produces anhydrous mono-, di-, and tri-methylamines, all of which have separate storage that is just adequate for current rail and truck volumes. However, because Belle does not have storage tanks capable of holding barge volumes, it would have to construct storage tanks and piping at a cost of {{[redacted]}}. On top of this cost, DuPont would have to locate and lease pressurized storage tanks at river terminals strategically located to serve multiple customers

efficiently, because its AHM customers are not on navigable waterways and/or do not purchase AHMs in barge-sized volumes.

(b) Aqueous Methylamines

Costly infrastructure is required for trucking, transloading, and barging all 5 AQM issue movements, which originate at DuPont's Belle, WV facility. Because AQMs are AHMs diluted in water, they have many similar infrastructure issues. See infra Part II-B.2.q.

AQMs have only a single truck loading rack that can load {[redacted]} trucks in 24 hours. But that rack also is used to unload inbound raw materials. The greater bottleneck for AQMs, however, is insufficient storage capacity even to load trucks at existing capacity. Because AQMs and AHMs share the same anhydrous supply piping, Belle cannot produce AQMs at the same time it is loading a truck of AHMs, or vice-versa. The AQM storage tanks for aqueous mono- and di-methylamines only hold the equivalent of {{[redacted]}} and {{[redacted]}} trucks, respectively. Consequently, even to load AQMs at the current maximum truck loading capacity, DuPont would have to continuously produce AQMs. But it cannot do both at the same time. The cost of adding storage capacity for AQMs and reconfiguring the piping to permit truck loading and AQM production simultaneously would be {{[redacted]}}. All of these costs apply to both direct trucking and transloading.

Although Belle has barge docks, it cannot ship AQMs by barge because it does not have the infrastructure to do so. The cost of constructing storage tanks and piping adequate for barge volumes would be {{[redacted]}}. On top of this cost, DuPont would have to locate and lease storage tanks at river terminals strategically located to serve multiple customers efficiently, because its AQM customers are not on navigable waterways and/or do not purchase AQMs in barge-sized volumes.

(c) Dimethyl Ether and Difluoroethane

DuPont currently sells DME and DFE primarily through a network of distributors who provide the storage capacity, dedicated trailers, loading racks, mixing facilities, and personnel to service the end-users. These distributors purchase in rail cars and then resell the commodity in trucks. DuPont sells to very few end-users directly. In order to by-pass NS at the origins, DuPont would need to set up its own distribution network for both commodities. {{[redacted] }} See infra Parts II-B.2.k. and l.

(d) Glycolic Acid

In order to load glycolic acid into barges at Belle, WV, DuPont would have to construct piping from existing storage tanks to the barge docks at a cost of {{[redacted]}}. This cost cannot be justified for the sole issue movement of glycolic acid (Lane B-2), which totals just {[redacted]} rail cars {[redacted]} times per year. Moreover, the volume of each shipment would be less than the capacity of even the smallest barge. See infra Part II-B.2.a.

(e) Monomethyl Formamide

The sole issue movement of MMF (Lane B-37), which is an internal DuPont movement, does not have sufficient volume, at approximately {[redacted]} rail cars per year, to warrant the requisite infrastructure investment that DuPont would have to make at both the origin and destination to load and unload barges. At Belle, WV, DuPont would need to construct a 400,000 gallon carbon steel storage tank, a transfer system of piping and pumps capable of transferring MMF at 1000 gallons per minute through a 3- or 4-inch pipe approximately 2 miles, and a nitrogen blanket or air drying system at a cost of {{[redacted]}}. At LaPorte (Strang), the cost of constructing a 400,000 gallon storage tank, a barge unloading facility, and a transfer system of pipes and pumps would be {{[redacted]}}. See infra Part II-B.2.r.

(f) Dimethyl Formamide

Although DuPont has a barge dock at its Belle, WV, facility, it does not have the storage capacity or the transfer system needed to load DMF into barges. An {{[redacted]}} infrastructure investment is required to barge the DMF issue movements that originate at Belle. In addition, because the issue movement DMF customers are not on navigable waterways and/or do not purchase DMF in barge-sized quantities, DuPont would have to lease storage tanks at river terminals strategically located to serve multiple customers efficiently. After a lengthy search, DuPont was able to locate a terminal in Joliet, IL to serve Lanes B-9 and 29 that would be able and willing to lease a storage tank for {{[redacted]}} per year plus other terminal costs. Although Lane B-29 is the highest volume issue DMF movement, with more rail cars than the other 4 issue DMF movements combined, it has averaged just 3.5 rail cars per month in 2009 and 2010, which hardly justifies these infrastructure costs. Moreover, the Joliet terminal is not strategically positioned to also service the other 3 issue DMF movements, which means that there is no opportunity for those movements to share terminal costs with Lanes B-9 and 29. These additional infrastructure costs would quickly erase the {{[redacted]}} freight savings provided by the barge-rail alternative in these two lanes. See infra Part II-B.2.m.

(g) Sodium Caustic

The 9 caustic soda issue movements are all inbound shipments from suppliers to DuPont facilities. Of those 9 movements, 7 originate at facilities that can load barges of caustic soda. The 2 exceptions are Lanes B-112 and 114, which originate at Niagara Falls. Of those 7 movements, just 2 are delivered to facilities on navigable waterways (B-80: Orange, TX and B-107: Belle, WV).[30] Each of those facilities, however, requires significant infrastructure

[30] Although Lane A-22 (Lemoyne, AL) is on a navigable waterway, the property is subject to an archaeological easement that restricts DuPont's ability to construct barge facilities.

investments to unload caustic soda. At Orange, TX, DuPont would have to construct {{[redacted]}} of storage and piping in order to receive caustic soda by barge. At Belle, DuPont would have to construct {{[redacted]}} of new piping to enable the unloading of barges. See infra Part II-B.2.i.

(h) Chlorine, Titanium Dioxide, Titanium Tetrachloride, and Petroleum Coke

DuPont ships titanium dioxide and titanium tetrachloride from Edge Moor and receives caustic soda,[31] chlorine and petroleum coke. Although Edge Moor is located on the Delaware River, its barge dock has not been used for at least 25 years and would require substantial repairs. Moreover, when the dock was in use, its sole purpose was to load iron chloride into barges for dumping offshore, and therefore, it also would need to be upgraded to handle the issue commodities. To make the barge dock operational again in order to load and unload these issue commodities, DuPont would have to build land-based infrastructure for each commodity (*e.g.*, pipes and pumps) to transport them approximately a half mile between the waterfront and the plant, build containment structures to prevent spillage into the river, upgrade the docks, and dredge 25 years of accumulated silt and mud that currently inhibits barge access to the docks. Moreover, if DuPont were to handle all these issue commodities by barge at Edge Moor, it would need to construct new docks in addition to the current dilapidated dock. See infra Parts II-B.2.j. and w.

DuPont estimates that the barge infrastructure costs for chlorine would be {{[redacted]}} to rehabilitate the dock and {{[redacted]}} to install the piping, pumps, tanks, and other infrastructure necessary to store the chlorine and pipe it from the dock to the plant.

[31] The caustic soda movement originates at a supplier which does not have barge loading docks. Moreover, in order to reach Edge Moor by barge, caustic soda would have to be transloaded in open water from ocean vessels to river barges.

Although DuPont did not separately calculate these costs for titanium tetrachloride, DuPont has assumed similar investment requirements because it also is a TIH commodity. This exercise, however, is merely academic because both commodities would have to be transloaded in the open water between river barges and ocean vessels. Since transloading these TIH commodities is not done for safety reasons, barges could not be used for the issue movements even if the enormous infrastructure investment made economic sense. See infra Part II-B.2.j. and x.

For petroleum coke, barge deliveries to Edge Moor are only possible if the Pet Coke is first railed nearly the entire distance to a terminal on the Delaware River and transloaded into barges for a short distance movement to Edge Moor.[32] In order to estimate the barge dock rehabilitation costs, DuPont started with the chlorine barge dock rehabilitation estimate of {{[redacted]}} and stripped out the equipment specific to handling chlorine to determine that it would cost {{[redacted]}} to rehabilitate the dock for pet coke deliveries. This estimate is incomplete because it does not include the infrastructure needed to transport the pet coke from the waterfront to the plant or the storage needed to receive barge-sized volumes of pet coke as opposed to staggered rail volumes. See infra Part II-B.2.s.

Although DuPont would need to build extensive infrastructure at Edge Moor to load titanium dioxide into barges, it has not separately estimated those costs because of the multiple other hurdles to ever using barges. Those hurdles include significant questions as to whether titanium dioxide can even be barged, since no one has ever done so and there would be a problem with significant heels left in the barge; the inability to store titanium dioxide for lengthy periods at river terminals, which would be necessary because customers do not purchase in

[32] An alternate barge option for pet coke considered by DuPont for Lanes B-75 and 123 is a barge-to-truck transload at McKees Rocks, PA, which would deliver the pet coke over 300 miles to Edge Moor in trucks. This option too would require an infrastructure investment of {{[redacted]}} to reconfigure the truck unloading spot by increasing the vertical clearance within the storage shed.

barge-sized volumes; and the need to transload in the open water between river barges and ocean vessels. Nevertheless, it is a safe assumption that barge rehabilitation costs for titanium dioxide would at least equal the {{[redacted]}} estimate for pet coke. Also like pet coke, this estimate is incomplete because it does not include the infrastructure needed to transport the titanium dioxide from the plant to the dock. See infra Part II-B.2.w.

Even if it made economic sense for DuPont to construct any of the above infrastructure needed to load or unload the issue commodities at Edge Moor, it is highly unlikely that DuPont even would be permitted to restore the barge docks under the Delaware Coastal Zone Act or obtain any of the other requisite permits. See infra Part I-A.2.b.(8).

(i) Sulfuric Acid

DuPont would incur significant infrastructure costs in order to load sulfuric acid into trucks or barges at its Reybold, DE facility, which is the origin for 19 of the 26 sulfuric acid issue movements. See infra Part II-B.2.b.

In order to shift the issue movements from rail to trucks, DuPont needs an additional truck loading rack which, based upon a recent similar project at Reybold, would cost {{[redacted]}}. There also would be real estate acquisition costs from the owner of the refinery in which DuPont's plant is embedded, which assumes that the owner would be willing to sell the property.

In order to load sulfuric acid into barges at Reybold, DuPont would have to construct 2 miles of piping, and associated pumps and tanks, to convey the acid to the barge docks. This assumes, however, that the refinery owner would permit DuPont to use the docks and extend piping across the refinery property to the docks. These issues and the millions of dollars in associated infrastructure costs are moot, however, because the Delaware Coastal Zone Act would prohibit DuPont from using the Reybold docks. See infra Part I-A.2.b.(8).

(j) Lime

DuPont does not have adequate infrastructure at its Ampthill, VA facility to receive additional truck shipments of lime over Lane B-96. DuPont has storage capacity for the equivalent of {{[redacted]}}, and therefore, relies upon its rail cars for storage. Furthermore, when DuPont makes emergency truck shipments, it uses {{[redacted]}}. If DuPont switched from rail to truck shipments, it would need to lease {[redacted]} additional trailers at a total cost of {{[redacted]}} per month. {{[redacted]}}. See infra Part II-B.2.o.

(k) Sodium Methylate

DuPont cannot use trucks to transport sodium methylate from its Strang (LaPorte), TX facility to its Lemoyne (Mobile), AL facility (Lane B-86) without adding costly infrastructure at both locations. See infra Part II-B.2.u. At LaPorte, DuPont does not have a truck loading rack for sodium methylate. If and when DuPont needs to load a truck, it must use the Velpar (a herbicide product) loading rack, which is constantly in use for loading and unloading commodities associated with Velpar production. Consequently, DuPont may be able to load just 1-2 trucks per month of sodium methylate. The cost of constructing a new loading rack for sodium methylate would be {{[redacted]}}.

At Mobile, DuPont has only {{[redacted]}} tons of fixed storage, {{[redacted]}}. Therefore, in order to receive sodium methylate by truck, DuPont would have to construct a 30,000 gallon storage tank for approximately {{[redacted]}}.

Consistent with the above limitations, DuPont has no history of trucking sodium methylate over Lane B-86 at all. The relatively small number of rail shipments in this lane, for a commodity that is not produced year-round, does not justify these infrastructure investments.

(l) Sulfur Trioxide

In Lane B-122, DuPont's Burnside production facility cannot load trucks of sulfur trioxide. It would cost {{[redacted]}} to construct a truck loading rack just to be able to load trucks at this origin in order to bypass NS at the issue destination. See infra Part II-B.2.v.

(6) Product integrity concerns preclude the use of alternative modes for 8 of the issue commodities.

Product integrity concerns are highly relevant indicators of market dominance. See e.g., DuPont (Plastics), slip op. at 5 (truck competition not effective due to product contamination concerns); FMC, 4 STB at 720 (Board notes receiver's "product integrity" concern in finding that transloading is not effective competition); Market Dominance Determinations, 365 I.C.C. at 133 (effective competition may be deduced from "physical characteristics of the product in question that may preclude transportation by motor carrier"). There are 8 issue commodities where the use of non-rail transportation alternatives raises significant product integrity concerns.

Bio-propanediol, or PDO, is a liquid that is used in the production of polymers. It is especially sensitive to discoloration. In addition to contamination from traditional sources like dirt and foreign material, even water can adversely affect the polymerization process. If contaminated product enters the polymer production process, it can cause a shut-down of {{[redacted]}} at a cost of {{[redacted]}} in lost product plus restart costs. The greatest potential for contamination occurs during transloading. Because rail cars are needed for storage of PDO at the issue origin, a significant increase in the use of trucks would require transloading from rail

cars into trucks, with increased contamination risks. In addition, PDO can only be transported in stainless steel trucks, which are more difficult and costly to acquire. See infra Part II-B.2.g.

Both DFE and DME are propellants that cannot be transloaded, except at facilities with highly specialized equipment and trained personnel to ensure product integrity. During the transload process, DFE and DME pick up non-condensable gases (such as nitrogen) from air in the pipes, along with moisture and residue from previous materials. Because these commodities are used in aerosol cans, the non-condensable gases can over-pressurize the cans and moisture can throw the commodities out of spec with customer requirements. Also, transloading cannot occur directly from one transport vehicle to another; instead, the product first must be offloaded into a storage tank. Therefore, transloading occurs only at distributor facilities, which have the equipment and trained personnel. In fact, the destination for nearly all of the DFE and DME issue movements is such a distributor, which makes transloading through a different distributor location to reach the destination distributor absurd. See infra Parts II-B.2.k. and l.

Glycolic acid is produced to customer specifications. Whenever glycolic acid is transferred in transit, DuPont hires a third party surveyor to inspect the receiving vessel, monitor the product transfer, and test product samples to ensure that the acid remains within the required specifications. The single issue movement of glycolic acid is produced to European specifications and exported by ocean vessel. DuPont already must transload the product from rail cars into the ocean vessel. The addition of a truck-to-rail transload near the origin would increase the risk of contamination and require additional testing. See infra Part II-B.2.a.

Certain grades of sulfuric acid cannot be transloaded because of degradation concerns. DuPont produces sulfuric acid in concentrations of 93%, 98% and 99%. The 93% concentration, which is the most corrosive, is produced in three grades: technical, electrolytic and water white.

The latter two grades cannot be transloaded because transloading exposes the sulfuric acid to air, which creates more water, which increases corrosion. The corrosion of the tank trucks, in turn, contaminates the acid. DuPont's customers in the following case lanes purchase water white or electrolytic grades of 93% sulfuric acid that cannot be transloaded: {{[redacted]}}. See infra Part II-B.2.b.

The Lime that DuPont ships in Lane B-96 is not ordinary pebble or other common forms of lime, but a specialty lime with minimal impurities and a {{[redacted]}}. It is hygroscopic and will calcify or bridge when it absorbs water, like concrete. Therefore, lime can only be transloaded at a facility with a conditioned, heated nitrogen blanket. No such facility exists in proximity to the issue movement route. See infra Part II-B.2.o.

Polyethylene, like most polymers, is subject to degradation caused by excess handling. For example, transloading creates fines, dust, and streamers, as the polyethylene pellets abrade each other and the sides of the transfer hoses when blown or vacuumed from one container into another. While the amount of fines, dust and streamers created by a single transload is typically acceptable, multiple transloads of a single shipment are avoided as much as possible because the contamination increases with each transload. In addition, transloading increases the risk of contamination from foreign particles. The consequences of these product quality degradations are very costly to DuPont's customers if the contaminated product is unloaded into the customer's silos or production lines, resulting in loss of product and plant shutdowns. See infra Part II-B.2.t.

Finally, Sand Zircon is an ultra-pure form of sand that is clean and contains very few imperfections. Because of the extremely fine grains, additional handling during transportation

inevitably results in a partial loss of this high value product. Therefore, transloading is highly undesirable and potentially very costly due to lost product. See infra Part II-B.2.z.

(7) Reliance upon rail cars for storage precludes the extensive use of alternative modes for 11 of the issue commodities.

For 11 of the 26 issue commodities, rail cars are essential storage, as well as transport, vessels. This would make it very costly, if not impossible, for DuPont to switch from rail transportation to trucks or barges. The following issue commodities and movements require rail cars for storage:

- Aniline Oil: Both customers for all 4 issue movements rely upon rail cars for storage. Nation Ford, in Lanes B-49, 84 and 115, receives too much volume to rely solely upon fixed storage. US Amines, in Lane B-85, only purchases aniline oil for limited production campaigns, which does not warrant the construction of fixed storage. See infra Part II-B.2.f.

- AQMs: Four of the five issue destinations rely upon rail cars due to a lack of adequate storage. Lane B-13 does not have any storage tank at all. Lanes B-8, 17 and 25 have storage tanks that are smaller than a single rail car. See infra Part II-B.2.q.

- Bio-PDO: Because the production facility origin for all 3 issue movements has limited storage tank capacity, it relies upon a dedicated fleet of rail cars for storage to ensure continuous production. Without rail car storage capacity, the plant would experience frequent and costly shut-downs. See infra Part II-B.2.g.

- Glycolic Acid: Because Lane B-2 is an export shipment, DuPont depends upon the rail cars for storage at Bayport, TX, until the ocean vessel is ready for loading. See infra Part II-B.2.a.

- Lime: The destination for Lane B-96 relies upon a dedicated fleet of rail cars to store its inventory of lime due to limited permanent storage capacity. See infra Part II-B.2.o.

- MMF: In Lane B-37, DuPont stores its MMF production in rail cars because it does not have any storage at the Belle, WV origin. Also, because the LaPorte, TX destination only has storage equivalent to a single rail car, it also needs the rail cars for storage. See infra Part II-B.2.r.

- Muriatic Acid: Because muriatic acid is an unavoidable by-product of DuPont's production of Freon 22, DuPont cannot produce Freon 22 unless it has storage for muriatic acid. When DuPont's fixed storage is full, DuPont must use rail cars as supplemental storage or halt its Freon 22 production. Moreover, the more difficult it is to

dispose of muriatic acid because of freight rates, the more likely it is that DuPont will need to use rail cars for storage. See infra Part II-B.2.e.

- Polyethylene: DuPont's customers for all 4 issue movements require rail cars for storage because their fixed storage capacity is equivalent to {[redacted]}. See infra Part II-B.2.t.

- Sodium Methylate: Both the origin and destination in Lane B-86 rely upon rail cars for storage. Because the origin does not have any storage tanks, it must load all volumes directly into rail cars. Because the destination has storage that is {{[redacted]}}, it too depends upon rail cars. See infra Part II-B.2.u.

- Sulfuric Acid: The customer in Lane B-94 requires rail cars for storage because it purchases an off-spec product that cannot be mixed with the specification grade product in its storage tanks. The customers in Lanes A-23, B-126, 127, 132, 135, 139 and 140 are distributors which use the rail cars for storage until they resell the product. See infra Part II-B.2.b.

- Titanium Dioxide: At Edge Moor, DE, which is the origin for 23 of 25 issue movements, DuPont loads substantial volumes directly into rail cars due to limited fixed storage. Moreover, DuPont pre-loads rail cars one week in advance for orders that will be filled the following week. See infra Part II-B.2.w.

(8) The Delaware Coastal Zone Act precludes the use of barges for shipments to and from DuPont's Edge Moor and Reybold facilities.

Although DuPont's Edge Moor and Reybold, DE facilities are located on the Delaware River, barge transportation cannot provide effective competition to NS rail service due to restrictions imposed by the Delaware Coastal Zone Act ("CZA"). DuPont ships sulfuric acid from Reybold. At Edge Moor, DuPont ships titanium dioxide and titanium tetrachloride, and receives chlorine, caustic soda, and petroleum coke. DuPont's facilities at Edge Moor and Reybold are both captive to NS and are located in the Delaware coastal zone, the coastal area to which the CZA applies.[33] To use barge transportation at these locations, DuPont must overcome substantial regulatory hurdles, including those posed by the CZA and multiple other

[33] Del. Code tit. 7, §§ 7001, 7002(a).

environmental regulations and statutes. The CZA prohibits DuPont from using barges at all at Reybold and places nearly impossible obstacles upon the use of barges at Edge Moor.

The CZA prohibits "bulk product transfer facilities," which include any port or dock facility for the transfer of bulk quantities of any substance between a vessel and onshore facility within the coastal zone.[34] Exceptions to this prohibition exist for the continued—but not expanded—use of bulk product transfer facilities that were in operation on June 28, 1971,[35] and the construction or expansion of dock or dock facilities, but only if they serve a single industrial or manufacturing facility and a permit is obtained.[36]

The CZA bars DuPont's access to the barge facilities at Reybold. DuPont's Reybold facility is landlocked within a refinery owned by a third party that abuts the Delaware River. Although the refinery has docks that operated on June 28, 1971, the CZA exemption for the continued operation of the docks does not apply to DuPont's use of the docks to load or unload sulfur products, since that would be an expanded use.[37] Nor does DuPont have the legal right to use the refinery's dock or to construct piping across 2 miles of refinery property to connect the DuPont facility to the dock. Moreover, the expanded use of the dock would involve service to multiple facilities—DuPont's facility and the refinery—thus disqualifying such use from the exemption for expanding docks serving a single manufacturing or industrial facility. Accordingly, DuPont does not have a viable barge alternative at Reybold. Even if barging from Reybold was a viable option, existing regulations still would effectively prohibit barge transportation, as described below with respect to Edge Moor.

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[34] Del. Code tit. 7, § 7002(b), 7003.
[35] Del. Code tit. 7, § 7003.
[36] Del. Code tit. 7, § 7002(b), 7004(a); Del. Admin. Code tit.7, § 101-6.1.
[37] See Del. Admin. Code tit. 7, § 101-5.9 (stating that a bulk product facility that was in operation on June 28, 1971, can only be used to transfer the same products and materials as it transferred on June 28, 1971).

The Edge Moor docks have not been used for at least 25 years and are in a state of significant disrepair. In order to rehabilitate Edge Moor's existing barge facilities to ship the issue commodities under the CZA exemption for barge facilities serving a single industrial or manufacturing facility, DuPont would have to obtain a permit. However, obtaining a permit is a difficult, expensive, and time consuming process, and the prospects for success are slight. A permit application requires an environmental impact statement and detailed descriptions of the proposed use, the aesthetic and economic effects, and impact on neighboring land uses.[38] In addition, any application that will result in a negative environmental impact must contain an offset proposal, which must more than offset the negative environmental impacts associated with the proposed activity.[39] Approval of a permit application is in the discretion of the Secretary of the Delaware Department of Natural Resources and Environmental Control ("DNREC"),[40] who considers multiple factors, including economic effect, aesthetic effect, the supporting facilities required, effect on neighboring land uses, and local land use and conservation plans.[41] DuPont's environmental counsel anticipate that it would take 8 months for the Secretary to rule on an application to rehabilitate and use the dock facilities at Edge Moor and cost at least $50,000 to $75,000 in legal, consulting, and application fees. Despite this, there is still a strong likelihood that the Secretary will deny the permit due to the potential for damaging spills, the need for substantial dredging, the increase in barge traffic, and the proximity of the barge docks to a picnic area at Fox Point State Park.

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[38] Id. § -8.1.
[39] Id. § -9.1.1. Because the primary medium at risk is the river environment and subaqueous soil, any DuPont offset would need to target spawning fish populations, benthic invertebrates, and submerged vegetation in the Delaware River.
[40] Del. Code tit. 7, § 7005(a).
[41] Id. § 7004(b).

Even if DuPont could obtain a CZA permit, additional regulatory hurdles remain. DuPont must obtain subaqueous land leases and permits,[42] certify that refurbishment or expansion of the dock facilities is consistent with Delaware's coastal zone management program,[43] obtain water quality certification,[44] and obtain permits from the U.S. Army Corps of Engineers ("USACE").[45] USACE permits are needed for the rehabilitation and any expansion of the dock facilities as well as the discharge of dredge or fill material.[46] Because this does not fall under nationwide permits for minimal impact activities,[47] DuPont would need to obtain an individual permit. The burden of obtaining an individual permit is "not trivial[;]. . . the average applicant for an individual permit spends 788 days and $271,596 in completing the process."[48] Moreover, there is no guarantee that a permit will be issued.

In order to obtain the USACE permits, DuPont must also certify to USACE and DNREC that any proposed activity affecting water use in the coastal zone complies with Delaware's approved coastal management program and will be conducted in a manner consistent with such program.[49] The certification must include a detailed description of the project and its associated facilities, a copy of the federal permit application package, an assessment of the effects of the project on any land or water use or natural resource of the coastal zone, findings that the proposed activity and associated facilities are consistent with the Delaware Coastal Zone Management Program ("DCMP").[50] DNREC's review of the certification includes twenty-five

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[42] Del. Admin. Code tit. 7, § 7504-2.3.3, -2.4.2.
[43] 16 U.S.C. § 1456(c)(3)(A).
[44] 33 U.S.C. § 1341(a)(1).
[45] 33 C.F.R. §§ 322.3(a), 323.3(a).
[46] Id.
[47] See 33 C.F.R. Part 330.
[48] Rapanos v. United States, 547 U.S. 715, 721 (2006)
[49] 16 U.S.C. § 1456(c)(3)(A). See also DNREC, Delaware Coastal Management Program: Comprehensive Update and Routine Program Implementation § 3.2 (2011).
[50] DNREC, supra note 49, § 3.2.2.

policy areas.[51] If DNREC finds that the proposed activity is inconsistent with the DCMP, it may object to the certification, thereby precluding USACE from issuing a permit unless the Secretary of Commerce, on appeal, overrides DNREC's objection.[52]

To obtain the necessary water quality certification, which is a prerequisite to obtaining the USACE permits,[53] and subaqueous land leases and permits, DuPont must submit a combined application containing engineering drawings and a wetlands delineation to the Wetlands and Subaqueous Lands Section ("WSLS") of DNREC, which will evaluate the application using a multitude of criteria, including: environmental impact, erosion control, impact on public use, impact on ecosystems, serviceability, impact of dredge or fill activities, and impact on Delaware surface water quality.[54] Applications for subaqueous lands permits and leases are subject to a public notice requirement and, if a meritorious request for hearing is received or WSLS finds a public interest in the project, a public hearing before a hearing officer.[55] Given the scope of any dock facility rehabilitation and expansion and its implication of the CZA, a hearing is likely. If the permit application is denied, there is no right of appeal.[56]

The presence of so many regulatory obstacles, the cost of pursuing the multiple required permits, and the potential that any single permit denial can block the entire project substantially dilutes any potential constraint that the possibility of barge competition might have on rail rates. See General Electric, 1984 ICC LEXIS 206, *6 ("[W]hether such a dock and unloading facility could actually be constructed is far from certain, since the record shows that environmental requirements of several jurisdictions would have to be met, and the government agencies

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[51] Id. § 5.0.
[52] Id. § 3.2.6.
[53] 33 U.S.C. § 1341(a)(1).
[54] Del. Admin. Code tit. 7, § 7504-4.0
[55] Del. Code tit. 7, § 7207, 7208.
[56] Id. § 7210.

involved might not permit construction for the handling of such a hazardous substance."). All of this is before investing the millions of dollars required to build the infrastructure that is necessary to make barge transportation a physical possibility at Edge Moor and Reybold. See Id. (holding that the complainant was justified in regarding the need to construct barge facilities capable of receiving a hazardous commodity to be a large and expensive capital expenditure).

(9) Some customers and suppliers require DuPont to ship by rail.

Even if Dupont could reduce its transportation costs by using alternative modes, there are some issue movements where it simply cannot do so because of customers or suppliers who require rail delivery in their contracts with DuPont. A customer requirement for rail transportation demonstrates the infeasibility of alternative modes. DuPont (Plastics), slip op. at 7. See also, McCarty Farms, 3 I.C.C. 2d at 829 ("needs of the shipper or receiver" may determine feasibility of truck transportation). Moreover, a contractual requirement to deliver product to a customer by rail "makes a switch to trucks highly infeasible from an economic standpoint due to the risk of losing its customer or incurring breach-of-contract liability." E.I. du Pont de Nemours and Company v. CSX Transportation, Inc., STB Docket No. 42101, slip op. at 6 (served June 30, 2008) ("DuPont (Nitrobenzene)"). For those customers who will not accept regular truck deliveries, DuPont is unable to respond to changes in NS's prices by switching from NS to alternative modes, which means that those alternative modes do not provide effective competition. Special Procedures, 353 I.C.C. at 929. There are 7 issue commodities where DuPont's contracts with its customers require rail transportation.

Of the 19 issue movements of anhydrous methylamines, 9 customers in 12 lanes have rail delivery requirements in their contracts with DuPont.[57] The customer location in Lane {{[redacted]}}

[57] Those customers are {{[redacted]}}.

physically cannot receive trucks. Consistent with these rail delivery requirements, DuPont did not deliver a single truck shipment to 8 of these 12 destinations from 2006-10, and delivered only a very small number of trucks to the other 4 destinations on an expedited basis. Because of the properties of this commodity, customers do not want to handle it more than is absolutely necessary, which includes avoiding 4-5 times as many truck unloadings in comparison to rail. See infra Part II-B.2.p.

There are 4 issue movements of aniline oil to 2 different customers. {{[redacted].}} Both customers also rely upon rail cars for storage of the aniline oil after delivery. {{[redacted].}} See infra Part II-B.2.f.

{{[redacted].}} The customer's facility is designed for rail unloading and it must improvise for occasional expedited truck deliveries. Such improvisations would not be practical for regular truck shipments. See infra Part II-B.2.z.

{{[redacted].}} See infra Part II-B.2.d.

For 5 issue movements of titanium dioxide, the customer has required rail delivery in its contract with DuPont.[58] From 2006-10, there were no truck shipments in {{[redacted]}}. Although the other 4 lanes had many truck shipments in 2010, most of those were attributable to a production shut down at DuPont's Edge Moor, DE plant. To ensure that all of its customers remained supplied with titanium dioxide during the shutdown and subsequent ramp up of production, DuPont kept all customers supplied as leanly as possible by making expedited truck shipments only when the customer was at risk of shutting down due to low inventory. In addition, {{[redacted]}} always receive some trucks because their facilities are divided into two parts, one of which cannot receive rail shipments and the customers do not have the infrastructure to pipe titanium dioxide from one part of their plants to the other. See infra Part II-B.2.w.

The sole caustic potash movement is different from the prior commodities because DuPont is the customer rather than the seller. {{[redacted]}} The Dayton P&L Co. v. Louisville and Nashville R.R. Co., 1 I.C.C. 2d 375, 382 (1985). Because caustic potash is a highly corrosive hazardous material that all parties prefer to handle as little as possible, rail has one-quarter the number of hook-ups as trucks at both the origin and destination. Even if DuPont was willing to assume the risks, not to mention the costs associated with the extra handling required for trucks, DuPont cannot compel its suppliers to do the same. See infra Part II-B.2.h.

DuPont faces similar issues with its purchases of caustic soda, which like caustic potash also is highly corrosive. Also like caustic potash, {{[redacted]

[58] Those customers are in Lanes {{[redacted]}}.

[redacted].}}} Even if DuPont were willing to assume the risks of handling four times more caustic soda shipments, not to mention the costs associated with the extra handling, DuPont cannot compel its suppliers to do the same. See infra Part II-B.2.i.

B. SAC EVIDENCE AND ARGUMENT

1. Introduction – Governing Principles

In Coal Rate Guidelines, 5 I.C.C.2d 520 (1985), the Interstate Commerce Commission, the Board's statutory predecessor, adopted constrained market pricing ("CMP") as its methodology for determining maximum reasonable rate levels for market dominant traffic, such as DuPont's movements that are the subject of this proceeding. Under CMP, a captive shipper should not be required to pay more than is necessary for the carrier involved to earn adequate revenues. Nor should it pay more than necessary for efficient service. Finally, a captive shipper should not be required to bear the cost of any facilities or services from which it derives no benefit. id. at 523-524. These principles have been relied on by the Board and its predecessor for more than twenty-five years. See, e.g., AEPCO, slip op. at 3-4, citing Guidelines; WFA/Basin, slip op. at 7, citing Guidelines.

Under Guidelines, CMP contains three main constraints on the extent to which a railroad may charge differentially higher rates on captive traffic: the "revenue adequacy" constraint, Guidelines at 535-36; the "management efficiency" constraint, id. at 537-42; and the "stand-alone cost" ("SAC") constraint, id. at 542-46, which protects a captive shipper from bearing costs or inefficiencies or from cross-subsidizing other traffic by paying more than the revenue needed

to replicate rail service to a select subset of the carrier's traffic base.[59] AEPCO, slip op. at 4. DuPont is proceeding under the SAC prong of CMP.

Under the principles of SAC, the Board seeks to determine whether a complainant is bearing the cost of any inefficiencies or the cost of any facilities or services from which it derives no benefit, by simulating the rate that would exist in a "contestable market," that is, a market that is free from barriers to entry. Guidelines, 1 I.C.C.2d at 528; AEPCO, slip op. at 4; CP&L, 7 S.T.B. at 244 (SAC analysis seeks to determine the "lowest cost at which a hypothetical, optimally efficient carrier could provide the service. . . if the rail industry were free of barriers to entry or exit . . ."). Contestable markets have characteristics that preclude monopoly pricing. Id. Since real-life rail markets are not contestable due to high barriers to entry that permit a rail carrier to impose monopoly pricing on a captive shipper, the SAC analysis develops a hypothetical competitor – the "Stand Alone Railroad" ("SARR"). AEPCO, slip op. at 4. Under the SAC constraint, the rate at issue cannot be higher than what the SARR would need to charge to serve the complaining shipper while fully covering all of its costs, including a reasonable return on investment. The SAC analysis produces a simulated competitive rate against which to judge the challenged rate. Guidelines, 1 I.C.C.2d at 542; AEPCO, slip op. at 4; TMPA, 6 S.T.B. at 586.

To make a SAC presentation, the complaining shipper designs a SARR specifically tailored to serve an identified traffic group. Using information on the types and amounts of traffic actually moving over the defendant's rail system, the complainant selects a subset of that traffic (including the traffic that is the subject of the complaint) that the SARR would serve. AEPCO, slip op. at 4. The complainant then designs a transportation system that would serve

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[59] Guidelines also contains a fourth limitation on a rail carrier's pricing, the phasing constraint. See, Guidelines, 1 I.C.C.2d at 546. Phasing does not limit the final price selected by the carrier, but the pace at which a rate increase may be imposed.

that group of traffic efficiently and at the lowest cost, taking into account all essential facilities and operating assets. See WFA/Basin, slip op. at 8; FMC, 4 S.T.B. at 721; Guidelines, 1 I.C.C.2d at 543-44. An operating plan must be developed to serve the traffic group selected by the complainant, and the system-wide investment requirements and operating expenses must be estimated, including appropriate documentation to support the estimates. AEPCO, slip op. at 4-5. The Board's requirements assume that investments are made prior to the start of service, that the SARR would continue to operate into the indefinite future, and that recovery of the investment costs would occur over the economic life of the assets. Id. at 5. A computerized discounted cash flow ("DCF") model simulates how the SARR would likely recover its capital investments. The annual revenues required to cover the SARR's capital costs and taxes are combined with the annual operating costs to calculate the SARR's total annual revenue requirements. AEPCO, slip op. at 5.

The revenue requirements of the SARR are then compared to the revenues that the defendant railroad is expected to earn from the traffic group. If the present value of the revenues that would be generated by the traffic group exceeds the present value of the revenue requirements of the SARR, the Board must decide what relief to provide to the complainant by allocating the revenue requirements of the SARR among the traffic group over time. Id.

Thus, the five basic parts of a SAC analysis are: (1) identify the traffic group to be served by the SARR, including historical and projected revenues; (2) design the configuration of, and develop an operating plan for, the SARR to serve the selected traffic group; (3) calculate operating expenses of the SARR to serve the traffic group and implement the operating plan; (4) calculate the road property and equipment investment needed to operate the SARR; and, (5) develop the DCF analysis. The parts are not strictly sequential, since the results of a later step

may prompt a revision in an earlier step. DuPont's evidence is presented in Part III, in the order required by the Board in its decision in General Procedures, 5 S.T.B. 441 (2001).

2. DuPont Has Carefully Followed the Board's Well-Defined Set of Rules and Precedent to Guide Parties In Developing Stand-Alone Cost Evidence.

Since the ICC's 1985 decision in Guidelines, the ICC and the Board have decided several dozen SAC cases. In the years between 1985 to the early years of the twenty-first century, the agency was grappling with fundamental questions about the principles that it would use to determine an acceptable design and operation of a SARR, including such key issues as the nature of a SARR as a competitor or a replacement to the incumbent; the use of cross-over traffic; acceptable rerouting of traffic, issues of cross-subsidization; and several others.[60] Finally, in 2006, after comprehensively considering several key issues in a rulemaking proceeding, the Board issued a decision in Major Issues, which established binding rules in four key areas dealing with the development of a SARR and the application of a SARR's costs to determine the maximum reasonable rate: (a) replacing the "percent reduction approach" with the "maximum markup methodology" ("MMM") to calculate the maximum lawful rates; (b) adopting the "average total cost" ("ATC") approach to allocate revenue from cross-over traffic; (c) shortening the analysis period to 10 years; and, (d) using a hybrid approach for forecasting operating expenses to account for future productivity. See Major Issues, slip op. at 9-44, 61-64.[61] Since the Board's decision in Major Issues, the agency has applied the rules set forth in that decision to

[60] See, e.g., Nevada Power II, 10 I.C.C.2d at 265-268 and 280-81 (nature of SARR as competitor or replacement; use of cross-over traffic); Duke/NS, 7 S.T.B. at 112-117 (principles of acceptable rerouting); PPL, 6 S.T.B. at 293-300; Otter Tail, slip op. at 24-30 (cross-subsidization principles).

[61] The Board's decision in Major Issues also dealt with the issue of whether movement-specific adjustments would be used to calculate variable costs, an issue important for developing the variable cost calculations used for the Board's jurisdictional inquiry, as well the ATC and MMM calculations. Major Issues also dealt with the issue of uniform standards for reopening, vacating and filing a new case. See Major Issues, slip op. at 47-60 and 67-75.

complaints brought to the Board under the SAC constraint.[62] Thus, the Board's decision in Major Issues has substantially "narrowed the playing field" with respect to the calculation of the SAC constraint, significantly reducing the choices of the parties in developing their evidence, and the discretion of the Board in deciding cases.

Moreover, even in matters involved in calculating the SAC constraint that were not dealt with in Major Issues, since about 2003, the Board has developed an increasingly-well defined set of precedent that has established consistent principles for deciding a number of other key issues dealing with the overall design of the SARR. For example, in the Eastern Coal Cases and other recent decisions, the Board has developed a consistent set of principles by which it would adjudge the acceptability of rerouting traffic internally on, and externally to, the proposed SARR. See TMPA, 6 S.T.B at 589; Duke/NS, slip op. at 25-26; CP&L, 7 S.T.B. at 253-259; Duke/CSXT, 7 S.T.B. at 417-422; WFA/Basin II, slip op. at 11-12; AEPCO, slip op. at 10-11; Ariz. Elec. Power Coop. v. Burlington N. & Santa Fe Ry., 6 S.T.B. 322, 327 (2002). Similarly, in its decisions in PP&L and Otter Tail, the Board has set forth principles and procedures by which it would adjudge whether traffic on one part of a SARR was cross-subsidizing traffic on another part of a SARR, and if so, whether and how the Board would adjudge the rate to be unreasonable and calculate the SAC rates. See, PP&L, 6 S.T.B at 293-300; Otter Tail, slip op. at 24-30.

Finally, even beyond the rules developed in Major Issues and general principles dealing with the overall design of the SARR set forth in a number of cases, the Board has also established substantial precedent involving more detailed aspects of the cost of constructing and

[62] See AEPCO, slip op. at 34, 35; WFA/Basin II, slip op. at 4-7, 12; AEP Texas, slip op. at 15, 23. The Board also has followed those principles in cases in which the parties have agreed that the SAC level would be below the jurisdictional threshold, and therefore the maximum reasonable rate would be set at the 180 percent of the applicable variable costs. See OG&E, slip op. at 4; KCPL, slip op. at 7-8.

operating a SARR. For example, where contracts have expired and the parties disagree whether internal forecasts produced in discovery are accurate, the agency has consistently expressed a preference for using government forecasts of revenue and traffic because they are unbiased, independent and updated regularly. See, e.g., AEPCO, slip op. at 21-23; PSCo/Xcel, 7 S.T.B at 639 and PSCo/Xcel II, slip op. at 14, aff'd on this point, 453 F.3d at 486; WFA/Basin, slip op. at 27. The Board has expressed a strong preference for an operating plan based upon the Rail Traffic Controller ("RTC") Model. See AEPCO, slip op. at 28; WFA/Basin II, slip op. at 15-16; WFA/Basin, slip op. at 15; AEP Texas, slip op. at 17; PSCo/Xcel, 7 S.T.B. at 613-14; Otter Tail, slip op. at 19. The Board has consistently accepted a 10 percent contingency factor[63] as well as a 10 percent engineering factor[64] for the road property investment cost of a SARR, both of which are now clearly settled law. The Board has consistently used the cost of capital determined annually for the railroad industry in determining the cost of capital for the SARR.[65]

Even when the Board has not settled on one figure for certain SARR elements, as it clearly has done in the case of the contingency and engineering factors, in recent cases the Board has often narrowed the range of acceptable costs. For example, in several recent decisions, the Board has accepted a very narrow range for the cost of insurance for the SARR.[66] Similarly, the Board has approved a relatively narrow range of costs for mobilization factors in cases where the matter has been litigated.[67]

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[63] See AEPCO, slip op. at 133; WFA/Basin II, slip op. at 55; WFA/Basin, slip op. at 132-133; AEP Texas, slip op. at 104 (citing the complainant's reliance on "past Board decisions"); Duke/NS, 7 S.T.B. at 203-204.

[64] See AEPCO, slip op. at 132; WFA/Basin II, slip op. at 55; WFA/Basin, slip op. at 132; AEP Texas, slip op. at 104; Duke/NS, 7 S.T.B. at 201-203.

[65] See AEPCO, slip op. at 137; WFA/Basin II, slip op. at 19-26; WFA/Basin, slip op. at 135; AEP Texas, slip op. at 107-108.

[66] See AEPCO, slip op. at 78 (3.66% of operating expenses accepted); WFA/Basin II, slip op. at 44 (3.2% of operating expenses accepted); WFA/Basin I, slip op. at 76 (3.2% of operating expenses accepted). .

[67] See AEPCO, slip op. at 132 (2.4% mobilization factor); Duke/CSXT, 7 S.T.B at 338 (2.6% mobilization factor); CP&L, 7 S.T.B at 338 (2.5% mobilization factor); TMPA, 6 S.T.B. at 744-45 (2.0% mobilization factor); Wisconsin P&L, 5 S.T.B. at 1036-1037 (2.4% mobilization factor).

In other cases where it would not be possible to settle on a specific figure or even range of figures given the specific design of a SARR in an individual case, the Board has clearly expressed a preference for a particular configuration or methodology for determining the costs of a SARR. For example, the Board has clearly made known that it does not believe that the outsourcing of ordinary maintenance is feasible. See Duke/NS, 7 S.T.B. at 163-164 (rejecting the use of outside contractors for spot maintenance); AEP Texas, slip op. at 67-68 (rejecting the use of outside contractors for spot maintenance); WFA/Basin, slip op. at 57 (noting with approval that the complainant had used a realistic in-house maintenance staff); PSCo/Xcel, 7 S.T.B at 661-62 (rejecting extensive use of outside contractors); Otter Tail, slip op. at C-18 to C-21 (rejecting use of small MOW staff). Similarly, the agency has noted with approval throughout its decisions a particular methodology to estimate the "peaking factor" that it uses to insure that the SARR has sufficient equipment to handle the peak week traffic demands. See AEPCO, slip op. at 32, citing WFA/Basin and PSCo/Xcel II.

DuPont's experts have carefully considered the Board's precedent in these and other matters, and have followed the Board's guidance. The Board will determine from the evidence presented in Part III that DuPont's SAC analysis is well within the bounds of the parameters that the Board has accepted in past cases, and therefore the Board can and should rely on DuPont's evidence in deciding this case. As the Board recently noted, [w]here . . . a complainant has followed established agency precedent, defendant[] carr[ies] the burden to justify a departure from that methodology." AEPCO, slip op. at 11, 33.

In this case, DuPont's evidence shows that the challenged NS rates are extraordinarily high, by any measure. As noted in Part II-A-1, revenue to variable cost ("R/VC") ratios for DuPont's traffic are as high as 1,044%, significantly higher than the Board has encountered in

past cases. On a mills per ton mile basis, these rates are also higher than the Board has encountered in past cases. Therefore, on the basis of the SAC evidence submitted by DuPont, which is consistent with the rules, principles and precedent that the Board has enunciated in past SAC cases, the Board should determine that DuPont's rates clearly exceed a reasonable maximum, and should prescribe maximum reasonable rates as requested by DuPont.

3. The DuPont Railroad

As the Board has already recognized in this case, DuPont's SARR – the "DuPont Railroad" or "DRR" – is one "of unusual scope and complexity." See STB Docket No. 42125, decision served January 13, 2012, slip op. at 2. The DRR is made up of nearly 7,300 route miles, and in addition will operate over about 820 miles of trackage rights or joint facility agreements (as NS does today), for a system approximately 8,000 miles in length. See infra pp. III-A-3, -B-1 to -2. The DRR system will hypothetically operate in twenty (20) states. See infra p. III-A-3. It will carry general freight, coal and intermodal traffic and is designed to transport a broad range of commodities over its system. Id. Yet, this complex system is not made up out of whole cloth – the DRR system replicates the routes and traffic of the NS itself, and its operations are similar to what NS does over many of the same lines today. See infra p. III-A-4. But, consistent with Guidelines and with Board precedent, the DRR takes advantage of efficiencies of scope and scale and modern railroad practices, to develop an optimally efficient SARR.

The traffic of the DRR largely moves over the same routes utilized by NS: there is only limited re-routing; all reroutes are entirely internal to the DRR; and any trains that carry cross-over traffic are still interchanged with NS at a point along the "real world" route of movement. See infra pp. III-A-5 to 7. As discussed further below, rerouted traffic is handled consistent with

Board precedent, and the reroutes do not adversely impact the quality of service that the customers in question receive from NS today.[68]

4. The Stand-Alone Traffic Group

Under Board precedent, the complainant must create a traffic group by using information on the types and amounts of traffic moving over the defendant's rail system, and by selecting a subset of that traffic (including its own traffic to which the challenged rate applies) that the SARR would serve. See AEPCO, slip op. at 16. The selected traffic group must be representative of that which would move on the SARR in the future, and the composition of the traffic group must be realistic, that is, consistent with the principles of real-world railroading. Id.

DuPont has followed these principles. As noted in Part III-A of its evidence, the DRR transports a broad range of commodities over its system, similar to what the NS does over many of the very same lines today. The DRR traffic group was developed using NS car and container waybill data for the June 1, 2009 through December 31, 2010 time period, which were produced by NS in response to DuPont discovery requests. See infra p. III-A-3. Like traffic carried by the NS itself, the DRR traffic group includes chemical, intermodal, agricultural, coal, automotive, metals, paper, and construction materials shipments. See infra p. III-A-3 to -4.

As noted above, the routing of certain trains moving on the DRR differs in part from the routing followed by these trains on NS lines. However, these re-routes are entirely internal to the DRR, affecting only the manner in which the trains move on the DRR, and are still interchanged with NS at a point along the actual route of movement. See infra pp. III-A-5 to -7, III-C-19 to 21. As the Board has very recently noted, "[t]remendous flexibility is permitted in the design of

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[68] In the Duke/NS, Duke/CSXT and CP&L cases, which dealt with movements in the eastern United States, the complainant in those cases utilized extensive rerouting of traffic, where the rerouting of traffic would change the routing on the residual incumbent carrier, i.e., so-called "external" reroutes. See Duke/NS, 7 S.T.B. at 112-115; CP&L, 7 S.T.B. at 253-254. In contrast, as discussed herein, DuPont's DRR system uses limited rerouting completely internal to the SARR.

the SARR," so long as the hypothetical operations are "feasible and supported and that they provide shippers included in the analysis the same or superior service as provided by the actual operations of the defendant railroads." AEPCO, slip op. at 10. It is now well-settled that rerouting of traffic to take advantage of economies of density is permissible. See AEPCO, slip op. at 14-15. Under well-settled precedent, as long as the reroute is "internal" to the SARR, i.e., the "routing differences would be confined to within the SARR's own system," the re-routing is permitted "so long as the routing is reasonable and would meet the shippers' needs." AEP Texas, slip op. at 9-11; TMPA, 6 S.T.B. at 594-95. See also, AEPCO, slip op. at 15 ("as long as the SARR would provide equivalent or superior service to those shippers, the non-issue traffic included in the SAC analysis is permitted to share the expense of those rail facilities."); PSCo/Xcel, 7 S.T.B. at 609 (internal rerouting accepted where complainant offered "comparable or superior" service). Unlike the situation in Duke/NS, for example, the DRR's routing would not have ramifications extending beyond the SAC analysis to the incumbent railroad. Compare, Duke/NS, 7 S.T.B. at 112-113.[69]

The DRR fully meets these standards. Indeed, the DRR's internal re-routings are even more conservative than the Board has permitted in past cases. The DRR contains four (4) segments over which trains will be rerouted. See infra pp. III-A-5 to 7, III-C-18 to 21. In each of these four cases, the route of movement used by the SARR is one of two alternate routes actually used by the NS; in other words, NS actually uses the route chosen by the DRR for some of the traffic actually transported on its system, a supporting fact not present in a number of prior cases in which the agency approved the use of a shipper's internal re-routes. See, e.g., AEP Texas, slip op. at 10. The fact that NS actually uses these "alternate" routes confirms the fact

[69] In fact, in Duke/NS, the NS did not object to the rerouting of traffic that would be local to the SARR or that would be interchanged with the residual NS along its usual route. See, Duke/NS, 7 S.T.B. at 113, n. 39.

that they are reasonable and meet the shippers' needs. Moreover, in two of these four cases, the rerouting is shorter than the route actually used. See infra p. III-A-5 to 6. In such cases, the Board presumes that the rerouting is acceptable. Duke/NS, 7 S.T.B at 112. In the other two cases, the rerouting involves only small increases in the length of haul,[70] significantly shorter than the added length of haul of reroutes that have been approved by the Board in past cases.[71] See infra pp. III-A-5 to 6, III-C-19 to 20. And, consistent with past cases in which the Board has approved such internal reroutes, DuPont's analysis shows that the DRR is "reasonable" and provides comparable or superior service. As with the situation in AEP Texas, the RTC model shows that the SARR's average transit time for the rerouted traffic is equal to or faster than those recorded by the incumbent. See infra pp. III-A-5 to 7, Part III-C-21; AEP Texas, slip op. at 10 (RTC Model simulation showed that the transit times for the reroutes traffic would be "comparable to or shorter than" the incumbent's transit times). See also, PSCo/Xcel, 7 S.T.B. at 607-608 (internal rerouting approved where mileage was slightly (6.1 miles) longer but the cycle time for the rerouted movement was shorter than the average cycle time for the usual route of movement).

The DRR has been constructed to begin operating on June 1, 2009. The DRR traffic group uses actual NS traffic moving from that date through the 2010 base year. See infra p. III-A-7; AEPCO, slip op. at 20 (STB accepted base year volumes using actual traffic information). The DRR also includes forecasted traffic volumes for the period from January 1, 2011 through May 31, 2019. See infra p. III-A-7. Traffic volume forecasts through 2015 were developed using NS internal forecasts, developed by NS in December 2010. Id. For the 2016 through

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[70] In two of the four cases, the rerouting only adds 8.3 miles and 38.1 miles of distance to the route, that is, the reroutes are 4% and 13% longer than the actual route.

[71] In AEP Texas, for example, the complainant's rerouting would have added between 10% and 25% extra distance. See, AEP Texas, slip op. at 10, n. 12.

2Q2019 time period, volumes were developed by adjusting the prior year volume by a commodity-specific compound annual growth rates developed using two (2) years of actual NS data and five (5) years of NS internal forecast data. See infra pp. III-A-8 to 12. The methodology used by DuPont is consistent with the methodology used by the Board in the CP&L decision, where the Board recognized that coal business in the east in constantly shifting, and therefore to project volumes on an O-D pair-specific basis would be "unduly restrictive" and would not "fairly reflect the traffic that would be available" to the SARR in any one year. CP&L, 7 S.T.B. at 249-250. Thus, the Board approved the use of projections on a regional, commodity group basis. Id. There is no difference between coal and other commodities in this regard, and DuPont has used the same logic to cover all carload movements on the DARR. Electric utility coal volume growth was capped at an 85 percent capacity level consistent with STB decisions in prior SAC cases involving the movement of coal to electric utilities. See infra pp. III-A-11 to 12; AEPCO, slip op. at 21; AEP Texas, slip op. at 31. Peak year traffic was projected to occur in the final year of the ten-year model evaluation. See infra p. III-A-13. Revenue projections were based on NS 2010 traffic and revenue data; NS pricing authorities; NS internal revenue forecasts; and publicly available forecasts of key economic indices. See infra pp. III-A-15 to 17. Indices used by DuPont are consistent with STB precedent. See, WFA/Basin, slip op. at 30; PSCo/Xcel, 7 S.T.B. at 638; AEPCO, slip op at 24-26.

Although the DRR will handle single line and interline traffic (which revenue will accrue to the DRR in the same manner as that revenue currently accrues to NS), the largest grouping of traffic to be handled by the DRR is cross-over traffic, that is, traffic that currently moves over a larger portion of the NS system than is replicated by the DRR. See infra pp. III-A-18 to 22. Cross-over movements are assumed to be interlined with the residual NS. See infra p. III-A-20.

The revenue split between the DRR and the residual NS has been calculated using the methodology set forth in Major Issues, slip op. at 24-39, as modified by the Board in WFA/Basin II, slip op. at 12-13 and AEP Texas, slip op. at 15-16 (application of ATC procedures to total revenue contribution rather than total revenue).

Finally, DuPont's treatment of the revenue accruing as a result of NS fuel surcharges is consistent with the methodology recently approved by the Board in AEPCO, slip op. at 26-28, in which the Board approved of the use of EIA forecasts of oil prices included in the agency's short term and long term projections. See infra p. III-A-17.

5. The DRR System and Operating Plan

The DRR has an extensive system that essentially includes twenty-three main-line segments as well as 36 branch lines, which serve DuPont issue locations as well as a large selection of power plants, industrial facilities, rail/water transfer terminals, and interchanges. See infra pp. III-B-1 to 2. The DRR will interchange with six (6) Class I railroads and numerous regional and short-line carriers that NS interchanges with today. See infra pp. III-B-4, III-C-3. The DRR system includes main- and branch-line tracks, sidings, interchange tracks, and pocket and set-out tracks, as well as six (6) major yards, thirty-five (35) mid-sized yards, and seventy-eight (78) small yards. See infra p. III-B-7. The DRR uses new 136-pound continuous welded rail on all constructed main line and passing sidings in line segments carrying 20 million tons or more gross tons per year and premium rail on curves of 3 degrees or more, with new 115-pound rail used on lighter-density tracks. See infra p. III-B-5. This is consistent with Board precedent. See, AEPCO, slip op. at 104; Duke/NS, 7 S.T.B. at 184-85. As noted further below, other components used in the construction of the DRR system are consistent with the Board's past decisions. As described at page III-B-7, the yards on the DRR are used for train staging, inspections, crew changes, fueling, and other operations. The DRR system is constructed in

conformity with the latest requirements. Specifically, although current federal law mandates the use of Positive Train Control ("PTC") only by December 31, 2015, the DRR is constructed at the outset with the PTC system, both for safety reasons and for reasons of cost and efficiency, since it is more cost-efficient to construct a PTC train control and communications system from the outset, rather than constructing a Centralized Traffic Control ("CTC") system and then converting partway through the analysis period. See infra pp. III-B-8, III-C-21 to 23, III-F-38 to 39.

The DRR's operating plan, described in detail in Part III-C, is designed to enable the DRR to transport its peak seven-day traffic volume and train frequencies during the 10-year DCF period, in a manner that meets the transportation needs of the traffic group in compliance with all NS transportation and service commitments. See infra p.III-C-1. The operating plan was developed using the Board-approved RTC Model, and takes into account the DRR's total traffic volume and traffic flows, as well as the DRR's interchange relationships with other carriers. See infra pp. III-C-2 to 5. All trains are interchanged with other railroads as run-through trains. See infra p. III-C-5. The DRR's train sizes are the same as those for comparable NS trains operated in the base year, and non-coal trains that are interchanged with NS have the same mix of traffic as the comparable NS trains that moved between the same points in the base period. See infra pp. III-C-8 to 9.

The DRR operating plan provides for efficient modern railroad practices, such as calling train crews in advance of the train's arrival at a designated interchange point; maximization of crew assignments within the confines of current law; maximum train speeds consistent with modern practices; and appropriate operational staffing. See infra p. III-C-6.

The number of locomotives on the DRR is sufficient to handle the peak-period traffic volume. Locomotives used on the DRR are consistent with locomotives used in actual service on the NS, and are used in modern distributed power (DP) configurations used by rail carriers across the country, including NS. See infra pp. III-C-10 to 11. The count of road locomotives includes a spare margin of {[redacted]} percent for road and helper service locomotives and {[redacted]} percent for local and work train locomotives, based on information provided by NS in discovery. See infra p. III-C-11. DuPont's experts examined actual NS bad order time, transit time and total equivalent units in service by locomotive type for 2008, 2009, and 2010. From that information, they developed the actual three-year weighted average locomotive spare margin for both types of locomotives. Id. Though these spare margin figures are somewhat lower than the Board has found in some (but not all) past cases,[72] the figure is well-supported and is based on actual NS experience, and should be adopted by the Board. DuPont experts have also calculated a peaking factor of 5.4%, using the same process as that approved by the Board in recent cases. See infra pp. III-C-11 to 12; WFA/Basin, slip op. at 33-34; PSCo/Xcel II, slip op. at 13; AEPCO, slip op. at 32 (peaking factor of 5.9%).

Railcar requirements for the DRR traffic group were determined from data produced by NS in discovery. See infra pp. III-C-13; III-D-6. The DRR car requirements were increased by a {[redacted]} percent spare margin that is based on the range of spare margins contained in NS' coal transportation contracts and which is consistent with the range of spare margins for cars utilized by the parties or decided by the Board in a number of recent cases.[73] The car requirements were

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[72] See, WFA/Basin, slip op. at 33-34 (8.6% spare margin for road locomotives and 0% for helper, switching and work locomotives); AEP Texas, slip op. at 43-44 (7.9% spare margin); Otter Tail, slip op. at C-2 (7.94% spare margin for road locomotives). But see, TMPA, 6 S.T.B. at 661 (5% spare margin requirement for helper service); Duke/CSX, 7 S.T.B. at 453-454 (5% spare margin used for road and helper locomotives); CP&L, 7 S.T.B. at 289 (5% spare margin accepted); Duke/NS, 7 S.T.B. at 151 (5% spare margin accepted).

[73] See infra p. Part III-C-15, n. 6, describing both parties use of a 5.0 percent spare margin in the AEPCO case, based on the use of transportation contracts. See also WFA/Basin, slip op. 39 (5% railcar spare margin used,

also increased by the peaking factor used for locomotives described previously. See infra p. III-C-14.

The DRR's operating plan is consistent with the Board's fundamental requirement that the operating plan must "meet the transportation needs of the traffic the SARR proposes to serve," and must be "realistic, i.e., consistent with the underlying realities of real-world railroading." WFA/Basin, slip op. at 15. In making that determination, the Board looks to the adequacy of the configuration, to insure that the SARR will have sufficient capacity to handle the peak forecast, and the cycle times, to determine whether the service will be adequate. The DRR meets these tests. The RTC Model confirms that the train cycle times during the peak period in the peak year are similar to or lower than the NS' actual cycle and transit times during the comparable period of the most recent year for which data is available. Indeed, as discussed at pages III-C-16 to 18, the DRR's trains operate in a manner that produces faster train speeds and transit times on average than NS demonstrated in the 2010 base year.

6. Operating Expenses

The DRR's operating expenses are described in Part III-D of DuPont's evidence, which sets forth the costs of equipment, personnel, general and administrative, information technology and maintenance of way requirements, and the development of related service units and costs. The DRR's operating expenses reflect the results of the RTC Model simulation, which was used to calculate the DRR's locomotive hours and car hours for the peak week of the peak year, which was then used to calculate locomotive hours, car hours, locomotive unit miles and car miles for the 2010 Base Year. The resulting statistics were then utilized to determine overall locomotive and car ownership requirements as well as personnel requirements. See infra p. III-D-1. The

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based on transportation contracts); Otter Tail, slip op. at C-5 (5.0% spare margin for cars, based on transportation contracts).

procedures used to develop the DRR's operating expense for the 2010 Base Year were those approved by the Board in WFA/Basin, that is, by applying transit times calculated for the peak period of the peak year to a full year of train data in order to calculate operating statistics. See infra p. III-D-26.

As noted in DuPont's evidence, NS did not provide any current locomotive capital leases in response to DuPont's discovery requests. See infra p. III-D-3. Therefore, DuPont developed locomotive lease costs from various public sources (depending on the type of locomotive acquired), including prior Board decisions, the public record of prior cases, and industry publications. See infra pp. III-D-3 to 4. The cost of locomotive maintenance and servicing was based on actual NS costs derived from its Annual Report to the STB. See infra pp. III-D-3 to 5. Fuel costs for locomotives are based on the prices that NS actually paid for fuel, and fuel consumption was based on NS' own experience, from information developed from NS' Annual Report to the STB. See infra p. III-D-6. All of these sources provide strong support for the DRR's cost of operations.

The DRR was conceived as a railroad that would primarily handle trainload quantities of goods using non-union personnel, as permitted by Board precedent. See infra p. III-D-9; Exhibit III-D-1 at 1; PSCo/Xcel, 7 S.T.B. at 651 (non-unionized workforce); TMPA, 6 S.T.B. at 687. The DRR's staffing plan permits the SARR to handle peak traffic volume safely and efficiently, taking into account the DRR's traffic volume. Train and engine ("T&E") crew counts were developed using the train counts over an annual period, as the Board has authorized in past cases. See infra p. III-D-10; Exhibit III-D-1 at 2; PSCo/Xcel, 7 S.T.B. at 645 (citing Duke/CSXT, CP&L, Duke/NS, and TMPA). Consistent with Board precedent, DuPont's SARR recognizes that train crews could work 270 shifts per year. See infra p. III-D-10; Exhibit III-D-1 at 2;

TMPA, 6 S.T.B. at 644 (270 crew shifts per year); WFA/Basin II, slip op. at 47 (270 crew shifts per year). T&E crew compensation for the DRR was derived from NS's own Wage Forms and is established at the same level as those paid by NS for comparable positions. See infra p. III-D-11; Exhibit III-D-1, p. 12. Other aspects of T&E personnel costs, such as the fringe benefit ratio and the cost of taxi trips and overnight stays, were also calculated as approved in prior cases. See infra p. III-D-11 to 12; Exhibit III-D-1, pp. 13-14; WFA/Basin, slip op. at 48 (taxi and overnight expenses) and 66 (fringe benefit ratio calculation); PSCo/Xcel, 7 S.T.B. at 651-52 (annual calculation of taxi expenses).

As noted above, the DRR has approximately 7,300 route miles, which is nearly the same as the route miles of the major lines comprising the Kansas City Southern Lines ("KCS"), the holding company which owns and operates the Kansas City Southern Railway, the Kansas City Southern de Mexico, and the Texas Mexican Railway Company, whose route miles total 7,075. See infra pp. III-D-16; Exhibit III-D-2, p. 18. Yet, this is far smaller than the NS or the other Class I railroads. In its evidence, DuPont has taken into account the fact that the DRR is larger than past SARR's, but without replicating the overhead of a rail carrier the size of the NS.

DRR's General and Administrative ("G&A") staff, composed of 213 personnel, is larger than the G&A staffing for the SARRs approved by the Board in many recent cases, taking into account the DRR's geographic scope, traffic flows, and commodities handled. See infra pp. III-D-12 to 16; Exhibit III-D-2; PSCo/Xcel, 7 S.T.B at 648 (51 G&A staff approved); WFA/Basin, slip op. at 39 (39 G&A staff approved); AEP Texas, slip op. at 52-53 (66 G&A staff approved). The DRR uses a 10-member Board of Directors, larger than the number that has been approved by the Board in past cases, to account for the relatively larger size and scope of the DRR

compared to past cases. See infra p. III-D-14; Exhibit III-D-2, p. 4-5; AEP Texas, slip op. at 53-54, citing PSCo/Xcel, Duke/CSXT, and TMPA.

In AEPCO, the Board rejected the complainant's proposal to outsource a large part of the marketing function and instead adopted the much larger in-house marketing staff proposed by the defendant railroad. See AEPCO, slip op. at 55-57. However, in previous cases, the Board has accepted a smaller marketing department, noting that, though the Board has "rejected as infeasible attempts to outsource entire marketing departments at nominal cost," it has also "accepted the premise that a SARR serving only a subset of the incumbent railroad's customer base would not need a marketing department as large as that of the incumbent carrier." WFA/Basin, slip op. at 46; see also, AEP Texas, slip op. at 54. DuPont's evidence shows that it would be entirely feasible for a rail carrier the size of the DRR to outsource some, but not all, of its marketing function. The DRR would internally incorporate mid- to high-level marketing personnel, including a Director of Marketing and Sales and 18 Marketing Managers in order to provide high-level in-house representation to serve the traffic base. See Exhibit III-D-2, pp. 6 to 7. DuPont's evidence shows that three (3) Marketing Managers would be sufficient for the DRR's small number of coal movements. See Exhibit III-D-2, p. 7. The DRR's Marketing Department would also include three (3) Marketing Managers for intermodal traffic, which moves in a few discrete flows and which in large part is interlined with the residual NS; and three (3) Marketing Managers for general freight business. See Exhibit III-D-2, pp. 6-7. In addition to the Marketing Managers, the DRR will also employ a cadre of Customer Service Managers on a 24/7 basis, in order to handle contacts with origin and destination facilities and customer inquiries. See Exhibit III-D-2, p. 8.

The DRR's Finance and Accounting Department consists of 66 people to handle the DRR's financial and accounting functions. See infra p. III-D-15; Exhibit III-D-2, pp. 8-12. This is consistent with the finance and accounting functions that the Board has approved in recent cases, with additions to account for the DRR's larger and more varied traffic base. See infra p. III-D-15; e.g., AEPCO, slip op. at 55 (32-person Finance and Accounting Department approved); AEP Texas, slip op. at 52 (32-person Finance and Accounting Department approved); WFA/Basin, slip op. at 43 (15-person Finance and Accounting Department approved); PSCo/Xcel, 7 S.T.B. at 648 (16-person Finance and Accounting Department approved). This department includes a Director of Internal Auditing, as approved by the Board in AEP Texas, slip op. at 56-57.

Similarly, the DRR's Legal and Administrative function, composed of 42 people, is larger than the same function that has been approved by the Board in past cases, again to reflect the requirements of the DRR's larger traffic base. See infra p. III-D-15; Exhibit III-D-2, pp. 12-14. Compare AEPCO, slip op. at 55 (29 Legal and Administrative personnel approved); WFA/Basin, slip op. at 43 (9 Legal and Administrative personnel approved); Otter Tail, slip op. at C-8 (9 Legal and Administrative personnel approved); PSCo/Xcel, 7 S.T.B. at 648 (14 Legal and Administrative personnel approved, plus IT function); AEP Texas, slip op. at 53 (9 Legal and Administrative personnel approved). In the same way, the DRR's IT function, consisting of 46 people, is larger than the IT function approved in recent cases, reflecting the DRR's larger and more varied traffic base. See infra p. III-D-16; Exhibit III-D-2, pp. 14-16; AEPCO, slip op. at 55 (41 IT personnel); WFA/Basin, slip op at 43 (8 IT personnel); AEP Texas, slip op at 52 (12 IT personnel); Otter Tail, slip op. at C-8 (9 IT personnel).

The DRR's start-up and training costs have been approved as set forth in the Board's decision in WFA/Basin, slip op. at 51-54. Training costs for engineers and conductors are based information provided by NS in discovery. See infra pp. III-D-20 to 21; III-D-2, pp. 31-32. Recruiting costs for the DRR are based on amounts provided by NS in discovery. See Exhibit III-D-2, p. 32. Consistent with WFA/Basin, slip op. at 53, and other Board precedent, the costs of training and recruiting employees is treated as an operating expense in the DRR's first year of operation. See infra p. III-D-20; Exhibit III-D-2, p. 33.

Unlike the complainant in some past cases, DuPont's experts have included a substantial field staff to perform day-to-day inspection and maintenance activities. See infra p. III-D-22; Exhibit III-D-3; WFA/Basin, slip op. at 57. This is consistent with the approach taken by complainants in recent cases, much of which the Board has accepted. See AEPCO, slip op. at 65, 72, 74 (Board approves MOW staffing for various categories); WFA/Basin, slip op. at 57 (same). However, the Board has recognized in WFA/Basin and in AEPCO that some maintenance can be contracted out, and DuPont's experts have followed that precedent here. See infra p. III-D-22 and WFA/Basin, slip op. at 69-73, and AEPCO, slip op. at 77. This contracted work includes scheduled planned maintenance, such as track geometry testing, rail grinding and vegetation control; certain unplanned maintenance such as snow removal; and some other large unplanned maintenance, such as derailments, washouts or environmental cleanups. See infra pp. III-D-22 to 23; Exhibit III-D-3, pp. 18 to 30; WFA/Basin, slip op. at 70 (track geometry testing, etc.) and 73 (snow removal, environmental cleanup and derailments); AEPCO, slip op. at 75-77. As DuPont's evidence notes, rail carriers actually utilize contract personnel for program maintenance. See infra p. III-D-22, n. 47.

Other miscellaneous operating costs, such as ad valorem taxes, loss and damage, and insurance, are also calculated for the DRR consistent with Board precedent. See infra pp. III-D-24 to 25; AEPCO, slip op. at 79 (ad valorem taxes calculated by the amount that the incumbent paid per route mile in the various states); WFA/Basin, slip op. at 55 (loss and damage based on the incumbent's experience); AEPCO, slip op. at 79 (insurance expense calculated by reference to Class I railroads).

7. Road Property Investment Cost

Part III-F describes the acquisition of land and the construction of roadbed, track tunnels, bridges, signals, etc. on the nearly 7,300 miles of the DRR's system through twenty (20) states. This evidence is in accordance with current engineering standards and governing Board precedent. Construction costs for the DRR total nearly $23.4 billion, or $3.2 million per route mile. See infra p. III-F-1. Compare, AEPCO, slip op. at 31, 81 (SARR approved by Board at approximately $3.2 million per route mile); PSCo/Xcel, 7 S.T.B. at 632 and 666 (SARR approved by Board at approximately $3.2 million per route mile); AEP Texas, slip op. at 2, 75 (SARR approved by Board at approximately $2.4 million per route mile).

Land acquisition amounts and costs are consistent with the methodologies employed by the Board in past cases. The standard "Across the Fence" ("ATF") methodology was used to estimate the value of the right of way ("ROW"), by establishing the value of adjacent land in proximity to the SARR's ROW with the same zoning. See infra p. III-F-4; e.g., Duke/CSXT, 7 S.T.B at 168-169. The majority of the DRR's ROW is an average width of 100 feet, with 75 feet used in urban locations. See infra pp. III-F-3. This is consistent with the amounts of land utilized in past cases. See, AEP Texas, slip op. at 75 (100 foot/75 foot widths used); WFA/Basin, slip op. at 78 (100 foot widths generally used); PSCo/Xcel, 7 S.T.B at 667 (100 foot/75 foot widths used); Duke/NS, 7 S.T.B. at 168 (parties agreed on 100 foot widths in most

locations, but 75 foot widths in industrial, commercial and urban areas); Wisconsin P&L, 5 S.T.B. at 1018 (100 foot width is "standard," except 75-foot in urban locations); West Texas, 1 S.T.B. at 702. The DRR purchased the same interest held by the NS in the land utilized. See infra p. III-F-5; CP&L, 7 S.T.B. at 308; Duke/CSXT, 7 S.T.B. at 474.

Other design parameters such as the DRR's 24-foot single-track roadbed width, the 1.5:1 side-slope measurements and other features of the roadway investment are based on Board-approved parameters from prior cases. See infra p. III-F-11; e.g., AEPCO, slip op. at 90 (15-foot track centers); WFA/Basin, slip op. at 82 and 83 (24-foot roadbed width and 1.5:1 side slopes); Otter Tail, slip op. at D-7-8 (24-foot roadbed widths used and 1.5:1 side slopes); PSCo/Xcel, 7 S.T.B at 671-672; WFA/Basin, slip op. at 83 (1.5:1 side slope); AEP Texas, slip op. at 79-80 (24-foot roadbed width and 1.5:1 side slope); Duke/NS, 7 S.T.B. at 171. Similarly, DuPont has adopted a variety of construction elements for the DRR consistent with the agency's practice in past cases, including the one foot of fill height for yard earthwork,[74] grading,[75] ditches,[76] and the costs and amounts of solid rock excavation.[77] See infra pp. III-F-8 to 17.

DuPont has developed costs for several aspects of rail construction for the DRR, including clearing and grubbing costs, earthwork costs, common excavation, and the need for construction site access, based on actual costs that NS incurred on a realignment project in Tennessee, the Trestle Hollow Project, which involved the rerouting and building of a rail line in Centerville, TN, indexed to the start date for the DRR construction. See infra pp. III-F-8 to 15, 22-23, 27. This is consistent with past cases, in which the parties utilized costs based on actual

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[74] See, AEPCO, slip op. at 90; Wisconsin P&L, 5 S.T.B. at 1022; PSCo/Xcel at 675; Duke/CSXT, 7 S.T.B. at 477; CP&L, 7 S.T.B. at 310-311; Duke/NS, 7 S.T.B. at 172; Otter Tail, slip op. at D-10.

[75] See, FMC, 4 S.T.B. at 800; Duke/CSXT, 7 S.T.B. at478-479.

[76] See, Duke/NS, 7 S.T.B. at 171; Duke/CSXT, 7 S.T.B. at 476; TMPA, 6 S.T.B. at 701, n. 83; Wisconsin P&L, 5 S.T.B. at 1023.

[77] See, for costs of excavation, AEPCO, slip op. at 89-90; PSCo/Xcel, 7 S.T.B. at 677-678; WFA/Basin, slip op. at 86-87; AEP Texas, slip op. at 82. See, for 50/50 split for solid and loose rock, AEPCO, slip op. at 90; PSCo/Xcel, 7 S.T.B. at 677; Duke/NS, 7 S.T.B. at 174; CP&L, 7 S.T.B. at 312; Duke/CSXT, 7 S.T.B. at 478.

railroad construction projects. AEPCO, slip op. at 80-86; WFA/Basin, slip op. at 86. DuPont also utilized, consistent with prior Board precedent, ICC Engineering Reports and information provided by NS in discovery and from the Means Handbook for earthwork quantities, culverts, retaining walls, rip rap, seeding and topsoil, and other information. See infra pp. III-F-6 to 23.[78]

Similarly, track construction for the DRR hews closely to Board precedent and the NS' own specifications. The DRR incorporates geotextile fabric in the construction of its lines, in accordance with past cases. See infra p. III-F-25; AEPCO, slip op. 103; WFA/Basin, slip op. at 94-95. Culverts are used to replace bridges less than twenty feet in length. Infra p. III-F-33; AEP Texas, slip op at 93. Quantities of ballast and subballast conform to NS' standard roadbed section, and prices from quotes obtained from suppliers and data obtained from NS in discovery. See infra pp. III-F-25 to 27. The DRR's spacing of wood ties conforms to the standard approved in numerous Board decisions. See infra p. III-F-27; AEPCO, slip op. at 103; WFA/Basin, slip op. at 95-96; AEP Texas, slip op. at 88; West Texas, 1 S.T.B. at 707. The DRR's use of 136-pound continuous welded rail ("CWR")for main tracks and 115-pound rail for lighter density lines conforms to standard Board practice. See infra p. III-F-28; AEPCO, slip op. at 104; WFA/Basin, slip op. at 98; AEP/Texas, slip op. at 88; Duke/NS, 7 S.T.B. at 184-85. Tunnel cost was based on prior Board decisions in the same geographic area. See infra pp. III-F-32 to 33; Coal Trading Corp., 6 I.C.C.2d at 422. Bridge design was based on standard practice in prior cases. See infra pp. III-F-33 to 37; e.g., CP&L, 7 S.T.B. at 327.

As mentioned above, DuPont has incorporated a 2.7% mobilization factor, a figure which is slightly higher than the figure adopted by the Board in past cases,[79] a 10% additive for

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[78] The STB has relied on ICC Engineering Reports, Means, and defendant's information for these construction elements in approving the complainant's estimates in, for example, AEPCO, slip op. at 85, 92, 95, and 96.

[79] See infra p. III-F-49; supra n. 67.

engineering costs,[80] and a 10% contingency factor,[81] all consistent with Board precedent. See infra pp. III-F-49 to 50.

Finally, consistent with Board precedent, DuPont projects a 30-month period to construct the DRR, controlled by the time it takes to construct the most time-consuming single component, and in accordance with the principle of barrier-free entry, which in turn demands that there be unconstrained resources and simultaneous construction of the SARR. See infra pp. III-F-50 to 51; Coal Trading Corp., 6 I.C.C.2d at 412-413; West Texas, 1 S.T.B. at 674; Guidelines, 1 I.C.C.2d at 529-530.

8. Discounted Cash Flow Analysis and Application to SAC Analysis

The DCF methodology presented by DuPont in Part III-G and Part III-H is consistent with Guidelines and Major Issues, as applied in recent cases such as WFA Basin and WFA Basin II, AEP Texas, and AEPCO.

First, debt cost for the DRR for the construction period (2006-2009) equals the railroad industry average cost of debt for each year; for the remaining years of the DCF model, the DRR's cost of debt reflects the weighted average of the construction years' debt costs. See infra p. III-H-1. Consistent with Major Issues and previous Board decisions, the debt for road property investment is assumed to be amortized over twenty years. See infra p. III-H-3; Major Issues, slip op. at 65. However, in previous SAC cases, the parties assumed that the SARR would issue debt structured similar to a typical home mortgage loan, with quarterly payments consisting of an interest and a principal component, with the former declining and the latter rising over time. This is not, however, consistent with actual railroad industry debt payments, which are typically coupon payments consisting of fixed interest payments. DuPont, therefore,

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80 See infra p. III-F-49; supra n. 64.
81 See infra p. III-F-50; supra n. 63.

has developed a quarterly coupon payment schedule consistent with industry practice. See infra pp. III-H-2 to 3.

The cost of equity for the DRR is the then-current year railroad industry cost of equity. Thus, the DRR uses the industry average costs determined by the Board in its annual cost of capital proceedings to calculate the capital recovery charges for all road property investment. See infra p. III-G-3. This methodology is the same as the Board has used in its most recent SAC decision, where it adopted the methodology used in its decision in Use of a Multi-Stage Discounted Cash Flow Model in Determining the R.R. Industry's Cost of Capital ("Multi-Stage DCF"), Ex Parte No 664 (Sub-No. 1), STB served January 28, 2009. See, AEPCO, slip op. at 137; see also, WFA/Basin, slip op. at 135; AEP Texas, slip op. at 107; Duke/NS, 7 S.T.B. at 123; CP&L, 7 S.T.B. at 261. The DRR's cost of capital reflects the numbers approved by the Board in its cost of capital determinations for 2006 through 2010.[82] See infra p. III-G-3.

Operating costs were indexed as required by the Board's decision in Major Issues, to use an index composed of the RCAF-U and RCAF-A with expenses adjusted based on a changing "mix" of the two indices over time. See infra pp. III-G-6 to 7; Major Issues, slip op. at 39. DuPont also uses inflation indices for various road property components based on actual railroad prices and wage rates developed by the AAR, along with a Global Insight's March 2012 Rail Cost Adjustment Factor forecast, as approved by the Board in AEP Texas, slip op. at 109; Duke/NS, 7 S.T.B. at 123; and CP&L, 7 S.T.B. at 261. See infra pp. III-G-4 to 5. For land asset value inflation, DuPont has adopted the Board's most recent pronouncement on the subject, using a weighted combination of indices that reflect rural and urban land prices in proportion to

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[82] Ex Parte No. 558 (Sub-No. 10), Railroad Cost of Capital – 2006, served April 14, 2008; Ex Parte No. 558 (Sub-No. 11), Railroad Cost of Capital – 2007, served September 24, 2008; Ex Parte No. 558 (Sub-No. 12), Railroad Cost of Capital – 2008, served September 24, 2009; Ex Parte No. 558 (Sub-No. 13), Railroad Cost of Capital – 2009, served October 28, 2010.

the mix of land values on the DRR system routes, instead of a combination of indices that reflect the percentage of SARR acres that were rural versus urban. See infra pp. III-G-5 to 6 and AEPCO, slip op. at 139. DuPont has also conformed to the Board's preference, expressed in AEPCO, for using "longer rather than a shorter period of historic data when forecasting future economic trends, such as an inflation rate for land values or the cost of equity." Id. Accordingly, DuPont has developed an historic annual and quarterly percentage change in rural land values for the eighty-year period between 1930 and 2011 for the DRR states, similar to the time period that the Board used in developing its own risk premium used in its cost of capital proceedings. See, Multi-Stage DCF, slip op. at 10-11; AEPCO, slip op. at 139. See infra p. III-G-5. For urban land values, DuPont has developed a similarly long-time-period index of historic data. See infra pp. III-G-5 to 6.

Federal and state tax liability for the DRR was calculated consistent with the Board's decisions in prior cases. See, e.g., West Texas, 1 S.T.B. at 714; FMC, 4 S.T.B. at 848; infra pp. III-G-7 to 8. The DRR will take advantage of "bonus" depreciation provisions enacted as part of the Economic Stimulus Act of 2008 and the American Reinvestment and Recovery Act of 2009 ("ARRA"), as the Board has noted in its decision in AEPCO, slip op. at 141-142. See infra p. III-H-5. In the AEPCO decision, the Board noted that it would not "necessarily accept" the application of these tax benefits in calculating the DCF in future cases. The Board should accept the application of those benefits in this case, since they were applicable at precisely the point at which the DRR was hypothetically being constructed (the DCF model assumes that all assets are placed into service in the first year of the ten-year DCF period, which in this case is 2009). In fact, NS itself took advantage of those bonus provisions in 2008 through 2011 to defer significant taxes to later years. See infra p. III-H-6. Not permitting the DRR to do so would

constitute a barrier to entry forbidden by Guidelines, since it would force the SARR to pay a cost that the incumbent did not incur. Moreover, the bonus depreciation provisions are applicable for at least five tax years, a significant period of time, with the possibility that they will be extended. Id.

Finally, DuPont's evidence conforms to the requirements of Major Issues dictating the use of a ten-year analysis period, but assuming that the DRR would continue to operate for the foreseeable future. See infra pp. III-G-8 to 9. DuPont's calculation accounts for the costs associated with the renewed investments after the 10-year analysis period. See, AEP Texas, slip op. at 105-106; DuPont's evidence also utilizes, as required by Board precedent, a real capital carrying charge that is equal in each year of the DCF period, regardless of changes in volume. See, WFA/Basin, slip op. at 134-135; infra pp. III-G-8 to 9.

Prior to its decision in AEPCO, unused depreciation was accounted for in an undiscounted terminal value calculation; AEPCO changed that approach to calculate the present value of unused depreciation in the terminal value calculation. See, AEPCO, slip op. at 140-141. DuPont's evidence conforms to the Board's conclusions in AEPCO, but has identified a flaw in the Board's model, which it has corrected in its evidence. See infra pp. III-H-8 to 10.

DuPont's DCF analysis combines all of the analyses above and others set forth in its evidence to develop a quarterly levelized capital carrying charge equaling the required investment to be recovered from the quarterly capital recovery flow. See infra p. III-H-10. This is then combined with the DRR's tax liability and operating expenses over the ten-year analysis period to show a summary of the SAC for the DRR. See infra p. III-H-11.

9. After Careful Application of the Procedures Called For By the Board's Principles and Rules in Guidelines, Major Issues, and By Board Precedent, DuPont's SAC Analysis Shows That the Rates Charged by NS Far Exceed a Reasonable Maximum

DuPont's SAC analysis was developed with the Board's principles in Guidelines, the Board's rules in Major Issues, and the procedures adopted by the Board in its past SAC decisions in mind, and is consistent with those decisions. Application of those procedures shows that, over the 10-year DCF period, the revenues generated by the DRR exceed its total capital and operating costs, indicating that the rates being charged by the NS exceed a reasonable maximum under the SAC constraint set forth in Guidelines. See infra pp. III-H-11 to 12.

In such a case the Board must then decide "what relief to provide to the complainant by allocating the revenue requirements of the SARR among the traffic group and over time." AEPCO, slip op. at 143-144. In Major Issues, the Board adopted the Maximum Markup Methodology ("MMM") as its new rate prescription approach. Major Issues, slip op. at 14-15. DuPont has utilized the Board's MMM procedures, using the revenues generated by the Board's ATC methodology; variable costs using the NS's 2009 and 2010 URCS costs; and the Board's standard URCS indexing approach. See infra pp. III-H-12 to 14. Application of the MMM yields maximum R/VC ratios for each year of the DCF model ranging from 95.7 percent to 118.1 percent, and application of those percentages yields maximum reasonable rates for DuPont's traffic, using the greater of the jurisdictional threshold or the MMM maximum rates. See infra p. III-H-14. DuPont's rates exceed both the jurisdictional threshold and the issue rates for all movements.

10. Rate Relief and Damages

Based on the evidence presented herein, the Board should find that the rates set forth in the NS tariffs at issue in this Complaint exceed the maximum reasonable levels as determined

under the SAC constraint of the Guidelines and are therefore unlawful under 49 U.S.C. § 10701(d).

Accordingly, since in all time periods relevant to this Complaint, *i.e.,* between June 1, 2009 and for the prescription period ending on May 31, 2019, the Board's prescribed SAC methodology results in a rate below the jurisdictional threshold, the Board should prescribe maximum reasonable rates at the jurisdictional threshold.

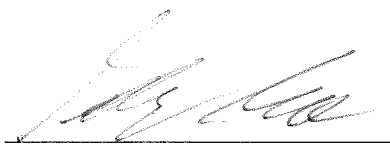
In addition, since June 1, 2009 and various dates thereafter depending upon the issue movement, DuPont has paid NS freight charges at tariff rates significantly higher than the lawful maximum rates summarized in the previous table. Pursuant to 49 U.S.C. § 11704(b), the Board should award DuPont damages resulting from the payment of rates that exceed a reasonable maximum. The Board should therefore award damages to DuPont, consisting of a refund of overpayments plus interest.

C. CONCLUSION

For the foregoing reasons, DuPont requests that the Board find that:

1. NS possesses market dominance over each of the 138 issue movements in DuPont's Third Amended Complaint;
2. the challenged rates for each of the issue movements are unreasonable;
3. DuPont is entitled to reparations for monies paid in excess of a reasonable rate from June 1, 2009 through the present; and
4. DuPont is entitled to a reasonable prescribed rate for a period of 10 years beginning on June 1, 2009.

Respectfully submitted,



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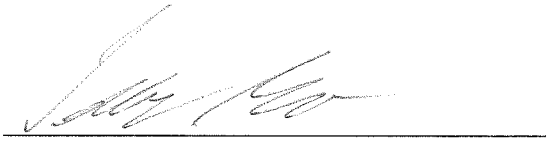
PUBLIC VERSION

CERTIFICATE OF SERVICE

I hereby certify that this 30th day of April 2012, I served a copy of the Opening Evidence and Argument or E.I. du Pont de Nemours and Company upon Defendant via hand-delivery at the address below:

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PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

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

OPENING EVIDENCE AND ARGUMENT OF

E.I. DU PONT DE NEMOURS AND COMPANY

Volume II:
Market Dominance Evidence

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April 30, 2012

CASE GLOSSARY

AEP Texas 2006	*AEP Texas Northern Co v. BNSF Ry.,* STB Docket No. 41191 (Sub-No. 1) (served Nov. 8, 2006)
AEP Texas	*AEP Texas Northern Company v. BNSF Railway,* STB Docket No. 41191 (Sub-No. 1) (served Sept. 10, 2007)
AEPCO	*Arizona Electric Power Cooperative, Inc. v. BNSF Railway Company and Union Pacific Railroad Company,* STB Docket No. 42113 (served Nov. 22, 2011)
APS	*Arizona Pub. Serv. Co. and Pacificorp. v. The Atchison, T. and Santa Fe Ry.,* 2 S.T.B. 367 (1997)
Bottleneck Decision	*Central Power & Light Company v. Southern Pac. Transp. Co, et al.,* 1 STB 1059 (1996), aff'd sub nom. *MidAmerican Energy Company v. Surface Transportation Board,* 169 F.3d 1099 (8th Cir. 1999)
Coal Rate Guidelines or Guidelines	*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)
Coal Trading Corp.	*Coal Trading Corp. v. The Baltimore & Ohio R.R., et al.,* 6 I.C.C. 2d 361 (1990)
Consolidated Papers	*Consol. Papers, Inc. v. Chi.& Nw. Transp., Inc.,* 7 I.C.C.2d 330 (1991)
CP&L	*Carolina Power & Light Co. v. Norfolk Southern Ry,* STB Docket No. 42072 (served Dec. 23, 2003)
DMIR I and II	*Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry.,* 4 S.T.B. 64 (1998), on reconsideration, 4 S.T.B. 288 (1999)
Duke/CSXT	*Duke Energy Corp. v. CSX Transportation Inc.,* STB Docket No. 42070 (served Feb. 4, 2004)
Duke/NS	*Duke Energy Corp. v. Norfolk Southern Railway,* STB Docket No. 42069 (served Nov. 6, 2003)

CASE GLOSSARY

DuPont (Nitrobenzene)	*E.I. du Pont de Nemours and Company v. CSX Transportation, Inc.,* STB Docket No. 42101 (served June 30, 2008)
DuPont (Plastics)	*E.I. du Pont de Nemours and Company v. CSX Transportation, Inc.,* STB Docket No. 42099 (served June 30, 2008)
FMC	*FMC Wyo. Corp. v. Union Pacific Railroad Company,* 4 S.T.B. 699 (2000)
General Electric	*Gen. Elec. Co. v. Balt.& Ohio R.R.,* No. 38125S, 1984 ICC LEXIS 206 (ICC served Oct. 12, 1984)
General Procedures	*General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases,* STB Ex Parte No. 347 (Sub-No. 3) (served March 12, 2001).
IPA	*Intermountain Power Agency v. Union Pacific Railroad Company,* STB Docket No. 42127 (Public Version of UP Reply dated Nov. 10, 2011)
KCPL	*Kansas City P & L Co. v. Union Pac. R.R. Co.*, STB Docket No. 42095 (served May 19, 2008)
Major Issues	*Major Issues in Rail Rate Cases,* STB Ex Parte No. 657 (Sub-No. 1) (served Oct. 30, 2006)
Market Dominance Determinations	*Mkt. Dominance Determinations & Consideration of Prod. Competition*, 365 I.C.C. 118 (1981)
McCarty Farms	*McCarty Farms v. Burlington N., Inc.*, 3 I.C.C.2d 822 (1987)
Nevada Power II	*Bituminous Coal – Hiawatha, Utah to Moapa, Nevada,* 10 I.C.C.2d 259 (1994)
OG&E	*Oklahoma Gas & Electric Co., v. Union Pacific Railroad Company,* STB Docket No. 42111 (served July 24, 2009)
Otter Tail	*Otter Tail Power Co., v. BNSF Ry.,* STB Docket No. 42071 (served Jan. 27, 2006)

CASE GLOSSARY

PP&L	*PPL Montana, LLC v. The Burlington Northern and Santa Fe Ry. Co.*, 6 S.T.B. 286 (2002)
PSCo/Xcel	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served June 8, 2004)
PSCo/Xcel II	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served Jan. 19, 2005)
Special Procedures	*Special Procedures for Making Findings of Mkt. Dominance as Required by the R.R. Revitalization and Regulatory Reform Act of 1976,* 353 I.C.C. 874 (1976)
TMPA	*Texas Municipal Power Agency v. Burlington Northern and Santa Fe Railway,* 6 S.T.B. 573 (2003)
WFA/Basin	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Sept. 10, 2007)
WFA/Basin II	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Feb. 18, 2009)
Wisconsin P&L	*Wisconsin Power and Light Co., v. Union Pacific Railroad,* 5 S.T.B. 955 (2001)
West Texas Utilities	*West Texas Utilities Co. v. Burlington Northern Railroad,* 1 STB 638 (1996), aff'd sub nom. *Burlington Northern Railroad v. STB,* 114 F.3d 206 (D.C. Cir. 1997)

ACRONYMS

The following acronyms are used:

AAR	Association of American Railroads
AASHTO	American Association of State Highway Officials
AEI	Automatic Equipment Identification
AEO	EIA's Annual Energy Outlook Forecast
AHM	Anhydrous Methylamines
AII-LF	All-Inclusive Less Fuel Index, published by AAR
AQM	Aqueous Methylamines
AREMA	American Railway Engineering and Maintenance-of-Way Assoc.
ARRA	American Reinvestment and Recovery Act of 2009
ATC	Average Total Cost
ATF	Across-the-Fence
ATV	All-Terrain Vehicle
B&B	Bridge and Building
BNSF	Burlington Northern Santa Fe Railway Company
C&S	Communications and Signals
CAGR	Compound Annual Growth Rate
CFS	2007 Commodity Flow Survey
cmp	Corrugated Aluminized Metal Pipe
CMP	Constrained Market Pricing
CN	Canadian National Railway
CNW	Chicago & NorthWestern
COBRA	Consolidated Omnibus Budget Reconciliation Act
CPI	Consumer Price Index
CSXT	CSX Transportation, Inc.
CTC	Central Traffic Control
CWR	Continuous Welded Rail
CY	Cubic Yards
DCF	Discounted Cash Flow
DFE	Difluoroethane
DME	Dimethyl Ether
DMF	Dimethyl Formamide
DMS	Dimethyl Sulfate
DOT	U.S. Department of Transportation
DP	Distributed Power
DRR	DuPont Stand-Alone Railroad
DTL	Direct to Locomotive Fueling
EDI	Electronic Data Interchange
EEO	Equal Employment Opportunity
EIA	Energy Information Administration
EOTD	End of Train Device
FED	Failed-equipment Detector
FRA	Federal Railroad Administration
FSC	Fuel Surcharges

G&A	General and Administrative
GDP-IPD	Gross Domestic Product – Implicit Price Deflator
GWR	Gross Weight on Rail
HCl	Hydrochloric Acid (a/k/a Muriatic Acid)
HDF	On-Highway Diesel Fuel Index
HR	Human Resources
ICC	Interstate Commerce Commission
IDC	Interest During Construction
IDS/IPS	Intrusion Detection System/Intrusion Prevention System
ISS	Interline Settlement System
IT	Information Technology
KCS	Kansas City Southern Lines
LAN	Local Area Network
MACRS	Modified Accelerated Cost Recovery System
MIT	Massachusetts Institute of Technology
MGT	Million Gross Tons
MLO	Manager of Locomotive Operations
MMF	Monomethyl Formamide
MMM	Maximum Markup Methodology
MOW	Maintenance of Way
MTO	Manager of Train Operations
NCREIF	National Council of Real Estate Investment Fiduciaries
NDGPS	Nationwide Differential GPS
NPI	NCREIF Property Index
NS	Norfolk Southern Railway Company
NT/PC	Network Personal Computer
O/D	Origin/Destination
OS	Operating Station
OSHA	Occupational Safety and Health Administration
PDO	Bio-Propanediol
Pet Coke	Calcined Petroleum Coke
PPI	Producer Price Index
PTC	Positive Train Control
R/VC	Revenue to Variable Cost
RCAF-A	Rail Cost Adjustment Factor, adjusted for productivity
RCAF-U	Rail Cost Adjustment Factor, unadjusted for productivity
RMI	A GE Transportation Company
RMS	RMI's Revenue Management Services System
ROW	Right of Way
RSIA	Rail Safety Improvement Act of 2010
RTC	Rail Traffic Controller Model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
SEC	Securities Exchange Commission
SO3	Sulfur Trioxide
SPLC	Standard Point Location Code
STB	Surface Transportation Board

STCC	Standard Transportation Commodity Code
STEO	Short-Term Energy Outlook
T&E	Train and Engine
TCS	Triple Crown Services
TDIS	Thoroughbred Direct Intermodal Services
TiCl4	Titanium Tetrachloride
TiO2	Titanium Dioxide
TMS	RMI's Transportation Management Services System
TRN	NS Train Event Train Symbol
UP	Union Pacific Railroad
UPS	Uninterruptible Power Supply
URCS	Uniform Railroad Costing System
WAN	Wide Area Network
WFL	Waste, Flammable Liquid
WTI	West Texas Intermediate

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Part II-A

PUBLIC VERSION

PART II

MARKET DOMINANCE

In this Part II, DuPont establishes NS's market dominance over the issue movements. Part II-A addresses quantitative market dominance and Part II-B addresses qualitative market dominance.

A. QUANTITATIVE MARKET DOMINANCE

In making a determination under this section, the Board may find that a railroad has market dominance if the rate charged results in a revenue to variable cost ("R/VC") ratio equal to or greater than 180 percent. 49 U.S.C. § 10707(d)(1). In this Part II-A, DuPont demonstrates that the R/VC ratios for each of the challenged lanes in this proceeding exceed 180 percent.

For purposes of this analysis, NS tariff rates are compared to NS's variable costs for handling DuPont's traffic following the Board's procedures in Major Issues.[1] Specifically, NS's variable costs are calculated using the Board's NS 2009 and NS 2010 Uniform Railroad Costing System ("URCS") unit costs, the URCS Phase III program and the following nine (9) specific traffic and operating inputs for each movement: (1) the railroad; (2) loaded miles (including loop track miles); (3) shipment type (local, originated and delivered, received and delivered or "bridge," and received and terminated); (4) number of freight cars per train; (5) tons per car; (6) commodity; (7) type of movement (single car, multiple car or unit train); (8) car ownership (railroad or private); and (9) type of car.[2]

A complete summary of the variable costs and R/VC ratios for each of DuPont's challenged lanes is included at Exhibit II-A-1 through Exhibit II-A-12. Each Exhibit II-A-1 through II-A-12 identifies the applicable rates and costs for each calendar quarter from 2Q2009

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[1] STB Ex Parte No. 657 (Sub-No.1), Major Issues in Rail Rate Cases, served October 30, 2006 ("Major Issues").

[2] *See* Major Issues at 52 and 60.

through 1Q2012. It should be noted that some issue movements began during this time period, and thus all issue movements did not occur in all calendar quarters. As shown on Exhibit II-A-1 through Exhibit II-A-12, NS's R/VC ratios at mid-second quarter 2009 levels through mid-first quarter 2012 levels, respectively, are all above 180% and reach as high as 1,043%.

1. Traffic and Operating Characteristics

As directed by the Board, DuPont and NS conferred and agreed upon six (6) of the nine (9) traffic and operating characteristics associated with DuPont's movements to which the challenged rates apply.[3] However, DuPont and NS were unable to agree on the loaded miles and tons per car for all of the issue traffic, nor on the car type for three (3) issue movements. A brief discussion of DuPont's process for developing those three components follows.

a. Loaded Miles – NS provided car waybill data and car event data for 2009 and 2010. NS's car waybill data and car event data was used to identify the rail routes and associated rail miles that NS data suggested each issue car traveled on NS. The rail miles DuPont used to develop NS's variable costs to determine quantitative market dominance were based on the predominant route for each issue movement with one exception which is explained below.

DuPont was forced to develop a convention to identify route miles because the waybill and car event data provided by NS were seriously deficient. As explained in detail in Part III-A and Part III-C, the NS computer records provided to DuPont were of such poor quality that DuPont had to find alternatives to develop many needed statistics while at the same time using as much of the NS-provided data as possible. The predominant route convention that DuPont developed began by analyzing the NS-provided route miles for each issue lane. For any given

[3] Joint Submission of Operating Characteristics ("Joint Submission"), Docket No. NOR-42125 filed December 22, 2011 and included as Exhibit II-A-13 to this opening evidence.

issue lane, the NS route miles could range from zero miles to many multiples[4] of the predominant NS route miles between the study locations. The NS traffic data contained so many of these mileage variations and other data anomalies that the most logical selection process for any given lane had to utilize a methodology that eliminated these problems. The predominant route analysis was selected in order to accomplish this task. The predominant route analysis is based on the theory that the route followed most often by NS for each issue lane represents the most efficient route and, therefore, that was the route selected by DuPont.

The one exception to the predominant route analysis involves extraordinary long back-haul movements[5] that NS's waybill and car event data suggested the issue traffic traveled, i.e., 20 issue lanes. To identify the extraordinary long back-haul movements, DuPont focused on two criteria, i.e., the length of the back-haul and the back-haul miles as a percent of NS total miles including the back-haul. The length of the extraordinary back-haul ranged between a low of 27 to 38 miles to a high of 322 miles. The percent of NS back-haul miles to total NS miles including the back-haul ranged between 11% and 85%.

The reason these two criteria were used can be seen in the following two examples. The issue movement outlined in Exhibit II-A-20 traveled 60 miles from NS origin to NS destination including the back-haul miles. The back-haul miles represent 38 miles, or 63%, of the total NS miles traveled according to NS-provided records. The issue movement outlined in Exhibit II-A-23 traveled 984 miles from NS origin to NS destination, including the back-haul miles. The back-haul miles represent 322 miles, or 33%, of the total NS miles traveled according to NS

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[4] For example, the predominant route for issue Lane B78 from McIntosh, AL to Mobile, AL equals 41 miles. The NS traffic data shows miles for this lane as high as 1,211 miles, almost 3,000% of the predominant route. Exhibit II-A-14 shows many more examples of these unexplained data anomalies included in the NS-provided data.

[5] For purposes of the predominant route analyses mileage development, DuPont accepted NS-identified back-haul miles on each route except the extraordinary long back-haul movements identified in Exhibits II-A-17 through II-A-36.

provided records. Both criteria used to identify extraordinary long back-haul movements suggest the extremely unusual nature of the movement included in NS-provided records. When these evaluation criteria were coupled with the fact that NS provided no documentation to support these extremely long back-hauls, DuPont excluded these miles.

For each of these 20 issue lanes, DuPont has developed a two page exhibit that identifies the back-haul miles, provides an overview of the impact on NS variable costs if these back-haul miles were included in the analysis, and provides a schematic identifying the NS route including the various back-hauls that have been eliminated because NS provided no data to support or explain these extremely circuitous movements.

For each of the other issue traffic routes, Exhibit II-A-14 summarizes the percent of traffic moving over each predominant route, as well as the range of variation in NS miles for the routes between each origin/destination pair.

b. **Tons per Car** - DuPont also used the predominant route analysis to calculate the weighted average tons per car. In those instances where the tons per car were not included in the NS data, the weighted average tons per car from the data available for the specific car type were used.

c. **Car Type** – For three (3) issue DuPont movements[6], DuPont and NS disagreed on the car type in the Joint Submission. For each of the three issue lanes, DuPont now agrees the car type should be "tank car > 22,000 gallons".

The traffic and operating characteristics used by DuPont in its calculation of the variable costs summarized in Exhibit II-A-1 through Exhibit II-A-12 are shown in Exhibit II-A-15.

[6] Lanes B- 49, 84 and 115.

2. Variable Cost Calculations

For seventeen (17) issue lanes, the challenged rates apply to local movements on NS ("Originated and Terminated"). For one hundred twenty-one (121) issue lanes, the challenged rates apply to movements that are either originated by NS and delivered by NS in interchange ("Originated and Delivered") or received in interchange and delivered to destination by NS ("Received and Terminated").

Exhibit II-A-1 through Exhibit II-A-12 show the calculation of the variable costs for each of the issue movements using the STB's NS 2009 or 2010 URCS unit costs. The 2009 NS URCS variable cost calculations are indexed to mid-second quarter 2009 ("2Q09"), mid-third quarter 2009 ("3Q09") and mid-fourth quarter 2009 ("4Q09") wage and price levels using the STB prescribed indexing procedures[7]. The 2010 NS URCS variable cost calculations are indexed to mid-first quarter 2010 ("1Q10") through mid first quarter 2012 ("1Q12") wage and price levels using the STB prescribed indexing procedures.[8]

3. Rates

Prior to June 1, 2009, NS transported some of the issue DuPont traffic pursuant to a Master Contract with DuPont. When the parties were unable to reach agreement on new contract rates, NS published common carrier tariff rates in a collection of private price lists for DuPont that were consolidated in NSRQ 64869, 65178, and 65720.

Prior to June 15, 2010, NS transported some of the issue DuPont traffic pursuant to a Master Contract with DuPont. When the parties were unable to reach agreement on new contract rates, NS published common carrier tariff rates in a collection of private price lists for DuPont that were consolidated in NSRQ 65178, 65720 and 70022. Between June 1, 2009 and June 15,

[7] See e-workpaper "NS09 to 4Q10 Phase III INDEX.xlsx."

[8] See e-workpaper "NS10 to 1Q12 Phase III INDEX.xlsx."

2010, NS also published rates for new DuPont traffic. NS published these common carrier tariff rates in a collection of private price lists for DuPont that currently were consolidated in NSRQ 65720 and 70022.

In addition to the foregoing tariffs, NS waybill data shows that some of the issue movements also have been rated, during the complaint period, under NSRQ 64455, 64799, 64802, 65725, 70028, and 70029.

Because DuPont and NS were unable to agree upon contract rates for the issue movements, DuPont initiated this proceeding and has continued to pay NS's public tariff rates since June 1, 2009. NS increased DuPont's tariff rates again in January 2011. A summary of the 2Q09 through 1Q12 rates applicable to the DuPont issue movements is shown in Exhibit II-A-16.

Comparing the aforementioned variable cost calculations to the applicable rates summarized in Exhibit II-A-16 produces R/VC ratios for 2Q09 through 1Q12 that are in excess of the 180 percent jurisdictional threshold.

The testimony in this Part II-A is being jointly sponsored by Thomas D. Crowley and Timothy D. Crowley of L.E. Peabody & Associates, Inc. Their credentials are detailed in Part IV.

Part II-B

B. QUALITATIVE MARKET DOMINANCE

In this Part II-B, DuPont presents its qualitative market dominance evidence. Subpart B-1 addresses the absence of any intramodal competition, much less "effective" competition. Subpart B-2 presents evidence of either the absence of any intermodal competition or the lack of effective intermodal competition separately for each of the 26 issue commodities in the following subsections:

a. Acid, Glycolic
b. Acid, Sulfuric
c. Acid, Spent Sulfuric
d. Acid, Fuming Sulfuric ("Oleum")
e. Acid, Muriatic ("HCl")
f. Aniline Oil
g. Bio-Propanediol ("PDO")
h. Caustic, Potassium
i. Caustic, Sodium
j. Chlorine
k. Dimethyl Ether ("DME")
l. Difluoroethane ("DFE")
m. Dimethyl Formamide ("DMF")
n. Dimethyl Sulfate ("DMS")
o. Lime
p. Methylamines, Anhydrous ("AHMs")
q. Methylamines, Aqueous ("AQMs")
r. Monomethyl Formamide ("MMF")
s. Petroleum Coke ("Pet Coke")
t. Polyethylene
u. Sodium Methylate
v. Sulfur Trioxide ("SO3")
w. Titanium Dioxide ("TiO2")
x. Titanium Tetrachloride ("TiCl4")
y. Waste, Flammable Liquid ("WFL")
z. Zircon Sand

All issue movements of a commodity are covered under the respective commodity headings. In a few instances where there are common facts across two or more commodities, DuPont presents a full set of facts in the discussion of one commodity and incorporates those facts by reference in

the discussion of the other commodities (*e.g.* AHM and AQM, DFE and DME, DMF and MMF, sulfur trioxide and Oleum, sulfuric acid and spent sulfuric acid).

In Part I: Counsel's Argument and Summary of Evidence, DuPont has addressed broad-based legal principles that apply across all or large subsets of the issue commodities and summarized common fact evidence across various commodities. The individual commodity subsections in this Part II-B make general reference to the appropriate legal principles when invoked and present detailed fact evidence. Therefore, this Part II-B should be read in conjunction with Part I-A-2 for DuPont's complete opening evidence and argument on qualitative market dominance.

1. Intramodal Competition

Because "[i]ntramodal competition refers to competition between two or more railroads transporting the same commodity between the same origin and destination," there can be no intramodal competition where NS is the sole rail carrier at either the origin or destination. APS, 2 STB at 373; see also, Market Dominance Determinations, 365 I.C.C. at 132. For each of the 139 issue movements, NS is the only rail carrier that serves the origin, the destination, or both. All 17 issue movements in Exhibit A to DuPont's Third Amended Complaint are captive to NS at both the origin and destination. Eighty-four issue movements in Exhibit B to the Complaint involve origins where NS is the only railroad that can provide service. Thirty-seven issue movements in Exhibit B involve destinations where NS is the only railroad that can provide service. There is no intramodal competition possible for any of these lanes because NS is the sole railroad that serves either the origin or destination, or both. Therefore, it is impossible to avoid NS rail service for these movements.

2. Intermodal Competition

In this section, DuPont discusses the potential to use trucks, barges, and/or some combination of either with rail as alternatives to NS rail transportation for the issue movement. Where such alternatives may be physically possible, DuPont explains why they are not feasible, practical, available, or effective competitive constraints upon the challenged NS rates. DuPont addresses these subjects by issue commodity in the subsections below. Within the discussion of each commodity, DuPont also addresses each issue movement of that commodity, including any facts that are specific to an individual movement.

a. Glycolic Acid[1]

DuPont has challenged the NS rate for transportation of glycolic acid in just a single case lane: Lane B-2 from Belle, WV to Bayport, TX. NS transports the glycolic acid from Belle to East St. Louis, IL, where it interchanges the railcars with UP, which delivers them to Bayport. At Bayport, the railcars are loaded directly into ocean vessels for transport to Europe. DuPont is captive to NS at the Belle, WV origin.

Glycolic acid is a Hazard Class 8 corrosive liquid that is produced at 70% strength. It is used in industrial applications for cleaning, such as by refineries and for boiler cleaning. DuPont, which is the largest domestic producer of glycolic acid, produces {[redacted]} annually at Belle. Upon production, the glycolic acid is piped into storage tanks where it is tested and stored until loaded into railcars or trucks. DuPont does not have the infrastructure required to load glycolic acid into barges at Belle. Although approximately one-third to one-half of Belle's glycolic acid production is shipped by truck every year, all truck shipments are to domestic destinations. In contrast, all export shipments are transported by rail, except when shipping in isotanks for smaller quantities and emergency shipments. DuPont maintains a dedicated fleet of ten railcars for all of its rail shipments of glycolic acid.

The glycolic acid that DuPont ships to Bayport in Lane B-2 is for export to Europe. Moreover, it is a special grade that DuPont produces just for European consumption. {[redacted]} Each campaign produces {[redacted]} pounds of the European grade of glycolic acid, which fills {[redacted]} railcars. DuPont ships all the railcars simultaneously to Bayport.

[1] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Matthew Nowicki, Supply Chain Manager.

Rail Transportation. Rail transportation is essential for Lane B-2 because of the nature of large volume export shipments. DuPont has a scheduled window of time for loading glycolic acid into an ocean vessel. If DuPont misses that window, it must accrue costly detention charges to hold the vessel. Rail transport enables DuPont to transport the glycolic acid to Bayport in advance of that window. Moreover, DuPont can use its private railcars for storage until loading begins.

Truck Alternatives. In contrast, truck shipments would have to be very carefully timed and coordinated to arrive within the precise window for loading the vessel. If the trucks arrive too early, detention charges accrue on each truck shipment; if they arrive too late, detention charges accrue on the ocean vessel. Alternatively, DuPont would have to lease storage tanks at Bayport in which to unload truck shipments, at an annual cost of {[redacted]}.[2] The {[redacted]}railcars that DuPont ships over Lane B-2 at one time would require a caravan of {[redacted]} trucks, assuming 4.0 trucks per railcar. DuPont has not shipped a single truck over Lane B-2.[3]

Even if the above obstacles could be overcome, direct truck shipments are not price competitive with direct rail service. The truck price for shipping the equivalent of one railcar of glycolic acid from Belle to Bayport would be {{[redacted]}} compared with a through rail rate of {{[redacted]}}, which is a difference of nearly {{[redacted]}}.[4] Finally, direct trucking from the origin to destination is not alternate transportation for the bottleneck NS segment to which the challenged rate applies, which is Belle to East St. Louis. See DMIR, 4 STB at 292 (n. 13) and 293.

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[2] DuPont would have to lease a tank for an entire year because there is a three month minimum lease period and DuPont ships over this lane 4-6 times per year. See Dup. Op. Workpaper "Odjfell e-mail" in the "Glycolic Acid" folder. Since DuPont may only need this storage capacity for anywhere from a few days to a few weeks for each production campaign, this capacity would be sitting empty for virtually the entire lease period.

[3] See Dup. Op. Workpaper "Glycolic Truck Shipments" in the "Glycolic Acid" folder.

[4] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

Trucking glycolic acid from Belle to a nearby transloading facility also would not be practical. Whenever a transfer of the glycolic acid occurs, it must be surveyed for quality. DuPont hires a third party surveyor to inspect the receiving vessel, monitor the product transfer, and test product samples to ensure that the transferred product remains within required specifications. For example, DuPont surveys all transfers of glycolic acid from railcars into ocean vessels in Lane B-2.[5] If DuPont were to add another transfer into the transportation chain by transloading from trucks into railcars, that would add over {{[redacted]}} in surveying costs for a typical shipment of 6 railcars.[6] Of greater significance, however, is the four-fold increase in the potential for contamination of the glycolic acid.

The nearest non-NS bulk terminal is at {[redacted]}. Although transload costs are {{[redacted]}} less than direct rail costs, that is before consideration of additional surveying costs and contamination risks.[7] Furthermore, at a truck loading rate of 2 hours per truck, it would take DuPont three days of continuous loading into trucks for transport to the bulk terminal and an even longer time to transload the trucks into railcars because of the survey requirements. DuPont also would have to pre-position empty railcars at the bulk terminal, and incur storage costs while waiting for the bulk trucks, none of which is included in the transload cost estimate. Moreover, Belle has only one truck loading spot. As previously stated, up to half of the glycolic acid produced at Belle is shipped by truck. Because outbound truck loading for these customers would take precedence over the Lane B-2 export shipments, truck loading and transloading would in reality take much longer than a theoretical three days. It simply is not practical to orchestrate truck loading for Lane B-2 while also trying to satisfy regular customer truck orders.

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[5] See the Chemcoast Survey Report which is a recent survey report for the Lane B-2 issue movement, embedded in Dup. Op. Workpaper "Liquid Bulk Process for GCA" in the "Glycolic Acid" folder.

[6] See Dup. Op. Workpaper "Liquid Bulk Process for GCA" in the "Glycolic Acid" folder.

[7] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder).

Barge Alternative. Barge transportation also is not an effective competitive alternative to NS rail service for multiple reasons. First, and foremost, DuPont does not ship enough volume at one time to satisfy the minimum requirement for barge shipments. DuPont currently ships methanol by barge from Bayport to Belle, which is precisely the reverse movement of Lane B-2. The contract has a {[redacted]} short ton minimum volume requirement.[8] This represents the capacity of the barge, which is about one-third smaller than the typical barges that DuPont uses. The {[redacted]} railcars of glycolic acid that DuPont ships at one time hold the equivalent of just {[redacted]} short tons, which is less than one-third of the capacity for this small barge. If DuPont were to nevertheless ship less than {[redacted]} tons of glycolic acid by barge, it would still have to pay for {[redacted]} tons. For that reason alone, barge is not an option for Lane B-2.

Second, DuPont would need storage tanks at Bayport for barge shipments, just as discussed above for truck shipments. Because both barges and ocean vessels are routinely delayed, DuPont undoubtedly would incur detention charges for one or the other without storage tanks. The detention charges on barges are {[redacted]} after 48 hours. In addition, DuPont would have to pay {[redacted]} to park the barge at Blessey's fleet in Houston and {[redacted]} for barge shifting (i.e. the time a tug is with the barge).[9] Moreover, even if the barge and ocean vessel arrivals could be timed with precision, DuPont will not load glycolic acid directly from a barge into a vessel because of the risk of a spill into open water during the transfer with no real way to contain it. Instead, barges must be unloaded into ocean vessels via a "shore loop," which requires that a terminal have dock space simultaneously for the barge and the vessel.[10] This is very difficult to coordinate and many terminals simply cannot or will not accommodate shore

[8] See Dup. Op. Workpaper "Methanol Contract" in the "Glycolic Acid" folder.

[9] See Dup. Op. Workpaper "Blessey Rates" in the "Glycolic Acid" folder.

[10] See Dup. Op. Workpaper "Liquid Bulk Process for GCA" in the "Glycolic Acid" folder.

loops.[11] "Shore loops" also require more testing samples by the surveyor, because of elevated contamination risks.

Third, DuPont does not currently have the infrastructure to load barges with glycolic acid at Belle. DuPont would have to construct approximately 600 yards of dedicated piping from existing storage tanks to the barge docks at Belle at a cost of approximately {{[redacted]}}.[12]

Rate History. Finally, the rate history for this issue movement reveals the extent to which NS is exercising its market dominance. Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the change in rates for the issue movement from 2007. Since 2007, the combined through rate for Lane B-2 has increased {{[redacted]}}. Since 2009, when NS and UP began pricing on a Rule 11 basis, the NS rate has increased by {[redacted]}, while the UP rate has increased just {{[redacted]}}. Clearly, most of the through rate increase since 2007 has occurred in the last two years as a consequence of extraordinary NS rate increases, which is the reason why the truck-transload option recently has gone from being substantially more expensive to less expensive than rail. These extraordinary NS rate increases have not been accompanied by any loss of traffic to alternative transportation, which is strong evidence of market dominance.[13]

In summary, NS possesses market dominance over the glycolic acid shipments in Lane B-2 because:

- DuPont is captive to NS at the origin.
- Direct trucking is not cost competitive.
- Truck-to-rail transloading is not practical and increases contamination risks.

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[11] See Dup. Op. Workpaper "Odjfell e-mail" in the "Glycolic Acid" folder.

[12] See Dup. Op. Workpaper "Barge Infrastructure" in "Glycolic Acid" folder.

[13] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

- NS has priced up to higher cost alternatives, with triple digit rate increases, while retaining 100% of the traffic.
- DuPont does not ship glycolic acid in sufficient volume to use barges.
- DuPont does not have the infrastructure at Belle to load barges.
- Both barge and direct truck transportation would require DuPont to lease storage tanks at the destination.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

b. Sulfuric Acid[14]

DuPont has challenged the NS rates for transporting sulfuric acid in the following twenty-six (26) case lanes:

Lane #	Origin	Interchange	Destination	Customer
A-2	Bayway, NJ	NS Direct	Waynesville, NC	Giles Chemical Co.
A-23	Reybold, DE	NS Direct	Detroit, MI	PVS Chemicals
A-24	Reybold, DE	NS Direct	Fort Mill, SC	Nation Ford
A-25	Reybold, DE	NS Direct	Morrisville, PA	Basic/ Univar
B-92	Bellwood, VA	Petersburg, VA	Dallas, GA	Basic / Univar
B-93	Bellwood, VA	Charlotte, NC	Fort Mill. SC	Nation Ford
B-94	Bellwood, VA	Petersburg, VA	Rockwell, NC	Alchem Inc
B-101	Miami Fort, OH	Cincinnati, OH	Dallas, GA	Basic Chemical
B-118	Wurtland, KY	Charlotte, NC	Fort Mill, SC	Nation Ford
B-119	Wurtland, KY	Birmingham, AL	McIntosh, AL	BASF
B-126	Reybold, DE	Streeter, IL	Albuquerque, NW	Basic Chemical Solutions
B-127	Reybold, DE	Baltimore Bayview Yard	Baltimore, MD	Basic Chemical Solutions
B-127	Reybold, DE	Baltimore Bayview Yard	Baltimore, MD	W R Grace & Co.
B-127	Reybold, DE	Baltimore Bayview Yard	Baltimore, MD	Delta Chemical Corporation
B-128	Reybold, DE	Chicago, IL	Blaire, NE	Cargill Incorporated
B-129	Reybold, DE	Birmingham, AL	Brewton, AL	Georgia Pacific Brewton
B-130	Reybold, DE	Charlotte, NC	Castle Hayne, NC	Elementis Chromium
B-131	Reybold, DE	Kansas City, MO	Clifton, AZ	Freeport-McMoran Copper & Gold
B-132	Reybold, DE	Chicago, IL	Carson, SD	Harms Oil
B-134	Reybold, DE	Memphis, TN	Ferguson, MS	Georgia Pacific
B-135	Reybold, DE	Chicago, IL	Hastings, NE	Equalizer Midwest
B-136	Reybold, DE	Cincinnati, OH	Indianapolis, IN	Univar
B-137	Reybold, DE	Chicago, IL	Omaha, NE	Univar USA Inc.
B-138	Reybold, DE	E. St. Louis, MO	Orange, TX	DuPont
B-139	Reybold, DE	Streeter, IL	Phoenix, AZ	Basic Chemical Solutions
B-140	Reybold, DE	Chicago, IL	Sioux City, IA	Basic Chemical Solutions
B-141	Reybold, DE	Toledo, OH	Toledo, OH	Jones Hamilton
B-142	Reybold, DE	Hagerstown, MD	Washington, WV	DuPont

[14] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Ted Edward Morris, Operations Business Leader-Sulfur Products

The issue movements of sulfuric acid originate at five different DuPont production facilities: Bayway, NJ (Lane A-2); Bellwood, VA (Lanes B-92 through 94); Miami Fort, OH (Lane B-101); Reybold, DE (Lanes A-23 through 25; B-126 through 132 and B-133 through 142); and Wurtland, KY (Lanes B-118 and 119). Bayway and Reybold are captive NS origins. Issue movements originating at the other three production plants are captive to NS at the destinations. All of the Complaint Exhibit A Lanes are captive to NS at both the origin and destination.

Most of the issue movements originate at Reybold, DE. The Reybold plant is embedded within a large oil refinery complex owned and operated by PBF Energy Partners. It had been closed for 18 months after the previous refinery owner shuttered the complex, which is why most of the issue movements have no historic traffic volumes. DuPont resumed operations at Reybold when PBF reopened the complex.

Sulfuric acid is a Hazard Class 8 clear, colorless, odorless, viscous liquid that is very corrosive.[15] As the largest-volume industrial chemical produced in the world, consumption of sulfuric acid is often used to monitor a country's degree of industrialization. Agricultural fertilizers represent the largest single application for sulfuric acid. Other uses include production of dyes, alcohols, plastics, rubber, ether, glue, film, explosives, drugs, paints, food containers, wood preservatives, soaps and detergents, pharmaceutical products, petroleum products, pulp, and paper. Although sulfuric acid can be transported by various modes, as shown below, NS has market dominance over the issue movements.

Direct Truck. Trucks are used predominantly for short distance movements of sulfuric acid, for low volume purchasers, to serve customers without rail access, and for expedited or emergency shipments to rail-served customers. DuPont has not used trucks extensively, if at all,

[15] See Dup. Op. Workpaper "Sulfuric Acid MSDS" in the "Sulfuric Acid" folder.

for any of the issue movements.[16] Even in those instances where truck rates are lower than rail rates, they are still too high to be economically sustainable.

As a matter of law, the Complaint Exhibit A movements (Lanes A-2, A-23, A-24 and A-25) are the only issue movements of sulfuric acid where direct trucking from the origin to the destination can be a form of alternative transportation, because NS transports the sulfuric acid in single line service from the origin to the destination. For the remaining 22 issue movements of sulfuric acid, which are the Complaint Exhibit B Lanes, direct trucking is not alternate transportation for the movements to which the challenged NS rates apply, because the challenged rates apply to just a bottleneck segment of the through rail movement. Specifically, DuPont has challenged NS bottleneck segment rates from the Reybold origin to various interchange points in 16 lanes and NS bottleneck segment rates from various interchange points to the destinations in another 6 lanes. Pursuant to the Board's decision in DMIR, 4 STB at 292 (n. 13) and 293, direct trucking to the customer is not alternate transportation for the bottleneck movements to which these challenged NS rates apply.

Even assuming *arguendo* that direct trucking is an alternate form of transportation for all of the sulfuric acid issue movements, direct trucking rates are higher than the rail rates for 16 lanes, and for 15 of these 16 lanes, the direct trucking rate is at least 10% higher than the rail rate and ranges up to {{[redacted]}} higher.[17] Where there is at least a 10% rate difference after a substantial rail rate increase, the Board has found market dominance. DuPont (Plastics), slip op. at 7.

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[16] See Dup. Op. Workpaper "Sulfuric Acid Truck Shipments" in the "Sulfuric Acid" folder.

[17] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). The 16 lanes with higher truck rates are Lanes A-23 and 24; and Lanes B-93, 118, 119, 126, 128, 129, 131, 132, 134 (less than 10%), 135, and 137-140.

Upon a close examination of the sulfuric acid issue movements with more than two years of historical rate and traffic data, there is clear evidence that the dramatic NS rate increases of the past few years reflect pricing by NS to match much higher cost truck alternatives, as opposed to those alternatives being an effective competitive constraint.[18] Of the 26 issue movements, only 7 have more than two years of data: Lanes A-2, A-25, B-92, B-94, B-101, B-119, and B-134. Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the change in rates for these issue movements from the later of 2007 or the first DuPont rail movement in each lane. Since 2007, the NS local rates for lanes A-2 and A-25 have increased by {[redacted]}, respectively. Since 2007, the combined through rates for the joint line movements have increased between {[redacted]}. Since 2008 or 2009, as applicable, when NS and its connecting carriers began pricing on a Rule 11 basis, the NS rate has increased between {[redacted]}, while the connecting carrier rates have ranged from {{[redacted]}}. The specific details for these 7 sulfuric acid issue movements are summarized in the following chart:

Lane #	Through Rate Increase Since …	NS Rule 11 Rate or Local Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Truck Premium
A-2	NS-Direct	{{[redacted]}}	NS-Direct	{{[redacted]}}
A-25	NS-Direct	{{[redacted]}}	NS-Direct	{{[redacted]}}
B-92	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-94	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-101	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-119	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-134	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}

[18] DuPont evaluated only those sulfuric acid issue movements with more than 2 years of rate history because 19 of the 26 issue movements are too new to have but 1-2 years of rate history, which is too brief to map a trend. Moreover, the initial NS rates for those movements already would reflect the new NS pricing strategy, which the data for the older lanes indicates began in 2008-09.

Clearly, most of the through rate increases since 2007 have occurred in the last two years as a consequence of extraordinary NS rate increases. Moreover, these extraordinary NS rate increases have reversed the historical relationship of truck and rail rates by making trucks less expensive than rail for nearly all of these sulfuric acid issue movements, without any loss of traffic to trucks, which is strong evidence of market dominance.[19]

Five of these seven issue movements stand out as particularly striking examples of NS pricing up to less efficient, higher cost alternatives. For Lane B-134, although the truck distance is nearly 1100 miles, the direct truck rate is just {{[redacted]}} higher than the through rail rate, after NS increased its rate by {[redacted]} since just 2009, contrasted against just a {{[redacted]}} increase by the connecting carrier over the same time period. Similarly, in Lane A-2, although the truck distance is 686 miles, the direct truck rate is {{[redacted]}} lower than the rail rate, after NS imposed back-to-back rate increases of {[redacted]} in each of the past two years. Moreover, in Lane B-92, although the truck distance is 546 miles, the direct truck rate is {{[redacted]}} lower than the through rail rate, after NS increased its rate by {[redacted]} since just 2009, contrasted against a {{[redacted]}} cumulative increase by the connecting carrier. In Lane B-101, although the truck distance is 435 miles, the direct truck rate is {{[redacted]}} lower than the through rail rate, after NS increased its rate by {[redacted]} since just 2009, contrasted against a {{[redacted]}} by the connecting carrier. The fact that direct truck rates at these long distances could be comparable with, and in some cases lower than, direct rail rates shows that trucking is not an effective competitive constraint. Finally, the fact that NS would raise rates in Lane B-119 by {[redacted]} since

[19] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

2009 when rail rates clearly were already higher than truck rates shows a complete disregard by NS for truck competition.

The remaining 19 lanes of sulfuric acid have just two years or less of rate and traffic data because they are new movements from Reybold, DE. Therefore, DuPont cannot present similar direct evidence for these lanes of NS pricing up to higher cost truck options. Nevertheless, because all 7 issue movements with more than two years of historical rate and traffic data show that NS has uniformly engaged in such pricing behavior, it is reasonable to deduce that NS has pursued the same pricing strategy for these 19 lanes. Of these 19 issue movements, Lanes B-130, B-136, B-141, and B-142 are the only lanes with lower-priced direct truck alternatives. At distances ranging from 400-1238 miles, however, they reflect the same pattern described in the preceding paragraph of NS setting its rates based upon higher-cost alternatives. Because the other 15 lanes (except B-127) have much higher truck rates, they cannot constrain NS's pricing.

In addition to the rate and cost issues discussed above, DuPont's Reybold plant has significant infrastructure constraints that restrict the number of trucks that it can load. Reybold has just two truck loading/unloading racks. One rack is dedicated to loading fresh sulfuric acid and the other to unloading spent sulfuric acid.[20] Therefore, DuPont truly has only one rack for loading sulfuric acid into trucks. At 1.5 hours per truck, DuPont mathematically could load 16 trucks in 24 hours, which is the equivalent of 4 railcars, if every truck could be scheduled to arrive at precise intervals. Of course, such precision is not realistic. Moreover, because the truck and rail loading racks share the same pump, trucks cannot be loaded at the same time as railcars, and each railcar requires 2.5 hours to load. Also, truck loading is less efficient because, at 4

[20] As discussed in Part II-B-2.c., concerning the spent sulfuric acid issue commodity, upon consuming purchases of fresh sulfuric acid, many DuPont customers return their spent sulfuric acid to DuPont facilities for recycling, which DuPont can resell as fresh acid.

trucks per railcar, it would take 6 hours to load the same volume of sulfuric acid into a truck that it takes only 2.5 hours to load into a railcar, which is 140% longer.[21]

Although Reybold produces three concentrations of sulfuric acid, including one concentration with three grades, it only has two storage tanks. That means DuPont must rely upon railcars to store large quantities of its sulfuric acid production. Moreover, the two storage tanks have a maximum capacity each of 2800 short tons, or 5600 short tons total, which is equal to 59 railcars. Although this is adequate for current truck volumes, it would not support a substantial shift of volume from rail to trucks, because Reybold currently relies upon railcars for supplemental storage.

DuPont has estimated that it would need to construct one additional truck loading rack at Reybold to handle its current rail requirements for sulfuric acid shipments by truck. This is easier said than done, however, because the Reybold plant occupies a small footprint within a large refinery complex that is not owned by DuPont, and consequently has almost no room to expand. DuPont has come up with one viable option that would add a new truck loading rack just north of the existing racks. In order to do this, however, DuPont would have to relocate an existing warehouse in that area to a new plot of land that is currently owned by the refinery. Using actual costs from recent similar work at Reybold, DuPont estimated the total cost (excluding real estate acquisition costs) to be {{[redacted]}}.[22] DuPont does not know if it even could acquire the additional property from the refinery owner, or if so, at what cost.

For most of the sulfuric acid issue movements, truck rates are higher. In the few lanes where this is not the case, the truck rates are lower only after extraordinary NS rate increases,

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[21] In actuality, between 4 and 5 trucks are needed to fill a railcar, which further exacerbates the inefficiency of trucks relative to railcars.

[22] See Dup. Op. Workpaper "Reybold Truck Rack Estimate" in the "Sulfuric Acid" folder.

which indicate that truck alternatives have not provided an effective competitive constraint upon NS pricing. Moreover, these rate comparisons do not include the infrastructure costs that DuPont must incur in order to make extensive use of trucks.

Transloading. Although sulfuric acid can be transloaded, it is typically transloaded only from railcars into trucks at bulk terminals near the final destination. Historically, this has been the most economical way to serve customers without rail access at great distances because direct trucking is not economically competitive with rail over long distances. As noted in the preceding discussion of direct trucking, the challenged NS rates have altered this long-held economic truism for several of the issue movements, which strongly indicates that NS has chosen to increase its rates to match those of much higher cost truck alternatives.

Transloading from railcars into trucks is only an alternative to NS for the 6 issue movements that originate at Bellwood, VA (Lanes B-92, 93, and 94), Miami Fort, OH (Lane B-101), and Wurtland, KY (Lanes B-118 and 119), because these are the only issue movements that are captive to NS solely at the destinations. All of the remaining 20 movements are captive to NS at the origin, which would require a truck-to-rail transload.

DuPont has seldom transloaded sulfuric acid from trucks into railcars and is not aware of anyone else who has done so routinely. Although truck-to-rail transloading is physically feasible, there are substantial obstacles. Because a railcar holds the equivalent volume of at least 4, but not quite 5, trucks of sulfuric acid, DuPont would have to load railcars at less than their full capacity, which increases rail costs by requiring more rail shipments and a larger railcar fleet to handle the same volume of acid.

The same infrastructure issues at Reybold for direct trucking are equally applicable to transloading. Even if the obstacles to loading trucks at Reybold could be overcome, there are

additional obstacles at the bulk terminal. DuPont would have to stage its empty railcars for loading at the bulk terminal rather than at its Reybold plant and pay storage fees.

Another obstacle pertains to a concentration of sulfuric acid for which transloading is more difficult because of its physical characteristics. The issue movements involve three different concentrations of sulfuric acid: 93%, 98%, and 99%. Because 98% and 99% sulfuric acid freeze at just 42° F, steam and/or hot water is required to thaw the acid when transloading below that temperature. As noted above, transloading of sulfuric acid from Reybold would occur in Philadelphia, which experiences frequent and extended periods of below 42° weather. Because the DuPont customers in {{[redacted]}}, which all originate at Reybold, purchase 98% or 99% sulfuric acid, transloading at the origin in order to by-pass NS is not a viable option for those movements.

Furthermore, concentrations of 93% sulfuric acid come in 3 grades, only one of which can be transloaded without degrading product quality. The three grades are technical, water white, and electrolytic. Only the technical grade can be transloaded without degrading quality. Weaker concentrations of sulfuric acid (*e.g.*, 93%) are more corrosive, which means that they are more prone to corrode stainless steel trucks.[23] Transloading exposes the sulfuric acid to air, which creates more water, which increases corrosion. The corrosion in the tank trucks, in turn, contaminates the acid. DuPont's customers in the following case lanes purchase water white or electrolytic grades of 93% sulfuric acid that cannot be transloaded: {{[redacted]}}.

[23] Railcars and storage tanks contain special plastic lining that is a barrier against corrosion. Very few trucks have these linings, and they are very expensive.

DuPont has estimated the transload costs for each of the Complaint Exhibit B lanes[24] in Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder).[25] The two lanes that originate at DuPont's Wurtland, KY plant, Lanes B-118 and 119, have transload rates that are {{[redacted]}} higher than the rail rates, respectively. Lane B-101, which originates at Miami Fort, OH, has a transload premium of {{[redacted]}}. Lane B-93, which originates at Bellwood, VA, has a transload premium of {{[redacted]}}. Notably, each of these lanes involve typical rail-to-truck transloading near the destination in order to by-pass NS.

Only Lanes B-92 and 94, which originate at Bellwood, have destination transload rates that would be the same or less than the rail rates. However, the customer in Lane B-92 is not the end-user, but a distributor that operates out of a bulk terminal. Transloading at one bulk terminal to reach a distributor's bulk terminal does not make sense. The customer in Lane B-94 is a spot customer for off-spec sulfuric acid. It too requires railcars for storage because it cannot mix its off-spec purchase with the specification grade acid in its storage tanks. Thus, neither of these issue movements of sulfuric acid can use the lower transload rates.

The other lanes where the transload rates are less than the rail-direct rates are movements out of Reybold that require uncommon truck-to-rail transloading in order to by-pass NS. Although DuPont could transload sulfuric acid around NS at Reybold for savings that range from {{[redacted]}}, that savings does not include the infrastructure costs and inefficiencies of transloading from trucks into railcars discussed above. Nor does transportation at those lower

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[24] DuPont has excluded the Exhibit A lanes because those would require transloading around NS at both the origin and destination.

[25] In selecting bulk terminal locations for these comparisons, DuPont has selected the lowest cost transload facility rather than adhere to the DMIR requirement that the alternative transportation be between the same points as the NS transportation to which the challenged rates apply. The DMIR points are rarely the least costly and sometimes no alternative at all exists at those points. Therefore, by selecting the most practical and least costly transload alternatives, DuPont has been very conservative in its analysis.

transload rates make economic sense from Reybold, despite Reybold being DuPont's lowest cost sulfuric acid production plant.

Barge. Barges are not an alternative for the sulfuric acid issue movements because either or both the origin and the destination, if they have access to a navigable waterway at all, lack the infrastructure to load and unload barges. Moreover, for the bottleneck issue movements in Complaint Exhibit B, it is the rail interchange location that must have access to a navigable waterway, because barge transportation to/from any other location would not be alternative transportation to the movement covered by the challenged NS rate. DMIR, 4 STB at 292 (n. 13) and 293. If the interchange locations between NS and connecting rail carriers are not on navigable waterways, barge is a physically impossible alternative for those issue movements.

Barge is not an option for the six issue movements that are captive to NS at the destination. For Lanes B-92, 93, 94, 101, and 118, the customer facilities at the destinations are not on navigable waters. Although Lane B-119 is on a navigable waterway, the customer does not have the infrastructure to unload barges of sulfuric acid, and its storage tank only has a {[redacted]}, while barges hold 250,000 gallons (*i.e.* 20 railcars). Therefore, barge is not an alternative mode of transportation for sulfuric acid in those issue lanes.

There are 19 issue movements that are captive to the NS at the Reybold, DE origin, which is situated within a large refinery complex on the Delaware River. As a practical matter, however, barges are not an option because water transportation would require shipment via ocean-going vessels in the Atlantic Ocean that cannot sail up the Delaware River. Therefore, the sulfuric acid would have to be loaded first into river barges and then transloaded into ocean vessels on the open water.

Reybold also does not have the infrastructure to load sulfuric acid into barges. DuPont's sulfuric acid plant is located within a refinery complex that is owned and operated by PBF Energy Partners. Although the complex has a dock on the Delaware River, DuPont cannot use the dock for sulfuric acid shipments for multiple reasons.

First, DuPont does not own the dock or have any right to use it. DuPont could request access to the dock, but DuPont does not know whether such access would be granted or at what cost. A thorough engineering study and a process hazard analysis would be required of the entire project before the refinery officials even would consider such a request.

Second, DuPont would have to construct at least two miles of piping, along with associated pumps and tanks, to convey sulfuric acid to the dock for loading. In addition to the cost, this would complicate the process of obtaining approval from the owner of the complex, as discussed in the preceding paragraph. Moreover, even if DuPont had the infrastructure to load barges with sulfuric acid, it also would need infrastructure for unloading, storing and transloading the sulfuric acid at the barge destination, wherever that might be, for continuing transportation to the final destination.

The final factor, which renders the preceding discussion academic, is that the Delaware Coastal Zone Act, Del. Code tit.7, § 7001 *et seq.*, (the "CZA") prohibits DuPont's use of the existing piers to load sulfuric acid. The purpose of the CZA is set forth in it its opening section:

> It is hereby determined that the coastal areas of Delaware are the most critical areas for the future of the State in terms of the quality of life in the State. It is, therefore, the declared public policy of the State to control the location, extent and type of industrial development in Delaware's coastal areas. In so doing, the State can better protect the natural environment of its bay and coastal areas and safeguard their use primarily for recreation and tourism. Specifically, this chapter seeks to prohibit entirely the construction of new heavy industry in its coastal areas, which industry is determined to be incompatible with the protection of that natural

> environment in those areas. While it is the declared public policy of the State to encourage the introduction of new industry into Delaware, the protection of the environment, natural beauty and recreation potential of the State is also of great concern. In order to strike the correct balance between these 2 policies, careful planning based on a thorough understanding of Delaware's potential and the State's needs is required. Therefore, control of industrial development other than that of heavy industry in the coastal zone of Delaware through a permit system at the state level is called for. It is further determined that offshore bulk product transfer facilities represent a significant danger of pollution to the coastal zone and generate pressure for the construction of industrial plants in the coastal zone, which construction is declared to be against public policy. For these reasons, prohibition against bulk product transfer facilities in the coastal zone is deemed imperative.

Del. Code tit. 7, § 7001.

Under the CZA, "heavy industry uses" and "bulk product transfer facilities" are prohibited within the coastal zone unless such uses were in existence on June 28, 1971. By contrast, manufacturing facilities not in existence on June 28, 1971, and the expansion or extension of non-conforming uses, are allowable by permit only. See Del. Code tit. 7, § 7003 – 7004. The CZA is implemented through regulations promulgated by the Office of the Secretary of the Delaware Department of Natural Resources and Environmental Control ("DNREC"), Del. Admin. Code tit 7, §101 (the "CZA Regulations").

The Reybold complex is within Delaware's coastal zone. Del. Code tit. 7, § 7002(a). Because it was in existence prior to June 28, 1971, the complex is permitted to operate in the coastal zone notwithstanding that it would otherwise be prohibited as a "heavy industry use" under the CZA. The existing dock was in place and being utilized on June 28, 1971. Since that time, no docks have been removed, and none added. Importantly, the limited use of the dock on that date is significant because any expansion of the use of such dock is not grandfathered and is subject to the strictures of the CZA.

Any expanded use of the Reybold dock to permit DuPont to share access is prohibited under the CZA. Because any use of the dock to accommodate the shipment of sulfuric acid causes that dock to serve more than one industrial or manufacturing facility, the dock would be forced into the definition of "bulk product transfer facility":

> "Bulk product transfer facility" means any port or dock facility, whether an artificial island or attached to shore by any means, for the transfer of bulk quantities of any substance from vessel to onshore facility or vice versa. Not included in this definition is a docking facility or pier for a single industrial or manufacturing facility for which a permit is granted or which is a nonconforming use. Likewise, docking facilities for the Port of Wilmington are not included in this definition.

Del. Code tit. 7, § 7002(f). Under the CZA, any offshore gas, liquid or solid bulk product transfer facility is absolutely prohibited:

> Heavy industry uses of any kind not in operation on June 28, 1971, are prohibited in the coastal zone and no permits may be issued therefor. In addition, offshore gas, liquid or solid bulk product transfer facilities which are not in operation on June 28, 1971, are prohibited in the coastal zone, and no permit may be issued therefor. Provided, that this section shall not apply to public sewage treatment or recycling plants. A basic steel manufacturing plant in operation on June 28, 1971, may continue as a heavy industry use in the coastal zone notwithstanding any temporary discontinuance of operations after said date, provided that said discontinuance does not exceed 2 years. An incinerator is neither "public sewage treatment" nor a "recycling plant" for the purpose of this chapter.

Del. Code tit. 7, § 7003. The CZA Regulations do not provide any help in this regard, as the CZA Regulations include the following in the list of prohibited uses:

> Bulk product transfer facilities and pipelines which serve as bulk product transfer facilities that were not in operation on June 28, 1971.

Del. Admin. Code tit. 7, §101 – 4.5. Delaware has taken a liberal view of what constitutes a "bulk product transfer facility" and, when in doubt, its administrative agencies and courts have

erred on the side of finding a proposed use to be a bulk product transfer facility.[26] Accordingly, a hypothetical use by DuPont of the Reybold complex dock to ship or receive sulfuric acid is prohibited under Delaware law.

Lane Specific Requirements. In addition to the multiple factors discussed above, many of the issue movements have individual factors that limit the feasibility of truck and transloading options. For example, some customers require rail delivery in their purchase contracts with DuPont. A contractual requirement to deliver product to a customer by rail "makes a switch to trucks highly infeasible from an economic standpoint due to the risk of losing its customer or incurring breach-of-contract liability." DuPont (Nitrobenzene), slip op. at 6. Some customers need railcars for storage. For customers who are distributors, trucking or transloading does not make sense because those customers are themselves transloading the product at the destination.

In the following chart, DuPont summarizes those factors for each issue movement of sulfuric acid:

LaneNo.	Lane Specific Factors
A-2	{{ [redacted] }}.[27]
A-24; B-93; B-118	{{ [redacted] }}.[28]
B-94	Customer requires railcars for storage because it purchases off-spec product that cannot be mixed with specification grade product in storage tank.
B-127	Three customers at this destination. All are high volume purchasers. Univar is a distributor that requires railcars for storage.
A-23; B-126; B-132; B-135; B-139; B-140	The customers are distributors that require the railcars for storage.

[26] For example, vessel to vessel lightering operations and a liquefied natural gas storage and regasification facility have been held to be bulk product transfer facilities. See Coastal Barge Corp. v. Coastal Zone Industrial Control Board, 492 A.2d 1242, 1246 (Del. 1985) (proposed lightering operation was prohibited offshore bulk transfer facility); Delaware Dept. of Natural Resources and Environmental Control v. Vane Line Bunkering, Inc., 2007 WL 4170810 (Del.Super.) (Proposed lightering operation was prohibited offshore bulk transfer facility); In the matter of Coastal Zone Status Decision on the Application of Crown Landing LLC, Appeal No. CZ 2005-01 (March 31, 2005) (Pier serving a single LNG regasification facility nonetheless found to be a prohibited offshore bulk product transfer facility).

[27] {{ [redacted] }}

[28] {{ [redacted] }}

In summary, NS possesses market dominance over all of the issue sulfuric acid movements because:

- NS serves both the origin and destination in lanes A-2, A-23, A-24, and A-25.
- For 6 of the 22 "B" lanes, the customer is captive to NS at the destination.
- For 16 of the 22 "B" lanes, DuPont is captive to NS at the origin.
- For 15 of the lanes, direct trucking rates are at least 10% higher than rail rates and up to {{[redacted]}} higher.
- In lanes with historical traffic data, NS has priced up to or above higher cost truck alternatives with double or triple digit rate increases while retaining its predominant market share. NS is engaged in similar pricing for the new Reybold lanes that do not yet have historic traffic or pricing data.
- Trucks are used primarily to serve non-rail destinations and/or lower volume customers; and for the issue movements, trucks are used in response to expedited customer requests, and in emergency situations to keep customer facilities from shutting down.
- DuPont lacks the capability to load trucks at Reybold for direct trucking or transloading without significant infrastructure investment.
- DuPont cannot transload 98% and 99% concentrations of sulfuric acid when the temperature is below 42° F, because the acid freezes. This seriously inhibits DuPont's ability to transload acid that originates at DuPont's Reybold, DE plant.
- DuPont cannot transload the electrolytic and water white grades of 93% sulfuric acid because of quality degradation problems.
- DuPont's contracts with certain customers specify delivery in railcars.
- DuPont lacks the capability to load barges without significant infrastructure investments at the origins and at intermediate terminals. The Delaware CZA prohibits such investment at Reybold.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

c. Spent Sulfuric Acid[29]

DuPont has challenged the NS rate for transportation of spent sulfuric acid ("Spent Acid") in Lane B-77, from McIntosh, AL to Burnside, LA. The Spent Acid is an inbound shipment to DuPont at the Burnside Plant, which is served by CN. The Spent Acid originates at BASF, which is captive to NS. The traffic is interchanged at Mobile, AL.

Spent Acid is fresh sulfuric acid that has been "used" in another process, but not chemically reacted. It is a heavy, oily, strong liquid mineral acid with many characteristics similar to fresh acid, including all the same safety and health concerns, plus it may pose additional concerns from other components in the Spent Acid. DuPont typically ships fresh acid to its customers, which then return the Spent Acid to DuPont to be regenerated into fresh acid.[30]

The Spent Acid produced by BASF in Lane B-77 is a "chemical" Spent Acid which is generated as a by-product when producing chemicals used in plastics, paints, and detergents. Chemical Spent Acid is brownish to blackish in color from residual charred reactants and often has a distinct sulfur dioxide odor. Spent Acid is corrosive and reacts rapidly with water. Personal protective equipment, including respiratory protection, is required when sulfur dioxide fumes are present.

DuPont's Burnside Plant processes the Spent Acid in its Sulfuric Acid Regeneration (SAR) process, which regenerates the acid to commercial quality fresh sulfuric acid that is resold by DuPont.

Direct Truck. Direct trucking is not an option because the Board must consider market dominance for the transportation to which the challenged rate applies. See, 49 U.S.C.

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[29] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Ted Edward Morris, Operations Business Leader-Sulfur Products.

[30] See Dup. Op. Workpaper "Spent Acid Brochure,"pp. 1-3, in the "Spent Acid" folder.

§ 10707(a). Consequently, when evaluating the reasonableness of bottleneck rates where the connecting carrier rates are in contracts, the Board evaluates market dominance only for transportation over the bottleneck segment. DMIR, 4 STB at 292 (n. 13) and 293. Since the challenged NS rate for Lane B-77 applies only over the NS bottleneck segment, direct trucking from origin to destination does not constitute alternative transportation.[31]

Although the direct truck rate is {{[redacted]}} lower than the through rail rate,[32] this is a stark reversal of the historical relationship between rail and truck pricing for this movement. Since 2007, the through rail rate has increased by {{[redacted]}}. Since 2009, when the rail carriers initiated Rule 11 pricing, the NS rate has increased by {[redacted]}, in contrast to just a {{[redacted]}} increase by the connecting carrier.[33] Clearly, most of the through rate increase since 2007 has occurred in the last two years as a consequence of extraordinary NS rate increases. Moreover, these extraordinary NS rate increases have reversed the historical relationship of truck and rail rates by making trucks less expensive than rail, without any loss of traffic to trucks,[34] which is strong evidence of market dominance.[35]

The Spent Acid volumes in Lane B-77 also are far too large to transport by truck. In 2009 and 2010, DuPont received {[redacted]} and {[redacted]} railcars of Spent Acid over this lane, respectively.[36] At 3.5 trucks per railcar, this would have required as many as {[redacted]} trucks in

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[31] Similarly, direct barge is not an option because of the DMIR precedent and because the origin of this movement is not located on a navigable body of water.

[32] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[33] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[34] See Dup. Op. Workpaper "Spent Acid Truck Shipments" in the "Spent Acid" folder, which shows {{[redacted]}}.

[35] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[36] See Dup. Op. Workpaper "2009-10 Rail Shipments" in the "Shipment Data" folder.

2010. The additional handling, labor and equipment needed to ship so many more trucks than railcars further reduces the effectiveness of trucks as a viable alternative to rail.

Transloading. Aside from direct trucking, the only alternate transportation that could bypass NS in Lane B-77 would be for BASF to load trucks at the origin, ship to a nearby bulk terminal, and transload the Spent Acid into railcars for delivery to DuPont. This transload alternative from rail to trucks is not an economically viable option because it is {{[redacted]}} more expensive than rail service.[37] Moreover, it still would require BASF to load as many as {[redacted]} trucks annually. DuPont also would have to coordinate with BASF on a daily basis to pre-position adequate railcars at the bulk terminal. BASF, rather than simply loading an empty railcar at its convenience and releasing that car to NS, would have to schedule truck loadings at its facility and transloading at the bulk terminal. There is no rational reason why BASF would agree to undertake this substantially greater workload, and the additional cost and risks associated with 3.5 times more truck hook-ups, either for direct shipments or for transloading.

In addition, when transloaded, spent sulfuric acid must be scrubbed with a weakened caustic soda solution. Therefore, the bulk terminal must have caustic storage tanks and storage tanks to capture waste from the scrubbing process, for which DuPont would have to pay storage and disposal costs.

[37] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder).

In summary, NS possesses market dominance over the movement of spent sulfuric acid in Lane B-77 because:

- BASF is captive to NS at the origin.
- The volume in this lane is too great to feasibly use trucks and would require substantially more time and effort from both BASF and DuPont to coordinate truck loading and/or transloading.
- A comparable direct truck rate is the result of recent substantial NS rate increases that have reversed the historical relationship between rail and truck rates for this movement, thereby demonstrating that NS is pricing to match the rates of much higher cost transportation alternatives.
- The transloading rate is {{[redacted]}} higher than direct rail service.
- Transloading would require scrubbing, which requires storage tanks for caustic solution and disposal of the waste product.
- DuPont cannot require BASF to undertake the cost and burden of loading 3.5 times the number of trucks as railcars for such a high volume of rail traffic.
- Barge is not an option because the origin is not on a navigable waterway.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

d. Fuming Sulfuric Acid (Oleum)[38]

DuPont has challenged the NS rates for transportation of fuming sulfuric acid, also known as Oleum, in two lanes: Lane B-103 from Miami Fort, OH to McIntosh, AL; and Lane B-106 from Miami Fort, OH to Pepper, VA. CSXT serves the Miami Fort origin and interchanges Lane B-103 with NS at Chattanooga, TN, and Lane B-106 with NS at Cincinnati, OH. DuPont's customers are captive to NS at each destination. The origin plant at Miami Fort is also known as North Bend or Fort Hill, which is near Cincinnati, OH.

Oleum is a Class 8 corrosive liquid that is produced in strengths of 20%, 65%, and 67%. Oleum consists of sulfur trioxide ("SO_3") dissolved in 100% sulfuric acid ("H_2SO_4") so that 20% Oleum contains 20% SO_3 and 80% H_2SO_4. The DOT regulates fuming sulfuric acid over 30% as a TIH, but fuming sulfuric acid under 30% is not classified as a TIH. However, DuPont's best business practice is to treat all fuming sulfuric acid the same for transportation and handling purposes.[39] DuPont is one of only two shippers of over 30% Oleum in the United States. Because Oleum gives off irritating and corrosive fumes or mist, handling requires full personal protective equipment including respiratory protection.[40] Oleum is hygroscopic, which means that it reacts violently with water so that handling must avoid contact with even trace amounts of water.[41] In addition, because Oleum reacts with certain metals, carbon or stainless steel are used in equipment for the transport, storage, and piping of Oleum.[42]

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[38] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Ted Edward Morris, Operations Business Leader—Sulfur Products.

[39] See Dup. Op. Workpaper "SO3 and Oleum PUSH Manual" in the "Sulfur Trioxide" folder, which describes a single set of common handling procedures for all grades of Oleum.

[40] Id. at 11 (describing Class B protective equipment required for connecting/disconnecting hoses to/from transport vehicles).

[41] Id. at 1, 10.

[42] Id. at 14, 26.

DuPont only ships Oleum in privately-owned equipment that is dedicated to transporting Oleum. DuPont uses specification DOT-312 trailers that comply with DOT HM-181 regulations, are equipped with a glycol heating system, and are insulated to maintain temperatures above the product's freezing point.[43] In addition to using dedicated trucks, DuPont only delivers Oleum using drivers who have been trained and equipped to safely handle Oleum, in order to provide the proper controls and to minimize the potential exposure to the general public.[44] There is a limited resource of these specialized trucks. DuPont owns 31 of these trailers to transport both sulfur trioxide and Oleum, and no new trailers have been built for DuPont since 1994. A new truck would cost at least $160,000.[45] Due to equipment and driver limitations, DuPont requires customers to pre-schedule truck deliveries.[46]

Over 30% Oleum is not transloaded because it is a TIH. Every time hoses are connected to or disconnected from a transport vehicle is another opportunity for a leak. Just a cursory review of the engineering and design factors for handling Oleum explains why no bulk terminals will transload this product. These factors include locating facilities away from densely populated areas and major highways; suitable scrubbing facilities for venting/evacuating unloading, storage, and handling equipment; and a means of isolating tank cars or trucks with remotely actuated block valves in the event of a hose failure.[47] The first factor alone is largely disqualifying because most bulk terminals, by design, are located near a major highway.

If the above facts were not sufficient to demonstrate the infeasibility of transloading, the actual transloading process would do so. Because the vapor pressure in railcars is too high to use

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[43] Id. at 17, 21.

[44] Id. at 18.

[45] See Dup. Op. Workpaper "Sulfur Trioxide trailer email" in the "Sulfur Trioxide" folder.

[46] See Dup. Op. Workpaper "SO3 and Oleum PUSH Manual" in the "Sulfur Trioxide" folder, p. 18.

[47] Id. at 14-15.

an external pump for the transfer process, any transload would have to occur via a pressurized transfer. This process, however, creates a sulfuric acid mist that must be scrubbed using a solution of 93% sulfuric acid. The scrubbing process creates a 98% sulfuric acid solution. Thus, a transfer facility must have storage for the 93% solution used to scrub Oleum and have a means to dispose of the 98% solution created by the scrubbing process. In essence, a bulk terminal must operate as a mini chemical plant, which commercial bulk terminals are not equipped to do and have no desire to do.

Lane B-103. The Oleum that is shipped to McIntosh, AL in Lane B-103 for BASF is at 65% strength, which makes it a TIH. BASF uses the Oleum to clean waste water. BASF cannot receive truck shipments of Oleum at its McIntosh facility. {{[redacted]}}[48] A contractual requirement to deliver product to a customer by rail "makes a switch to trucks highly infeasible from an economic standpoint due to the risk of losing its customer or incurring breach-of-contract liability." DuPont (Nitrobenzene), slip op. at 6. Furthermore, between 2006 and 2010, BASF received no truck shipments of Oleum from DuPont at McIntosh.[49]

The fact that the direct truck rate for this TIH movement of 662 miles is {{[redacted]}} less than the all rail rate[50] also is evidence that NS is not constrained by truck competition, but rather has chosen to set rates above a higher cost alternative, perhaps to discourage rail transportation of this TIH material.[51] Transloading is not an option because this is a TIH material that would

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[48] {{[redacted]}}

[49] See Dup. Op. Workpaper "Acid Fuming Sulfuric (TIH) Truck Shipments" in the "Oleum" folder.

[50] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[51] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

require scrubbing under pressure.[52] Finally, barge is not an option because BASF is not located on a navigable body of water.

Lane B-106. The Oleum that is shipped to Pepper, VA in Lane B-106 for Alliant Techsystems is at 20% strength. Alliant uses the Oleum to make a key material used in explosives and propellants at the Radford Army Ammunition Plant. The Radford Plant is the only domestic producer of this key material for ammunition used by the military and police officers. Although Alliant can unload tank trucks and railcars, it prefers to purchase Oleum in 90 ton tank cars. {{[redacted]}}.[53] Over the 5 year period from 2006 to 2010, Alliant received just {{[redacted]}} trucks of Oleum.[54]

Direct trucking in Lane B-106 is not an effective competitive constraint upon the NS rate despite being {{[redacted]}} less than the through rail rate.[55] First, direct trucking to this customer is not alternate transportation for the movement to which the challenged NS rate applies, because the challenged rate is from an interchange with a connecting contract rail carrier to the destination. DMIR, 4 STB at 292 (n. 13) and 293.

Second, NS is setting rates to match the prices of a much higher cost alternative. Since 2008, the through rail rate for this movement has increased by {{[redacted]}}. Moreover, since Rule 11 pricing began in 2009, the NS rate has increased by {{[redacted]}} while the connecting carrier's rate has {{[redacted]}}.[56] Clearly, most of the through rate increase since 2008 has occurred in the last two years as a consequence of extraordinary NS rate increases. Moreover,

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[52] See Dup. Op. Workpaper "SO3 and Oleum PUSH Manual," p. 14, in the "Sulfur Trioxide" folder.

[53] {{[redacted]}}

[54] See Dup. Op. Workpaper "Acid Fuming Sulfuric (Non-TIH) Truck Shipments" in the "Oleum" folder.

[55] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[56] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

the extraordinary NS rate increases have reversed the historical relationship of truck and rail rates by making trucks less expensive than rail, without any loss of traffic to trucks, which is strong evidence of market dominance.[57]

Transloading in Lane B-106 also is not a competitive constraint, because the transload rate is {{[redacted]}} higher than the through rail rate.[58] Moreover, as noted above, DuPont's best practice is to handle all grades of Oleum in the same manner, so DuPont does not transload any Oleum products. Finally, barge is not an option because the destination is not located on a navigable body of water.

In summary, NS possesses market dominance over the issue movements of fuming sulfuric acid because:

- DuPont's customers are captive to NS at the destinations.
- DuPont's customers require rail transportation.
- The Oleum grade in Lane B-103 is a TIH commodity that DuPont prefers to ship by rail and does not transload.
- In Lane B-106, the transload rate is {{[redacted]}} more expensive than rail service, but the bulk terminal subsequently declined to handle this traffic altogether after learning more details regarding the transload process and equipment.
- Lower direct truck rates are evidence that NS is not constrained by truck competition, but rather has chosen to set rates above a higher cost alternative through recent extraordinary rate increases that have reversed the historical relationship between truck and rail rates for these movements.
- From 2006-10, there were {{[redacted]}} trucks in Lane B-103 and just {{[redacted]}} trucks in Lane B-106.

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[57] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[58] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder). {{[redacted]}}

- DuPont does not have the specialized equipment or drivers needed to ship Oleum by truck to its customers on a routine basis.

- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segments.

e. Muriatic Acid[59]

DuPont has challenged the NS rates for muriatic acid shipments from Louisville, Kentucky to two destinations on the following case lanes:

Lane #	Origin	Destination	Customer
A-18	Louisville, KY	Decatur, IL	ADM Corp.; Tate & Lyle
A-19	Louisville, KY	Lafayette, IN	Tate & Lyle

DuPont is captive to NS at both the origin and destinations.

Muriatic acid is a highly corrosive acid that is also referred to as "Hydrochloric Acid" or "HCl." DuPont produces approximately {[redacted]} tons per year of HCl at its Louisville facility as an unintended byproduct during the manufacture of Freon 22.

{{[redacted]}}

{{[redacted]}}

Trucking. Direct trucking, although less costly than the NS rates, is not a practical alternative for the issue movements. DuPont's Louisville facility supplies the customers at

[59] The evidence and testimony in this section in jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Brad Kulesza, Operation Business Leader for Freon 22.

Decatur and Lafayette with {[redacted]} tons of HCl annually. This equals {[redacted]} railcars, or {[redacted]} trucks. Adding such a high volume of truck shipments will strain both DuPont's and the customers' facilities.

Moreover, DuPont frequently relies on railcar storage to prevent shutdowns of its Freon 22 production. As mentioned above, DuPont cannot produce Freon 22 unless it can store or ship the HCl byproduct. When DuPont's HCl storage at Louisville approaches capacity, DuPont depends upon railcars for storage.

The NS rates for the issue movements of muriatic acid also are a classic example of setting rail rates to match the rates of a higher cost alternative. Since just 2009, the NS rates have increased by {[redacted]} on Lane A-18 and {[redacted]} on A-19.[60] Direct truck rates in these lanes are {{[redacted]}} and {{[redacted]}} below the NS rates in Lanes A-18 and 19, respectively.[61] In other words, NS has dramatically reversed the historic relationship between truck and rail rates for the issue movements in just two short years. NS clearly believed that it could increase its rates so dramatically without losing this business to trucks, and it has been correct. In the case of Lane A-18, {{[redacted]}} In the case of Lane A-19, {{[redacted]}} In neither case, however, has NS lost any of this traffic to trucks.[62]

In summary, NS possesses market dominance over the issue movements of HCl because:

- DuPont is captive to NS at both the origin and destination.
- HCl volumes are too high to switch to trucks.
- DuPont uses railcars for storage in order to avoid disruption to its Freon 22 production.

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[60] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[61] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[62] See Dup. Op. Workpaper "Acid Muriatic Truck Shipments" in the "Acid Muriatic" folder.

- Lower trucking rates reflect attempts by NS to match the prices of higher cost direct trucking alternatives.

- Transloading is not viable because DuPont would have to transload around NS at both the origin and destinations of the issue movements.

f. Aniline Oil[63]

DuPont has challenged the NS rates for aniline oil from Dowling, TX and Pascagoula, MS to two destinations in the following case lanes:

Lane #	Origin	Interchange	Destination	Customer
B-49	Dowling, TX	Meridian, MS	Fort Mill, SC	Nation Ford Chemical Co.
B-84	Pascagoula, MS	Mobile, AL	Fort Mill, SC	Nation Ford Chemical Co.
B-85	Pascagoula, MS	Mobile, AL	LeMoyne, AL	US Amines
B-115	Pascagoula, MS	Atlanta, GA	Fort Mill, SC	Nation Ford Chemical Co.

DuPont's customers are captive to NS at the destinations. Lanes B-84 and B-115 are alternative routes between the same points via different origin carriers to different interchange points with NS.

Aniline oil is a Class 6 hazardous material that may be fatal if inhaled, swallowed, or absorbed through the skin.[64] Although aniline oil is not a TIH material, it must be handled like TIH material because of its inhalation hazards. Aniline oil is used in the production of many chemicals that are important to the urethane, rubber, petroleum, plastics, agricultural, explosives, pharmaceuticals, and chemical industries.[65]

DuPont produces aniline oil at two facilities, in Dowling, TX and Pascagoula, MS. In recent years, this business has operated through two different legal entities, First Chemical and DuPont. Both facilities can load aniline oil into trucks, barges, and railcars. Transloading occurs only into ocean barges.

DuPont has a very small customer base for aniline oil. Truck customers typically are not served by rail, purchase in small volumes, or are within a short distance. Customers who receive rail, however, want rail, typically because they purchase in large volumes.

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[63] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Katie Snyder, Business Manager Aniline.

[64] See Dup. Op. Workpaper "Aniline PUSH Manual" at 7; and "Aniline MSDS", both in the "Aniline Oil" folder.

[65] See Dup. Op. Workpaper "Aniline PUSH Manual" at 6, in the "Aniline Oil" folder.

This is particularly true of Nation Ford Chemical Company, which is the customer in Lanes B-49, 84 and 115, at Fort Mill, SC. Nation Ford consumes over {{[redacted]}} of aniline oil per year. {{[redacted]}}.[66] A contractual requirement to deliver product to a customer by rail "makes a switch to trucks highly infeasible from an economic standpoint due to the risk of losing its customer or incurring breach-of-contract liability." DuPont (Nitrobenzene), slip op. at 6. From 2006-2010, Nation Ford never received more than {{[redacted]}} trucks of aniline oil from DuPont at Fort Mill in any single year, which is less than 5% of its nominal annual consumption.[67] Those trucks were exceptions for emergency shipments.[68] Barge is not an option because Nation Ford is not located on a navigable body of water.

Although DuPont's customer in Lane B-85, US Amines, is not a contract customer, it requires rail delivery. This customer purchases for individual production campaigns. In some years, DuPont wins the business; in some years it loses the business; in some years DuPont does not bid because it is unable to supply the business; and in some years US Amines does not run its production campaign at all. Although this customer purchases much lower volume than Nation Ford, it uses aniline oil in production campaigns that require delivery of the entire purchase in blocks. For example, all of the 2009 shipments occurred within 21 days in March.[69] US Amines uses the railcars for storage until the aniline oil is consumed in the production campaign. This is validated by the fact that DuPont has not shipped a single truck of aniline oil to Lemoyne from

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[66] {{[redacted]}}

[67] See Dup. Op. Workpaper "Aniline Truck Shipments" in the "Aniline Oil" folder.

[68] See Dup. Op. Workpaper folder "Nation Ford Truck E-mails" in "Aniline Oil" folder.

[69] See Dup. Op. Workpaper "2009-10 Rail Shipments" in the "Shipment Data" folder.

2006-2010.[70] Barge is not an option for US Amines because it is not located on a navigable waterway and it does not purchase aniline oil in sufficient volume.

Direct trucking is not an option for each of the issue aniline oil movements, because the Board must consider market dominance for the transportation to which the challenged rates apply. See, 49 U.S.C. § 10707(a). Consequently, when evaluating the reasonableness of bottleneck rates where the connecting carrier rates are in contracts, the Board evaluates market dominance only for transportation over the bottleneck segment. DMIR, 4 STB at 292 (n. 13) and 293. Because all of the aniline oil issue movements originate at an interchange with NS, direct trucking options also must originate at those locations. This means that the rail shipments must be transloaded at the interchange.

If the DMIR precedent is disregarded, the direct truck rate for Lane B-49 is {{[redacted]}} higher than the through rail rate for a 943 mile road haul. Although the direct truck rates for the other three issue movements are less than or slightly above the through rail rates, there are 606 road miles on Lanes B-84 and 115, which is well beyond any range at which trucks are typically considered to be cost competitive with rail.[71] This indicates that NS is pricing up to much higher cost truck alternatives.

Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the change in rates for the issue movements from the later of 2007 or the first DuPont rail movement in each lane. Since 2007, the through rates in three of the four lanes have increased by {{[redacted]}}. Since 2009, when NS and the connecting carriers initiated Rule 11 pricing, the NS factor in those three lanes has increased by {[redacted]} while the connecting carrier factors

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[70] See Dup. Op. Workpaper "Aniline Truck Shipments" in "Aniline Oil" folder.

[71] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). Although Lane B-85 is just 56 miles, as noted above, this customer requires railcars for storage.

have increased by just {{[redacted]}}, respectively, and actually decreased by {{[redacted]}}. The specific details for each aniline oil issue movement are summarized in the following chart:

Lane #	Through Rate Increase since …	NS Rule 11 Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Truck Premium
B-49	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-84	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-85	This lane does not have a rate history prior to 2011			
B-115	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}

These extraordinary NS rate increases have not been accompanied by any loss of traffic to trucks, which is strong evidence of market dominance.[72]

Transloading from railcars into trucks is not a viable option for either Nation Ford or US Amines. Most significantly, DuPont has not been able to identify a bulk terminal that will handle aniline oil because of its poisonous properties. {{[redacted]}}[73] DuPont does not transload aniline oil from rail to trucks anywhere in North America. Even if such a facility existed, both customers require railcars for storage, as evidenced by railcar hold times that average nearly 2 weeks.[74]

[72] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[73] {{[redacted]}}

[74] See Dup. Op. Workpaper "Customer Hold Times" in the "Shipment Data" folder.

In summary, NS possesses market dominance over all of the issue aniline oil movements because:

- DuPont's customers are captive to NS at the destinations.
- DuPont's customers require rail delivery and need railcars for storage.
- DuPont cannot identify a bulk terminal willing to transload aniline oil because it is a poisonous combustible.
- Direct truck rates are much higher for Lane B-49. For Lanes B-84 and 115, recent sizeable rate increases by NS, resulting in lower direct truck costs for a 606 mile road haul, reflect attempts to price up to a much higher cost alternative.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

g. Bio-Propanediol[75]

DuPont has challenged the NS rates for transporting bio-propanediol ("PDO") from Loudon, TN to 2 destinations on the following lanes:

Lane #	Origin	Interchange	Destination	Supplier
A-17	Loudon, TN	NS-Direct	Braithwaite, LA	DuPont Tate & Lyle
B-99	Loudon, TN	Chattanooga, TN	Graingers, NC[76]	DuPont Tate & Lyle
B-100	Loudon, TN	Chattanooga, TN	Graingers, NC	DuPont Tate & Lyle

DuPont is captive to NS at the origin and destination on lane A-17 and only at the origin on lanes B-99 and B-100. Although lanes B-99 and B-100 are identical movements, B-99 applies to transportation in tank cars with capacities not exceeding 21,999 gallons and B-100 applies to transportation in tank cars with capacities between 22,000 - 27,500 gallons.

PDO is a non-hazardous liquid that is derived from sugar, unlike conventional propanediol, which is derived from petroleum. DuPont Tate & Lyle Bioproducts ("DT&L"), a DuPont joint venture, is the only large scale manufacturer of PDO worldwide and produces PDO exclusively at its Loudon facility. PDO is produced continuously by special, patented bacteria that convert corn sugar to PDO. If production stops, the restart process will take approximately {{[redacted]}}. Therefore, it is vital to keep transportation disruptions from interrupting PDO production.

After manufacture, PDO is shipped to DuPont's Graingers, NC Plant for polymerization and storage or to Braithwaite, LA for storage and export. The Graingers Plant operates two continuous polymerization lines that create multiple grades of DuPont's Sorona® pellets, which

[75] The evidence and testimony in this section is jointly sponsored by Mary Pileggi (Logistics Manager-NA Region), Nicky Mills (Kinston Supply Chain Manager), and Pamela J. Wilson (Global Supply Chain Planner).

[76] Graingers, NC is the rail head for Kinston, NC. "Graingers" and "Kinston" are used interchangeably unless otherwise noted. DuPont commonly refers to its facility at the destination as its Kinston facility.

are poly(trimethylene terephthalate) ("PTT") polymers. These pellets are ultimately used to create carpet, apparel, packaging, and films.

PDO contamination is a significant concern for DuPont. Products made from Sorona® pellets are especially sensitive to discoloration, which can occur from contamination in the PDO used to make the pellets. Although these pellets are small, each pellet produces a significant amount of yarn and other fibers and, therefore, the effects of discoloration in just one pellet can be far reaching. Also, contamination can affect the polymerization process, resulting in pellets that do not meet specifications and must be scrapped. Losing pellets to contamination causes DuPont to miss shipments to its customers and may result in customers trying to recoup their unscheduled downtime costs from DuPont.

PDO can be contaminated by dirt and other foreign materials. In addition, when in contact with aluminum and carbon steel, a reaction occurs causing contamination. Thus, to carry PDO, railcars must have a special liner and tank trucks must be constructed of stainless steel.

A foreign substance as basic as water can cause significant contamination of PDO. An increase in the water level in PDO causes improper operation of the polymerization equipment at the destination, resulting in finished product that does not meet specifications. At certain water levels, the polymerization equipment will not be able to function at all. In fact, a shutdown of a reactor, which is a piece of the polymerization equipment, may occur. To restart the production of first-grade pellets following a reactor shutdown will take {{[redacted]}} and cost DuPont {{[redacted]}}, because DuPont will not be able to produce first-grade product during the restart period even though it must continue to feed PDO and other Sorona® ingredients into the polymerization system at the normal consumption rate. To avoid these substantial costs, the

loading and unloading of PDO cannot take place in any form of precipitation, unless performed under cover.

Truck. Trucks are not a practical or viable alternative to NS rail service for most PDO shipments, including the issue movements. As a matter of pure economics, PDO direct truck rates exceed rail rates on lanes A-17 and B-100. On lane A-17, where DuPont is captive to NS at the origin and destination, the direct truck rate is {{[redacted]}} higher than the NS rate.[77] On lane B-100, the direct truck rate is {{[redacted]}} higher than the through rail rate.[78]

As a practical matter, because PDO contamination occurs when it comes in contact with aluminum and carbon steel, it cannot be transported in aluminum and carbon steel trucks. Instead, PDO must be transported in stainless steel trucks. However, tank trucks are normally aluminum and a sufficient fleet of stainless steel trucks is not available. Thus, switching to trucks would require DuPont to acquire a fleet of stainless steel trucks at a cost of {{[redacted]}} per trailer per month on a 1-3 year lease or {{[redacted]}} per trailer per month on a 5 year lease.[79] In contrast, the current monthly cost to lease one railcar, which is equivalent to 4 trucks on lanes A-17 and B-100 and 3.5 trucks on Lane B-99, ranges from {[redacted]} per car.[80]

Furthermore, the DT&L facility at Loudon is not configured to support a conversion of the case lane volumes to trucks. The DT&L facility produces {{[redacted]}} pounds of PDO per day in large production batches, which are processed continuously into finished product storage tanks. Because the daily production volume is equivalent to 1.7 railcars, having the ability to ship in railcars affords DT&L substantial flexibility to manage the quantity of PDO in its storage

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[77] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[78] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[79] See Dup. Op. Workpaper "BioPDO trailer quote" in the "PDO" folder.

[80] See Dup. Op. Workpaper "Railcar Leases" in the "Railcars" folder.

tanks and avoid a shutdown when the tanks are full, which requires a {{[redacted]}} restart period.

If the volumes on the case lanes are converted to trucks, DT&L will lose its storage flexibility and incur additional costs. Railcars allow DT&L to draw down storage tank volumes during the week by loading the cars several days prior to shipping. In contrast, trucks lack this storage flexibility because they are loaded only when ready to ship. Moreover, trucks would have to load on weekends to keep up with demand, whereas railcars are preloaded and shipped as needed. In addition, the DT&L production facility is located within a Tate & Lyle plant and relies on Tate & Lyle for security, truck weighing, and shipment processing, including entering shipment information into SAP. These services will have to increase, at an increased cost to DT&L, if the rail volumes on the case lanes are converted to trucks. DuPont cannot require its supplier to incur these additional costs.

Switching to trucks requires additional contamination testing and may result in increased demurrage costs. Contamination tests are performed on all shipments of PDO to Graingers prior to unloading, lest one shipment destroy the contents of an entire storage tank of PDO, which could hold millions of dollars worth of PDO, as indicated above. Each test takes approximately 1.5 hours to complete and costs {{[redacted]}}, but can take even longer if the testing lab is testing Sorona® production samples, which takes 4-6 hours, when a shipment arrives. Accordingly, since 1 railcar is equivalent to 4 trucks, testing time for a single railcar volume of PDO at a minimum would increase from 1.5 hours to 6 hours if transported by truck, and testing costs would increase from {{[redacted]}} to {{[redacted]}}. In addition, to the extent a dedicated, private truck fleet is not available, tank trucks incur detention at {{[redacted]

[redacted]}}[81] and it takes approximately {[redacted]} hours, total, to load and unload a tank truck.[82] Accordingly, for every tank truck shipment, DuPont must add to the truck linehaul rate between {{[redacted]}} in detention charges that accrue during testing.

Also, to the extent DuPont is able to use commercial motor carriers rather than a dedicated, private truck fleet, trucking to Graingers can result in truck detention charges. Specifically, the Graingers facility is not equipped with covered spots for unloading in precipitation. Thus, if it is precipitating at Graingers, the shipments will incur truck detention until the precipitation ceases, which could be minutes, hours, or even days. DuPont's fleet of dedicated railcars, in contrast, does not incur detention while waiting to unload.

The lack of effective competition from trucks is also reflected in the fact that DuPont's total PDO shipments by truck in each year from 2006 to 2010 ranged from just 1 to a high of 46, which is a small fraction of DuPont's total PDO shipments.[83] Moreover, there were only 6 truck movements on the case lanes from 2006 through 2010, all on lane A-17.[84] Because effective competition "may be deduced from . . . the amount of the product in question that is transported by motor carrier where rail alternatives are available," this historical data is highly relevant evidence of market dominance. Market Dominance Determinations, 365 I.C.C. at 133. See also, Product & Geographic Competition, 2 I.C.C.2d 1, 21 (1985).

Even setting aside the economic and practical disadvantages of trucking PDO, direct trucking PDO on lanes B-99 and B-100 is not an effective alternative to rail as a matter of law because DuPont has only challenged NS bottleneck segment rates from Loudon to Chattanooga,

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[81] Dup. Op. Workpaper "Tidewater Transit Company #0809-0002 Exhibit A" in the "Truck Contracts" folder.

[82] Tank truck loading requires {[redacted]} hours. Tank truck unloading requires {[redacted]} hours.

[83] See Dup. Op. Workpaper "PDO Truck Shipments" in the "PDO" folder.

[84] See Dup. Op. Workpaper "PDO Truck Shipments" in the "PDO" folder.

not the through rate from Loudon to Graingers. Under the Board's decision in DMIR, 4 STB at 292 n.13 and 293, trucking is only an alternative if it is limited to the segments to which the challenged rates applies, which is Loudon to Chattanooga.

Transloading. Transloading is not a viable option for by-passing NS at Loudon. As explained above, railcars are needed for storage at Loudon to avoid costly interruptions to production. Therefore, transloading would need to occur twice: first from railcars into trucks, and second from trucks back into railcars at a nearby bulk terminal. In addition, DT&L is not prepared to transload at its facility—it has not transloaded PDO from railcars to trucks and would need to devise a method for doing this. Also, DT&L would need covered transloading spots so that it can avoid contamination.

Even if DT&L could transload into trucks at Loudon, the cost of transloading back into railcars makes transloading impractical. To transload PDO into railcars, DuPont would have to truck the product from Loudon to Chattanooga, where it would be transloaded to CSXT. Transloading increases the transportation costs between Loudon and Graingers by {{[redacted]}} on lane B-99 and {{[redacted]}} on lane B-100.[85] DuPont has not considered transloading for Lane A-17 because transloading would have to occur at both the origin and destination in order to bypass NS.

Finally, as noted in the discussion of direct trucking, all trucks from Loudon would have to be loaded from railcars. Consequently, the minimum number of transloads required for Lanes B-99 and 100 would be two (once into trucks at Loudon and again back into railcars at the bulk terminal), and for Lane A-17 would be three (once into trucks at Loudon, back into railcars at the origin bulk terminal, and back into trucks at the destination bulk terminal). The contamination

[85] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder).

concerns noted above make even a single transload undesirable, much less two or even three transloads per shipment.

In summary, NS possesses market dominance over the issue PDO movements because:

- DuPont is captive to NS at the origin, and as to Lane A-17, also at the destination.
- The direct truck rates are higher than the rail rates on lanes A-17 and B-100.
- Transloading is more expensive than the through rail rate for Lanes B-99 and B-100. Transloading is not an option at all for Lane A-17 because NS serves both the origin and destination.
- PDO cannot be transported in aluminum and carbon steel trucks. Instead, it must be transported in stainless steel trucks, which DuPont would have to acquire at significantly higher cost than its railcars.
- Converting the case lane volumes to trucks will eliminate storage flexibility and result in increased truck handling costs at the DT&L facility.
- New procedures, equipment, and covered transloading locations are needed at Loudon to load trucks from the railcars that are used for storage.
- Each truck must incur a minimum of 90 minutes of detention while it is tested for contamination.
- Transloading and loading trucks at the origin—which involves transloading from railcar storage to trucks—cannot occur in precipitation, which contaminates PDO, unless conducted in a covered area. If contaminated PDO makes it into the polymerization process, it can cause a shutdown of at least {{[redacted]}}, costing DuPont {{[redacted]}}.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

h. Potassium Caustic (Caustic Potash)[86]

DuPont has challenged the NS rate for the transportation of potassium caustic, also called potassium hydroxide or caustic potash, in one lane, Lane B-125 from Charleston, TN to Woodstock, TN. DuPont's supplier is Olin, whose facility is captive to NS. The movement is interchanged with CN at Memphis for delivery to DuPont's facility at Woodstock/Memphis.

Caustic potash is a colorless to slight yellow, clear to cloudy liquid.[87] Personal protective gear is required in handling caustic potash.[88] Caustic potash is a corrosive hazardous material and, when mixed with water, releases heat which can result in splattering or dangerous mists.[89] Caustic potash is used by DuPont as a raw material in the production of water treatment and metal mining solutions. The chemical formula for caustic potash is KOH.

Olin manufactures the caustic potash at its Charleston, TN site. {{[redacted]}}. To the extent that trucking occurs in this lane, it occurs when there are rail delivery problems or for managing the inventory of caustic potash.

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[86] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region and Suneet Ranganath, Sourcing Manager, Ag & Nutrition.

[87] See Dup. Op. Workpaper "Caustic Potash MSDS" at 2, in the "Potassium Caustic" folder.

[88] Id. at 3; see also Dup. Op. Workpaper "KOH Unloading Procedures" § 4.0, in the "Potassium Caustic" folder.

[89] See Dup. Op. Workpaper "Caustic Potash MSDS" at 4, in the "Potassium Caustic" folder.

[90] See Dup. Op. Workpaper "Olin Contract," Addendum B, in the "Potassium Caustic" folder.

[91] See Dup. Op. Workpaper "2009-10 Rail Shipments" in the "Shipment Data" folder (showing 113 railcars in 2010).

DuPont operates two separate production units at Woodstock that require caustic potash. One is the precious metals business ("KCN"); the other is the water treatment business ("OXONE"). The KCN business requires caustic potash as a raw material for production that is run in campaigns just 2-3 times per year for approximately one month at a time. The volume of caustic potash needed for a campaign is approximately {[redacted]} railcars. The OXONE business uses caustic potash in the production of potassium salt that is used for cleaning, disinfection, and oxidation mostly in residential water applications. It receives approximately {[redacted]} railcars per month.

Direct Truck. Direct trucking in Lane B-125 does not constitute alternative transportation for the movement to which the challenged NS rates apply, because the challenged NS rate is to an interchange with a connecting contract rail carrier, not to the destination. DMIR, 4 STB at 292 (n. 13) and 293.

The volume of caustic potash received by DuPont at Woodstock also is too great to shift to trucks. Across both the KCN and OXONE businesses, DuPont received {[redacted]} net tons of caustic potash from Charleston in 2011.[92] At 22 tons per truck, this would equate to {[redacted]} trucks. Moreover, this truck volume would not be evenly spread throughout the year because there would be spikes in truck deliveries when the KCN business is running one of its three month-long production campaigns each year. The additional handling of this corrosive material, and the labor and equipment needed to truck four times as many shipments as railcars, renders trucking an impractical alternative to rail. Moreover, DuPont cannot force its supplier to incur both the additional risk and costs associated with scheduling trucks, employing additional labor, and making four times as many connections to load trucks as railcars. {{[redacted]

[92] This is based upon {[redacted]} dry tons doubled to reflect that the caustic potash is shipped in a 50% solution.

[redacted]}} Nor does DuPont have any desire to increase the costs and risks associated with handling so many extra hook-ups.

Consequently, even though the direct trucking rate is {{[redacted]}} below the direct rail rate, DuPont cannot use direct trucks. Moreover, the most striking fact is that the extraordinary NS rate increases over the past few years have reversed the historical relationship between the truck and rail rates for this 354-mile truck movement. Since 2007, the through rail rate in Lane B-125 has risen by {{[redacted]}}.[93] Since 2009, when the participating rail carriers implemented Rule 11 pricing, the NS rate has risen by {[redacted]}, while the connecting carrier's rate increased by {{[redacted]}}.[94] This shows that NS has used its market power to increase rail rates far above truck rates, while still retaining the predominant market share.[95]

Transloading. Transloading faces most of the same obstacles as direct trucking. Because the origin is captive to NS, Olin would have to load trucks at its facility and transfer the caustic potash into railcars at a bulk terminal. This is precisely the reverse of typical transloading scenarios. Moreover, it would impose upon Olin all the additional labor and risks that direct trucking would require.

Furthermore, very few commercial bulk terminals will handle caustic potash due to its highly corrosive nature. Some caustic potash producers operate their own terminals to serve customers without rail access, but those terminal locations are selected and optimized to serve their customer destinations, not their origin production facilities, which would be necessary for

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[93] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[94] Id.

[95] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

Lane B-125. Because caustic potash producers can move large volumes through a single terminal, they also may team up with a commercial bulk terminal to provide storage and transfer facilities in lieu of constructing their own private terminals.

Barges. The above limits on transloading also apply to barge transportation. Direct barging is not an option for Lane B-125 because the destination is not on a navigable waterway. Therefore, any barge transportation would have to unload and store the caustic potash at a barge terminal to be transloaded into trucks or railcars for delivery to DuPont. Many caustic potash producers, including Olin, own and operate their own barges for transporting caustic potash and lease terminal facilities for storage and transfer, which they are able to do economically because of the large volumes that move through those facilities to serve multiple customers. Olin does not use any inland barge terminals for caustic potash, except at Willow Springs, IL, which is near Chicago. This suggests that Olin primarily barges caustic potash directly to its customers, not to bulk terminals.

In order to be a true alternative to the issue movement, a barge alternative would have to operate between Charleston and Memphis, TN, which are the origin and interchange points for the issue movement in Lane B-125. DMIR, 4 STB at 292 (n. 13) and 293. DuPont currently procures barge terminal services from the {[redacted]} in Memphis for 5 other commodities received at the Woodstock facility, which is approximately 7 miles away. Therefore, DuPont has evaluated whether that facility could handle caustic potash and at what cost.

The {[redacted]} terminal is operated by {[redacted]}, with which DuPont has a contract for the receipt, storage and handling of five commodities destined for

Woodstock.[96] Those commodities are {[redacted]}.[97] Although this terminal can handle caustic potash, it cannot do so in addition to the five commodities that it already handles for DuPont because it does not have an empty storage tank. Therefore, caustic potash would have to displace one of these other commodities for which DuPont would have to secure alternative storage and transportation.[98] Although this factor alone renders this barge alternative infeasible, DuPont has estimated the cost per ton of barge transportation versus rail transportation for Lane B-125.

The barge cost has three components. The barge transportation itself would cost {{[redacted]}} per net ton[99] and the truck transportation from the terminal to Woodstock would be {{[redacted]}} per net ton.[100] Because the terminal charges, which are set forth in Exhibit C of the {[redacted]} contract, are not on a transactional or per ton basis, DuPont cannot calculate precisely how much this would add to the total barge transportation costs. However, DuPont's total 2011 spend under the {[redacted]} contract was {{[redacted]}} for five commodities.[101] If a fifth of that cost is assigned to the issue movement, based upon {[redacted]} net tons received from Charleston in 2011, this yields a terminal cost per ton of {{[redacted]}}.[102] The sum of these costs is {{[redacted]}} per net ton, which is {{[redacted]}} higher than the rail cost per ton of {{[redacted]}}.[103] This clearly is

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[96] {[redacted]}

[97] Id., Contract Exhibit C.

[98] DuPont also has used the {[redacted]} terminal as an alternative for caustic soda in Lanes B-47 and 81. If this terminal were used as an alternative for both caustic soda and caustic potash, they would displace 2 of the 5 commodities that DuPont currently transships through that terminal.

[99] See Dup. Op. Workpaper "ACL e-mail" in the "Potassium Caustic" folder.

[100] {{[redacted]}}

[101] {[redacted]}

[102] {{[redacted]}}

[103] {{[redacted]}} The through rail rate is the 12/1/11 rate in Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

a higher cost alternative because of the extra storage and handling that is required at the {[redacted]} terminal.

This barge option has the same undesirable requirement as all of the truck options, which is a four-fold increase in the number of hook-ups due to the need to load/unload four trucks for every railcar. Because DuPont seeks to minimize the handling of this highly corrosive commodity, this option would never receive serious consideration.

In summary, NS possesses market dominance over this movement of caustic potash because:

- DuPont's supplier is captive to NS at the origin.
- The high volume of caustic potash moving in this lane makes switching to truck infeasible, unpractical and unwarranted, because of the increased handling of this hazardous material. DuPont cannot impose these increased costs and risks upon its supplier at the origin.
- NS's recent sizeable rate increases have reversed the historical relationship between truck and rail rates and have not had any impact on NS retaining the predominant market share of the traffic.
- Total barge costs, including barge rates, truck rates, and terminal costs, are approximately {{[redacted]}} higher than direct rail costs.
- DMIR precludes the Board from considering alternative transportation options to origins and destinations other than the issue destinations or origins covered by the challenged rates.

i. Sodium Caustic (Caustic Soda)[104]

DuPont has challenged the NS rates for transportation of sodium caustic, which is commonly referred to as "caustic soda," in nine lanes:

Lane #	Origin	Interchange	Destination	Supplier
A-22	McIntosh, AL	NS Direct	Lemoyne, AL	Olin
B-47	Charleston, TN	Memphis, TN	Woodstock, TN	Olin
B-79	McIntosh, AL	Mobile, AL	Delisle, MS	Olin
B-80	McIntosh, AL	New Orleans, LA	Orange, TX	Olin
B-81	McIntosh, AL	Mobile, AL	Woodstock, TN	Olin
B-107	Natrium, WV	Cincinnati, OH	Belle, WV	PPG
B-108	Natrium, WV	Lynchburg, TN	Danville, VA	PPG
B-112	Niagara Falls, NY	Columbus, OH	Belle, WV	OxyChem
B-114	Niagara Falls, NY	Buffalo, NY	Edgemoor, DE	Olin

Lane A-22 is a direct NS movement from a DuPont supplier in McIntosh, AL to DuPont's facility in Lemoyne, AL, both of which are captive to NS. Lanes B-47, B-79, B-80 and B-81 are shipments from DuPont suppliers that are captive to NS at the origin and destined for a DuPont facility after interchange with another carrier. Lanes B-107, B-108, B-112, and B-114 are shipments from DuPont suppliers that are served by another railroad and then interchanged to NS for delivery to DuPont facilities that are captive to NS.

Caustic soda, also known as sodium hydroxide or NaOH, is a clear to slightly turbid odorless liquid that is used as a neutralizing agent, as an industrial cleaner, for pulping and bleaching, and for manufacturing soap.[105] It is a Class 8 hazardous material that is extremely corrosive. Caustic soda is sold and shipped in solutions of varying strength, with 50% solution being quite common. Caustic soda causes severe burns on contact that penetrate to deeper layers of skin, causing deep ulceration, permanent scarring, and even death.[106] The severity of injury

[104] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region and Suneet Ranganath, Sourcing Manager, Ag & Nutrition.

[105] See Dup. Op. Workpaper "Caustic Soda MSDS," at 1, 8, in the "Sodium Caustic" folder.

[106] Id. at 2.

depends upon the concentration of the caustic soda solution and the duration of exposure.[107] The risk of severe burns is enhanced due to the fact that the solution is odorless and burns may not be immediately painful and could be delayed from minutes up to hours.[108] Caustic soda also reacts violently with certain metals and water to generate enough heat to ignite nearby combustible materials.[109] Personal protective equipment is needed to load or unload caustic soda.[110] Liquid caustic soda is shipped hot at 100-180° F.

Caustic soda is a widely used chemical that can be transported by truck, rail, or barge. However, trucks typically are used only for very short distances or for expedited deliveries. Rail is the preferred method of transporting caustic soda over land because it has the lowest risks. Railcars also double as storage containers for caustic soda at the destinations. In addition, as noted below, trucks are not practical because of the volume of caustic soda received at each destination.

Direct Trucking. Direct trucking is only an alternate form of transportation for Lane A-22 because that is the only issue movement for which NS provides direct rail service from the origin to the destination. Because all of the other issue movements are bottleneck segments for which the challenged NS rate applies either from origin to interchange, or from interchange to destination, direct trucking is not an alternate transportation for the movement to which the challenged NS rates apply. DMIR, 4 STB at 292 (n. 13) and 293.

For Lane A-22, direct trucking is not an effective competitive constraint upon NS because the truck rate is {{[redacted]}} higher than the NS rate.[111] Even if truck rates were not so

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[107] Id. A 4% solution can destroy the outer layer of skin within 15 minutes and all skin layers within 60 minutes.

[108] Id.

[109] Id. at 1, 6.

[110] Id. at 5.

[111] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

much higher, direct trucking is impractical due to issues at DuPont's Lemoyne facility, which has just one truck unloading site. From 2006-2010, {{[redacted]}} trucks of caustic soda moved in this lane or even to this destination by truck.[112]

Even if the Board's DMIR decision did not foreclose direct trucking alternatives for the eight Complaint Exhibit B lanes, the direct trucking rates are {{[redacted]}} higher than the through rail rates for five of those eight movements.[113]

Furthermore, nearly all of the case destinations receive very large volumes of caustic soda, for which it simply would not be practical to deliver by truck. A rail tank car has a caustic soda capacity of 98 net tons, and a tank truck has a capacity of 22 net tons. To illustrate the large volumes of caustic soda received by the issue DuPont facilities, DuPont has calculated the net tons received at each facility in 2010 from its SAP data.[114] Because these volumes are in dry tons, they must be doubled to reflect shipment weights for 50% caustic solution:

- Woodstock (Memphis), TN, which is the destination in Lanes B-47 and 81, received {[redacted]} net tons of dry caustic soda by rail, which would require {[redacted]} trucks annually.
- Delisle, MS, which is the destination in Lane B-79, received {[redacted]} net tons of dry caustic soda by rail, which would require {[redacted]} trucks annually.[115]
- Sabine (Orange), TX, which is the destination in Lane B-80, received {[redacted]} net tons of dry caustic soda by rail, which would require {[redacted]} trucks annually.
- Danville, VA, which is the destination in Lane B-108, received {[redacted]} net tons of dry caustic soda by rail, which would require {[redacted]} trucks annually.

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[112] See Dup. Op Workpaper "Sodium Caustic Truck Shipments" in the "Sodium Caustic" folder.

[113] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). Those are Lanes B-47, 81, 108, 112, and 114.

[114] See Dup. Op. Workpaper "2010 Caustic Volumes" in the "Sodium Caustic" folder. Rail shipments are indicated by the abbreviations "TKR" and "BRL"; truck shipments by "TKT."

[115] Although Dup. Op. Workpaper "2010 Caustic Volumes" shows a barge delivery to Delisle, Delisle in fact does not have any barge docks. This particular shipment was ordered by DuPont on behalf of {{[redacted]}}.

- Edge Moor, DE, which is the destination in Lane B-114, received {[redacted]} net tons of dry caustic soda by rail, which would require {[redacted]} trucks annually.

Although Lanes B-79, 80 and 107 have direct truck rates that are {{[redacted]}} less than the through rail rate,[116] these lower truck rates are due to recent NS extraordinary rate increases that have reversed the historical relationship between truck and rail rates for these movements. Indeed, all of the issue movements have experienced substantial rail rate increases in recent years that reflect the exercise of market power by NS, even in the lanes where there still are significant truck premiums after the NS rate increases. Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the change in rates for the issue movements from the later of 2007 or the first DuPont rail movement in each lane. Since 2007, the combined through rate for each caustic soda issue movement has increased between {[redacted]}. Since 2009 (or 2008 for some lanes), when NS and its connecting carriers began pricing on a Rule 11 basis, the NS rate has increased between {[redacted]}, while the connecting carrier rates have {{[redacted]}}. The specific details for each caustic soda issue movement are summarized in the following chart:

Lane #	Through Rate Increase since …	NS Rule 11 Rate or Local Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Truck Premium
A-22	NS Direct	{[redacted]}	NS-Direct	{{[redacted]}}
B-47	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-79	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-80	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-81	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-107	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-108	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-112	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-114	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}

[116] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

Clearly, most of the through rate increases since 2007 have occurred in the last two years as a consequence of extraordinary NS rate increases. Moreover, these extraordinary NS rate increases have dramatically reversed the historical pattern of higher truck rates for three of the caustic soda issue movements without any loss of traffic to trucks, which is strong evidence of market dominance.[117] Furthermore, the fact that most of the issue movements still have sizeable truck premiums even after such rapid and steep rail rate increases underscores how little of a competitive constraint trucks truly exert upon NS rates for caustic soda transportation.

The only issue destination for caustic soda that has any history of large truck volumes is Belle, WV, in Lane B-107.[118] Those volumes are deceptive, however, because DuPont has four different businesses at Belle that unload caustic soda. These businesses are referred to as SLM, Vazo, F3455, and Amines. The SLM and Vazo facilities cannot unload railcars, and therefore, must purchase caustic soda in trucks. In contrast, Amines cannot unload trucks, and therefore, must purchase caustic soda in railcars. Only the F3455 business has the capability to unload caustic soda by both truck and rail. The large truck volumes in Lane B-107 were received almost entirely by the SLM and Vazo businesses at Belle, and thus, do not demonstrate that trucks are competitive constraints upon rail rates for transporting caustic soda.

Finally, DuPont cannot unilaterally switch from railcars to trucks; its suppliers also would have to agree to ship caustic soda by trucks. Trucks would increase their costs and risks by requiring them to load four times more trucks than railcars. This means more opportunities for spills and more employees needed for loading operations and to coordinate truck loading

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[117] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[118] See Dup. Op. Workpaper "Sodium Caustic Truck Shipments" in the "Sodium Caustic" folder.

schedules with motor carriers. Yet, these suppliers would not realize any freight cost savings for their efforts, since DuPont pays the freight, which raises the question why they would voluntarily assume these greater risks and costs. If they were willing to do so, surely they would demand some compensation, which would reduce or eliminate any freight savings to DuPont.[119]

Transloading. Transloading is undesirable because it would significantly increase the handling of this extremely corrosive chemical. Moreover, transloading rates range from {{ }} higher than rail rates for all but two of the caustic soda issue movements.[120] The two exceptions are Lanes B-80 and 107, where transload rates are {{ }}, respectively, below the rail rates.[121] In both lanes, however, the savings from direct trucking are greater. The reasons why direct trucking over these lanes does not constitute effective competition apply equally to transloading. Transloading has added complications for Lanes B-47, 79, 80, and 81, because it is DuPont's suppliers who are captive to NS at the origins. They, therefore, would have to agree to ship by trucks to a bulk terminal, with the attendant extra costs and risks, but without any offsetting benefit from lower freight rates.

Barges. Although 7 of the 9 issue movement origins can load caustic soda into barges (the exceptions are Lanes B-112 and 114 at Niagara Falls), the destinations cannot unload caustic soda from barges, if they can receive barges at all. Due to differences among the issue movements, barge options, including both direct and transloading, are reviewed on an individual lane basis below.

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[119] {{ }}

[120] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder). DuPont has not calculated transload rates for Lane A-22 because that lane would require transloading at both the origin and destination to by-pass NS.

[121] Id.

In Lane A-22, barge is not an option because DuPont's Lemoyne facility, although located on the water, does not have any barge docks. Nor is DuPont permitted to construct any barge docks because the waterfront property is covered by an Archaeological Exploration Easement in favor of the Archaeological Conservancy.[122] There are active archeological digs on the property, which is the original site of the City of Mobile from the 1700's. Pursuant to paragraph 8 of the easement, DuPont must "refrain from any activities which have not been undertaken in the past and which would disturb the integrity of the SITE."

For Lanes B-47 and B-81, because the destination, Woodstock, is not located on a navigable waterway, DuPont would have to transload from barges into trucks. DuPont currently procures barge terminal services from {[redacted]} in Memphis for commodities received at the Woodstock facility, which is approximately 7 miles away. Therefore, DuPont has evaluated the cost of a barge-truck transload through that terminal for both of these issue movements. The barge transportation alone would cost {{[redacted]}} per net ton for Lane B-47 and {{[redacted]}} per net ton for Lane B-81.[123] The truck transportation from the terminal to Woodstock would add {{[redacted]}} per net ton to both movements.[124] The combined barge and truck costs for Lane B-47 of {{[redacted]}} per net ton is {{[redacted]}} higher than the rail cost of {{[redacted]}} per net ton.[125] The combined barge and truck costs for Lane B-81 of {{[redacted]}} per net ton is {{[redacted]}} higher than the rail cost of {{[redacted]}} per net ton.[126]

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[122] See Dup. Op. Workpaper "Archaeological Conservancy Easement" in the "Sodium Caustic" folder.

[123] See Dup. Op. Workpaper "ACL e-mail" in the "Sodium Caustic" folder.

[124] {{[redacted]}}

[125] {{[redacted]}} The through rail rate is the 12/1/11 rate in Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[126] {{[redacted]}} The through rail rate is the 12/1/11 rate in Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

Clearly, barge transportation is not a competitive constraint upon NS rates for these movements even before adding the terminal costs, which were {{[redacted]}} in 2011.[127]

For Lane B-79, Delisle is not located on a navigable waterway. DuPont searched for barge transload options through the ports of Gulfport, MS and Mobile, AL. Chemicals are not among the cargo handled by the Port of Gulfport, which in any event is not a proper barge destination under the DMIR decision.[128] The Port of Mobile, which is a proper barge destination under DMIR because it is the actual NS interchange location, also does not handle hazardous materials.[129] Regardless, this option is not practical because it would require DuPont to unload over 1400 trucks annually at Delisle.

For Lane B-80, direct barging to the DuPont facility in Orange, TX is not an alternative to the issue movement, which is to the UP interchange in New Orleans, LA.[130] Even if DMIR did not apply, DuPont's Orange facility does not currently have the infrastructure to unload barges. Although DuPont has barge docks at Orange, it does not have the storage or piping needed to receive caustic soda by barge. Existing storage is less than one-fifth the capacity of the smallest barge and 2-3 miles of heated piping would be required to connect a new barge storage tank with the 4 DuPont businesses at Orange that use caustic soda. The total estimated cost of this infrastructure would be {{[redacted]}} of capital plus {{[redacted]}} in costs

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[127] {[redacted]} DuPont has a contract for the receipt, storage and handling of five commodities destined for Woodstock. {[redacted]} Although this terminal can handle caustic soda, it cannot do so in addition to the five commodities that it already handles for DuPont because it does not have an empty storage tank. Therefore, caustic soda would have to displace one of these other commodities for which DuPont would have to secure alternative storage and transportation. DuPont also has used the {[redacted]} terminal as an alternative for caustic potash in Lane B-125. If this terminal were used as an alternative for both caustic soda and caustic potash, they would displace 2 of the 5 commodities that DuPont currently routes through that terminal.

[128] See http://shipmspa.com/cargo.htm

[129] See Dup. Op. Workpaper "Port of Mobile Info" in the "Sodium Caustic" folder.

[130] DMIR, 4 STB at 292 (n. 13) and 293.

associated with capital.[131] Furthermore, a transload alternative would require DuPont to unload over 650 trucks of caustic soda annually.

For Lane B-108, the destination, Danville, is not located on a navigable waterway and is not near any river terminals. The closest river terminal is Charleston, WV, which still requires a 250 mile truck haul to Danville, compared with a direct truck distance of 380 miles. In other words, DuPont still would be trucking for 66% of the distance. But, on top of the truck costs, DuPont would incur barge transportation costs and terminal charges for leasing a storage tank year-round and handling fees. In any event, because the NS interchange is Lynchburg, VA, there is no barge alternative that satisfies DMIR.

For Lane B-107, although the destination, Belle, has barge docks, it does not have the infrastructure to unload caustic soda. DuPont estimates that the additional piping and associated equipment needed to enable barge unloading would cost {{[redacted]}}.[132] The barge rate from Natrium to Belle is {{[redacted]}} per net ton,[133] and the rail rate is {{[redacted]}} per net ton.[134] Clearly, DuPont would have ample incentive to take advantage of a rate savings of {{[redacted]}} if it were able to do so. Moreover, as noted above, the fact that NS has increased its rate for this movement by {[redacted]} since just 2009 demonstrates that it does not feel constrained by barge competition for this traffic. In any event, because the NS interchange is Cincinnati, OH, a barge-truck alternative that complies with DMIR would require a 210 mile truck haul, which would be 36% longer than a 145 mile direct truck alternative.

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[131] See Dup. Op. Workpaper "Sabine DOME Estimate" in the "Sodium Caustic" folder. The cost associated with capital is estimated as 20% of the capital cost.

[132] See Dup. Op. Workpaper "Belle DOME Estimate" in the "Sodium Caustic" folder.

[133] See Dup. Op. Workpaper "ACL e-mail" in the "Sodium Caustic" folder.

[134] {{[redacted]}} The through rail rate is the 12/1/11 rate in Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

In summary, NS possesses market dominance over all the issue Caustic soda movements because:

- Charleston, TN; Edgemoor, DE; McIntosh, AL; Lemoyne, AL; Belle, WV; and Danville, VA are rail captive to NS.
- Because caustic soda is an extremely corrosive hazardous material that should be handled as little as possible during transport, transloading is not feasible, practical, or warranted.
- Because caustic soda is an extremely corrosive hazardous material that should be handled as little as possible, rail is preferable to trucks so as to minimize the number of connections required to load and unload.
- Direct truck rates are substantially higher than the through rail rates for six of the nine issue caustic soda movements.
- Transload truck rates are substantially higher than the through rail rates for all but two of the issue caustic soda movements.
- The high volume of caustic soda received by the issue destinations makes the receipt of trucks, either via direct shipment or transload, infeasible, unpractical and unwarranted.
- NS's recent extraordinary rate increases have not had any impact on NS retaining the predominant market share of the traffic, and have reversed the historical relationship between truck and rail rates for three of the issue movements.
- The Niagara Falls, NY, origin in Lanes B-112 and 114 cannot load barges.
- The following issue destinations cannot unload caustic soda from barges: Woodstock, TN; Delisle, MS; Danville, VA; Edgemoor, DE; Belle, WV; Lemoyne, AL; and Orange, TX.
- Barge-truck transload rates are significantly higher than rail rates for Lanes B-47 and 81, even before adding terminal charges.
- DMIR precludes the Board from considering alternative transportation options to origins and destinations other than the issue destinations or origins covered by the challenged rates. Therefore, the only lane where direct trucking or barging may be considered is Lane A-22.

j. Chlorine[135]

DuPont has challenged the NS rate for transportation of chlorine in four lanes:

Lane #	Origin	Interchange	Destination	Supplier
A-10	Charleston, TN	NS Direct	Edgemoor, DE	Olin
B-78	McIntosh, AL	Mobile, AL	Delisle, MS	Olin
B-87	Beauharnois, PQ	Buffalo, NY	Edgemoor, DE	PPG
B-113	Niagara Falls, NY	Buffalo, NY	Edgemoor, DE	Occidental Chemical

Lane A-10 is captive to NS at the origin and destination. Lane B-78 is captive to NS at the origin and is interchanged to CN at Mobile, AL. Lanes B-87 and B-113 are captive to NS at the destination and are interchanged from CSXT at Buffalo, NY.

Chlorine is a compressed liquefied gas that is an essential element used as a process chemical, water treatment chemical, and in plastic manufacturing. Chlorine is classified as a Class 2.3 poison gas under 49 C.F.R. § 172.101, and is a TIH material. Chlorine is not flammable but it enhances the combustion of other substances. DuPont has very stringent safety rules for handing chlorine within its facilities.[136]

Direct Truck. Direct trucking of chlorine does not provide effective competition to NS rail service. DuPont seldom trucks chlorine at all because of its hazardous properties. When it does do so, DuPont trucks chlorine only in small volumes and over very short distances. In other cases before the Board, the parties agreed that intermodal competition from trucks does not exist for chlorine. See E.I. du Pont de Nemours and Company v. CSX Transportation, Inc., NOR No. 42100 (STB served June 30, 2008).

Direct truck can only be an alternative for Lane A-10 because it is the only movement where the challenged NS rate applies to the same origin and destination as the direct truck rates

[135] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region and Suneet Ranganath, Sourcing Manager, Ag & Nutrition.

[136] See Dup. Op. Workpaper "Chlorine Safety Rules" and "Chlorine Safety Manual", both in the "Chlorine" folder.

would apply. See DMIR, 4 STB at 292 (n. 13) and 293. Lanes B-78, 87, and 113 are bottleneck rates that apply only to or from an interchange.[137]

Furthermore, the distances involved are longer than DuPont is willing to truck chlorine for safety reasons. Lane A-10, the only movement where direct trucking is a true alternative to the challenged rate, is a movement of nearly 700 miles by road. Lanes B-78, 87 and 113 are approximately 125, 500 and 400 miles, respectively. Even when DuPont does truck chlorine, it does so in containers, not bulk trucks. All of the above factors render direct trucking of chlorine infeasible, impractical and unwarranted.

Transloading. For the three joint line movements, the risk of a spill and its accompanying consequences renders transloading of chlorine infeasible, impractical, and unwarranted. DuPont does not transload chlorine anywhere in the United States and is unaware of any facility that does so in bulk quantities that is not itself a chemical plant.

The process required to transload chlorine simply is not practical or cost-effective. The process of loading chlorine into railcars creates vapor that accumulates above the liquid. During transloading, this vapor must be scrubbed in a caustic solution as it is released from the railcar. This scrubbing process, in turn, creates bleach. Therefore, a bulk terminal must bring in caustic solution for scrubbing and it must have a means to capture the resulting bleach that is created and dispose of that bleach. In essence, the bulk terminal would become a mini-chemical production plant. This explains why chlorine is not transloaded in the transportation chain.

Barge. DuPont receives chlorine by barge only at its New Johnsonville, TN facility. However, none of the issue movements are to New Johnsonville. Three of the issue chlorine movements are to DuPont's Edgemoor, DE facility and the other is to Delisle, MS.

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[137] DMIR also precludes direct barge alternatives for all issue movements except Lane A-10.

At Delisle (Lane B-78), barge is not an option because neither the origin, at McIntosh, AL, or the destination, at Delisle, have barge loading/unloading facilities capable of handling chlorine. A barge cannot get within 20 miles of the Delisle facility. Although DuPont's supplier at McIntosh has barge docks, those docks are not capable of loading chlorine.[138] Moreover, the fact that Delisle is not barge accessible means that transloading would be required. As discussed above, chlorine simply is not transloaded because of its hazardous properties and the complications associated with scrubbing.

At Edgemoor (Lanes A-10, B-87, and B-113), DuPont also does not have barge unloading facilities. Although Edgemoor is located along the banks of the Delaware River, its only dock facility is an abandoned dock that once was used to load iron chloride onto barges for offshore dumping. This dock, which was never configured for unloading any commodity, is in a state of disrepair. Also, the dock is located nearly a quarter mile from the part of the facility that utilizes the chlorine. This would require an extensive infrastructure investment at Edgemoor to rehabilitate the dock, retrofit it for unloading chlorine, and build piping and storage to connect the dock with the DuPont facility. There is no need to even consider whether those infrastructure investments are warranted, however, because there remain two highly significant practical hurdles.

First, the Delaware River is only accessible to barges from the issue origins via the Atlantic Ocean. Because barges cannot traverse the open ocean, chlorine would have to be transferred between barges and ocean-going vessels twice for each issue movement. DuPont has already stated that it does not transload chlorine between transportation modes. Furthermore, transloading is even less practical on the open water than it is on land because the transloading

[138] See Dup. Op. Workpaper "Olin email" in the "Chlorine" folder.

operation is, in essence, a mini chemical plant for the production of bleach. The barge routes also would be highly circuitous. Lane A-10, from Charleston, TN, would have to barge the chlorine south to the Gulf of Mexico, transfer the chlorine onto ships that would sail around Florida and up the East Coast, and then transfer the chlorine onto river barges for transportation up the Delaware River to Edgemoor. Lanes B-87 and 113 would have to sail north up the St. Lawrence Seaway, transfer into ocean vessels in the Atlantic Ocean, sail south to the Delaware River, and transfer back into barges for transportation up the river to Edgemoor.

Second, even assuming that the above-described barge-ship-barge transportation was both feasible and economical, DuPont also must overcome multiple regulatory hurdles in order to upgrade the dock facility at Edgemoor to receive chlorine by barge. Under Delaware's Coastal Zone Act ("CZA"), the construction and extension of docking facilities and piers that serve a single manufacturing facility in Delaware's coastal zone, like Edgemoor, is allowable by permit only.[139] In addition, any new use of the Edgemoor docking facilities requires a permit.[140] Obtaining a permit is a difficult, expensive, and time consuming process for which there are no guarantees of success. A permit application requires an environmental impact statement and detailed descriptions of the proposed use, the aesthetic and economic effects, and impact on neighboring land uses.[141] In addition, any application that will result in a negative environmental impact must contain an offset proposal, which must more than offset the negative environmental impacts associated with the proposed activity.[142]

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[139] Del. Code tit. 7, §§ 7002(b), 7003, 7004(a); Del. Admin. Code tit. 7, § 101-6.1.

[140] Del. Admin. Code tit. 7, § 101-6.3.

[141] Id. § -8.1.

[142] Id. § -9.1.1. Because the primary medium at risk is the river environment and subaqueous soil, any DuPont offset would need to target spawning fish populations, benthic invertebrates, and submerged vegetation in the Delaware River.

Approval of a permit application is in the discretion of the Secretary of the Delaware Department of Natural Resources and Environmental Control ("DNREC").[143] When evaluating a permit application, the Secretary must consider economic effect, aesthetic effect, the supporting facilities required, effect on neighboring land uses, and local land use and conservation plans.[144] While the Secretary has 90 days to rule on an application, the 90-day clock does not start until the Secretary has determined that the application is complete.[145] Accordingly, DuPont's environmental counsel anticipate that it would take 8 months for the Secretary to rule on an application to rehabilitate and use the dock facilities at Edgemoor and cost at least $50,000 to $75,000 in legal, consulting, and application fees. Despite these efforts, there is a high likelihood that the Secretary could deny a permit to use the Edgemoor dock facilities to unload chlorine from barges due to many different reasons, including the potential for spills of chlorine into the Delaware River, the need for extensive dredging, increased ship and barge traffic close to the riverbank, and the 1/2 mile separating the Edgemoor dock facilities from a recreation area on the riverbank at Fox Point State Park.

Even if DuPont could obtain a permit, additional regulatory hurdles remain. DuPont must obtain subaqueous land leases and permits,[146] certify that refurbishment or expansion of docking facilities is consistent with Delaware's coastal zone management program, obtain water quality certification,[147] and obtain permits from the U.S. Army Corps of Engineers ("USACE").[148] USACE permits are needed for the rehabilitation and any expansion of the dock

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[143] Del. Code tit. 7, § 7005(a).

[144] Id. § 7004(b).

[145] Id. § 7005(a).

[146] Del. Admin. Code tit. 7, § 7500-2.3.3, -2.4.2.

[147] 33 U.S.C. § 1341(a)(1).

[148] 33 C.F.R. §§ 322.3(a), 323.3(a).

facilities as well as the discharge of dredge or fill material.[149] Because this does not fall under nationwide permits for minimal impact activities,[150] DuPont would need to obtain an individual permit. The burden of obtaining an individual permit is "not trivial[;]. . . the average applicant for an individual permit spends 788 days and $271,596 in completing the process."[151] Moreover, there is no guarantee that a permit will be issued.

In order to obtain the USACE permits, DuPont must also certify to USACE and DNREC that any proposed activity affecting water use in the coastal zone complies with Delaware's approved coastal management program and will be conducted in a manner consistent with such program.[152] The certification must include a detailed description of the project and its associated facilities, a copy of the federal permit application package, an assessment of the effects of the project on any land or water use or natural resource of the coastal zone, findings that the proposed activity and associated facilities are consistent with the Delaware Coastal Zone Management Program ("DCMP").[153] DNREC's review of the certification includes twenty-five policy areas.[154] If DNREC finds that the proposed activity is inconsistent with the DCMP, it may object to the certification, thereby precluding USACE from issuing a permit unless the Secretary of Commerce, on appeal, overrides DNREC's objection.[155]

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[149] Id.

[150] See 33 C.F.R. Part 330.

[151] Rapanos v. United States, 547 U.S. 715, 721 (2006)

[152] 16 U.S.C. § 1456(c)(3)(A). See also DNREC, Delaware Coastal Management Program: Comprehensive Update and Routine Program Implementation §3.2 (2011).

[153] DNREC, supra note 17, § 3.2.2.

[154] Id. § 5.

[155] Id. § 3.2.6.

To obtain the necessary water quality certification, which is a prerequisite to obtaining the USACE permits,[156] and subaqueous land leases and permits, DuPont must submit a combined application containing engineering drawings and a wetlands delineation to the Wetlands and Subaqueous Lands Section ("WSLS") of DNREC, which will evaluate the application using a multitude of criteria, including: environmental impact, erosion control, impact on public use, impact on ecosystems, serviceability, impact of dredge or fill activities, and impact on Delaware surface water quality.[157] Applications for subaqueous lands permits and leases are subject to a public notice requirement and, if a meritorious request for hearing is received or WSLS finds a public interest in the project, a public hearing before a hearing officer.[158] Given the scope of any dock facility rehabilitation and expansion and its implication of the CZA, a hearing is likely. If the permit application is denied, there is no right of appeal.[159]

The presence of so many regulatory obstacles, the cost of pursuing the multiple required permits, and the potential that any single permit denial can block the entire project substantially eliminates any potential constraint that the possibility of barge competition might have on rail rates. See General Electric Co. v. The Baltimore and Ohio R.R. co., 1984 ICC LEXIS 206, *6 (served Oct. 12, 1984) ("[W]hether such a dock and unloading facility could actually be constructed is far from certain, since the record shows that environmental requirements of several jurisdictions would have to be met, and the government agencies involved might not permit construction for the handling of such a hazardous substance."). All of this is before investing the millions of dollars required to build the infrastructure that is necessary to make

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[156] 33 U.S.C. § 1341(a)(1).

[157] Id. § 4.0

[158] Del. Code tit. 7, § 7207, 7208.

[159] Id. § 7210.

barge transportation a physical possibility at Edgemoor. DuPont has estimated that it would cost {{[redacted]}} dollars to rehabilitate its dock to unload chlorine by barge and another {{[redacted]}} to install the piping, pumps, tanks, and other infrastructure necessary to store the chlorine and pipe it from the dock to the plant.[160] This is just the capital expense estimate. The non-capital expenses are estimated to add 15% to the total cost, which would amount to {{[redacted]}}.

In summary, NS possesses market dominance over all the issue chlorine movements because:

- The Charleston, TN and McIntosh, AL origins are captive to NS.
- The Edgemoor, DE destination is captive to NS.
- Trucking and transloading of chlorine is not feasible, practical, or warranted.
- Barging to Edgemoor would require circuitous routes and transfers to and from ocean-going vessels in order to access the Delaware River.
- DuPont's suppliers in Lanes B-78 and 113 do not have barge loading facilities for chlorine. Nor are the destinations barge accessible.
- DuPont lacks barge unloading capability at Edgemoor without significant infrastructure investments. The Delaware CZA inhibits the feasibility of such investment because of the numerous permits that must be obtained, any one of which could block the project. If such permits were granted, the cost of the necessary investments would be nearly {{[redacted]}}.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segments.

[160] See Dup. Op. Workpapers "Chlorine DOME Estimate" and "Chlorine Barge Estimate", both in the "Chlorine" folder.

k. Dimethyl Ether[161]

DuPont has challenged the NS rates for Dimethyl Ether ("DME") from Belle, WV to seven destinations in the following case lanes:

Lane #	Origin	Interchange	Destination	Customer
A-3	Belle, WV	NS-Direct	Danville, IL	KIK
B-1	Belle, WV	Chicago, IL	Anaheim, CA	Diversified CPC
B-23	Belle, WV	Chicago, IL	Lorenzo, IL	Diversified CPC
B-30	Belle, WV	Chicago, IL	San Dimas, CA	Aeropress
B-42	Belle, WV	Meridian, MS	Winford Spur, LA	Aeropress
B-89	Belle, WV	Cincinnati, OH	Gainesville, GA	KIK
B-120	Belle, WV	Pine, IN	Divine, IL	Technical Propellants

Although there are seven destinations, there are only five NS rates, because three lanes are the same NS segment from Belle to an interchange at Chicago. DuPont is captive to NS at the origin in all of these lanes, and also at the destination in Lane A-3.

DME is a flammable, liquefied compressed gas. It is colorless and has only slight odor. If inhaled, DME can affect the heart and central nervous system. It also causes cold burns and frost bite when it contacts the skin. Fire protective clothing with antistatic control is recommended when handling DME. DuPont has provided the MSDS for DME at DuPont Op. Workpaper "DME MSDS" in the "DME" folder. Although not a TIH material, NS classifies DME as a Highly Hazardous Material ("HHM"), which is an intermediate category used by NS to distinguish commodities that are not a TIH material, but that NS considers more than simply hazardous. It is not clear to DuPont, however, exactly what criteria NS uses to distinguish between a hazardous material and a HHM.

DME is a water soluble propellant that is used in consumer products, such as hair spray, which accounts for {[redacted]} of DuPont's DME sales. DuPont originally developed DME for

[161] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and John Leuszler, U.S. Account Manager.

use as a propellant. But, DuPont soon recognized DME as a potential solution to air quality regulations. In North America, DuPont produces DME at just its Belle, WV plant. Belle produces approximately {[redacted]} tons per year.

The transportation of DME is dominated by rail. Only about 5% of all DuPont shipments of DME move by truck. For each of the issue movements, there have been as few as {{[redacted]}} and at most {{[redacted]}} truck shipments in each of the last five years.[162] This captivity is due to a combination of factors, including the nature of the commodity, the nature of the distribution network, and infrastructure constraints.

DuPont cannot ship DME by barge. No water carrier can legally transport DME by barge because the U.S. Coast Guard has not classified DME for inland water transportation.[163] Before anyone could transport DME by barge, the Coast Guard would have to adopt standards and specifications for the construction of such barges, which is a time consuming process. Then, it is highly likely that new barges would have to be built to meet those specifications. For example, most barges in existence today are dedicated to handling just a single commodity, or at most 2-3 commodities, because of narrow specification requirements. DME also must be shipped under pressure and there are no barge terminals with the special equipment required to transload DME, as discussed in the next paragraph.

DME cannot be transloaded except at facilities with specialized equipment. There are very few commercial bulk terminals that can handle compressed liquefied gases, such as DME, because they are both flammable and shipped under high pressure. A bulk terminal also must have special electrical and fire safety classifications in order to handle compressed liquefied gases.

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[162] See Dup. Op. Workpaper "DME Truck Shipments" in the "DME" folder.

[163] See Dup. Op. Workpaper "Kirby E-mail" in the "DME" folder.

Although some terminals exist that can handle compressed liquefied gases such as propane, those gases do not have the quality control issues associated with transloading DME. Specifically, transloading picks up non-condensable gases (such as nitrogen) from air in the pipes, along with moisture and residue from previous materials. The non-condensable gases can over-pressurize the aerosol cans in which DME is used and the moisture can throw DME out of specification with customer requirements. These quality issues are of less concern for propane, and other compressed liquefied gases, because those gases are burned as fuels. Also for quality control reasons, DME is not transloaded directly between a railcar and a truck; instead, it is transferred from one transportation vessel into an intermediate container (*i.e.* storage tank) before it is loaded into another transportation vessel.

When transloading does occur, it is performed at highly specialized facilities with the equipment and trained personnel to ensure product integrity. In fact, the customer for each issue movement, except KIK in Lanes A-3 and B-89, is such a specialized transload facility, rather than the end-user. The operators of these specialized facilities are intermediate distributors in DuPont's DME supply chain. DuPont sells DME directly to the distributor, which resells it to an end-user.[164] Distributors unload the railcars of DME into storage tanks at the destinations. When they have a sale to an end-user, the distributors will load the DME into trucks or smaller containers for shipment to their customers. Distributors use dedicated trailers for this transportation to avoid cross-contamination with other products.

DuPont sells DME through distributors because its ability to truck directly to customers is severely constrained by the infrastructure at Belle. The Belle facility was designed to use railcars as the primary mode of transportation. Consequently, Belle has only one truck loading

[164] { [redacted] } The distributor, however, not DuPont, has the primary commercial relationship with the end-user.

rack for DME, which also is used to load another issue commodity, anhydrous methylamines. Moreover, it takes 4-6 hours to load a single truck of DME.[165] Approximately 4.5 trucks are required to transport the same volume of DME as a single railcar. Therefore, it would take up to 24 hours to load enough trucks to replace a single railcar of DME. That is far too little capacity to handle even a portion of the issue movements by truck, especially if two or more customers place orders within the same time frame. Nor would that leave any capacity to load the other commodities that also share this truck loading facility at Belle.

The DME truck loading process is long because DME shipments must be pressurized and strict quality controls maintained. As noted above, non-condensable gases, such as nitrogen, are contaminants. Therefore, both the trailer and the hoses must be vented before, during, and after the loading process. The loading and the venting must be carefully balanced. During the loading process, one person must constantly watch the control board and another person must monitor the temperature and pressure.[166] Because the venting process is via a flare, some DME is actually burned during venting. The faster that DME is loaded, the more product that is lost in the flare. In order to minimize this product loss, DME must be loaded at a very measured pace. Once the trailer is loaded, a sample is taken to a laboratory on-site for quality testing, which typically takes 2-3 hours. During this time, the trailer remains hooked up to the loading rack in case multiple samples are needed. Otherwise, the trailers and hoses would have to be vented down to be unhooked, and if a new sample was required, the trailer would get back in line to use the single loading rack and then go through the entire process of re-hooking, venting, testing and unhooking just to obtain the sample.

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[165] Although the physical loading process takes 3-4 hours, as discussed below, the truck continues to occupy the loading rack until quality testing of the samples are completed.

[166] See Dup. Op. Workpaper "DME Truck Loading Procedures" in the"DME" folder for an overview of the complete loading process.

By using distributors, DuPont minimizes the costs associated with serving customers that purchase DME in truckload quantities or smaller.[167] The distributor provides the storage capacity, dedicated trailers, loading racks, mixing facilities, and personnel to service the end-users. In order to by-pass distributors, and also bypass NS at the Belle origin for the issue movements, DuPont would need to re-create its own distribution terminal at Belle, purchase significantly more dedicated trailers, hire up to eight additional employees, add at least two new truck loading racks, and change its entire approach to marketing DME. Because DuPont does not have adequate space to do this within the existing DME facilities at Belle, DuPont also would need piping and compressors to connect the newly-constructed storage and loading facilities with the existing production facilities.

{{[redacted]}} This is many times greater than DuPont's total freight spend for these commodities.

When DuPont does ship DME by truck from Belle, it uses specialized trailers. DuPont currently owns just three such trailers, which are dedicated solely to DME service. The cost to acquire additional trailers would be approximately $255,000 per trailer, based upon price quotes that DuPont obtained in 2009.[169] DuPont currently uses these trailers to meet the short-term, emergency needs of its customers. DuPont would need {[redacted]} trailers to handle current rail

[167] See Dup. Op. Workpaper "Supply Chain Risk Mitigation Project" at 2, in the "DME" folder.

[168] See Dup. Op. Workpaper "Supply Chain Risk Mitigation Project" at 3, 8, 10, in the "DME" folder.

[169] See Dup. Op. Workpaper "Swoboda e-mail" in the "DME" folder.

volumes. When DuPont does ship DME by truck, it always uses its private motor carrier, Sentinel, because of special handling requirements.

For each of the issue DME movements, the Board must consider market dominance for the transportation to which the challenged rates apply. See 49 U.S.C. § 10707(a). Consequently, when evaluating the reasonableness of bottleneck rates where the connecting carrier rates are in contracts, the Board evaluates market dominance only for transportation over the bottleneck segment. DMIR, 4 STB at 292 (n. 13) and 293.

Because Lane A-3 is the only issue DME movement that is not a bottleneck segment, but involves single-line NS rail transportation, it is the only movement where alternative direct truck transportation from Belle to the destination may be considered. {{[redacted]}}.[171] Moreover, the ability of NS to increase this rate by {[redacted]} on this 400-mile truck movement just since 2009 shows that NS pricing is not constrained by direct truck competition from a higher cost, long-distance truck alternative.

Lanes B-1, 23, 30, 42, 89, and 120 are joint line movements where DuPont has contracts with the connecting carriers. Therefore, alternate transportation must be from Belle to the NS interchange with the connecting carrier.[172] However, that would require a transload at the interchange point, which simply is not an option for the reasons described above. Moreover, because the destination for each lane, except B-89, is itself a distribution terminal where transloading occurs, it would not make sense to transload DME at the rail interchange in order to

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[170] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[171] The rail volumes for this lane were 83 in 2009 and 69 in 2010. See Dup. Op. Workpaper "2009-10 Rail Shipments" in the "Shipment Data" folder.

[172] Direct trucking to the destination, even if permissible, is not economical for Lanes B-1 and B-30, which are destined to California distribution facilities. For both lanes, the direct truck rate is at least {{[redacted]}} higher than the through rail rate. See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

reach a destination where transloading would occur again. Regardless, as discussed above, DuPont lacks the loading capacity at Belle to originate the issue movements via truck, and the cost of adding that capability far outweighs the potential freight savings from using trucks.

Finally, the rate history for each of the DME issue movements verifies that NS is exercising its market dominance. Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the change in rates for the issue movements from the later of 2007 or the first DuPont rail movement in each lane. Since 2007, the combined through rate for each DME issue movement has increased between {[redacted]} and the NS local rate for Lane A-3 increased {[redacted]}. Since 2009, when NS and its connecting carriers began pricing joint line movements on a Rule 11 basis, the NS rate has increased between {[redacted]}, while the connecting carrier rates have increased just {{[redacted]}}. Since 2008, the NS rate on Lane B-89 has increased {[redacted]}, while the connecting carrier rate increased just {{[redacted]}}The specific details for each DME issue movement are summarized in the following chart:

Lane #	Through Rate Increase since …	NS Rule 11 Rate or Local Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Truck Premium
A-3	NS Direct	{[redacted]}	NS-Direct	{{[redacted]}}
B-1	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-23	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-30	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-42	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-89	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-120	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}

Clearly, most of the through rate increases since 2007 have occurred in the last two years as a consequence of extraordinary NS rate increases. Moreover, these extraordinary NS rate increases, which have dramatically reversed the historical pattern of higher truck rates for several of the DME issue movements, have not been accompanied by any loss of traffic to trucks, which

is strong evidence of market dominance.[173] Furthermore, the fact that NS has increased rates significantly in lanes where its rates already were higher than truck rates (Lanes B-1 and 30) is compelling evidence that NS is not constrained by truck competition.

In summary, NS possesses market dominance over all of the issue DME movements because:

- DuPont is captive to NS at the Belle, WV origin.
- In order to ship by trucks, DuPont would have to modify its distribution network for direct shipping to end-users, rather than distributors, by adding significant infrastructure, equipment, and personnel, at a cost exceeding {{[redacted]}}.
- DME is not authorized by the U.S. Coast Guard for barge transportation and special barges would need to be constructed after the Coast Guard adopted standards.
- DME is a highly hazardous material that requires highly specialized handling procedures and should be handled as little as possible while in transit.
- DME cannot be transloaded, except at facilities that are especially equipped to handle both pressurized and flammable products, and have the training and equipment necessary to preserve product integrity. Very few commercial facilities exist that can or will handle DME. Because the destination for all but two of the issue DME movements is such a specialized facility operated by a distributor that purchases the DME and resells it to end-users, it would not make sense to inject another such facility between DuPont and its customer, even if such a facility existed.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

[173] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

l. Difluorethane[174]

DuPont has challenged the NS rates for Difluoroethane ("DFE") from Gregory, TX to two destinations in the following case lanes:

Lane #	Origin	Interchange	Destination	Customer
B-71	Gregory, TX	New Orleans, LA	Dragon, MS	Diversified CPC
B-73	Gregory, TX	E. St. Louis, IL	Royce, NJ	Aeropress

The DuPont customers are captive to NS at both destinations.

DFE is a propellant gas that is also referred to as "152A." It is flammable, may cause frost bite when contacting skin, and affects both the heart and central nervous system if inhaled. DuPont has provided the MSDS for DFE at DuPont Op. Workpaper "DFE MSDS" in the "DFE" folder. NS classifies DFE as a Highly Hazardous Material ("HHM"), which is an intermediate category used by NS to distinguish commodities that are not a TIH material, but that NS considers more than simply hazardous. It is not clear to DuPont, however, exactly what criteria NS uses to distinguish between a hazardous material and an HHM.

DuPont produces DFE for use in aerosol sprays; it is an alternative to DME, which is another issue commodity. DFE has many of the same commodity characteristics as DME, including product integrity concerns, and a similar distribution network. Thus, the ability to use alternate transportation modes is similarly limited.[175] Most significantly, DFE is a flammable liquefied gas, which means it cannot be transloaded, except at specialized facilities. Like DME, DuPont sells DFE through distributors which operate these specialized terminals for the purpose of storing and reselling DFE in truckload or smaller quantities. Both of the issue DFE movements are to distributors, which are the same distributors that receive issue movements of

[174] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and John Leuszler, U.S. Account Manager.

[175] See Part II-B-2.k. DuPont incorporates its DME evidence into this discussion of DFE, rather than repeat that evidence here.

DME. These distributors use dedicated truck fleets to transport DFE to end-users in order to avoid cross-contamination. Their DFE dedicated fleets are separate from their DME dedicated fleets. Moreover, like DME, all transloading of DFE should occur through an intermediate storage container.

{{ }} This is many times greater than DuPont's total freight spend for these commodities.

The principal difference in the market dominance analysis between DFE and DME is that all of the DFE issue movements are captive to NS at the destination, whereas all of the DME issue movements are captive at the origin. However, this is a distinction without significance because the inability to transload DFE eliminates the only potential form of alternative transportation.

Per the Board's DMIR decision, direct trucking to the customer is not alternative transportation for the movement to which the challenged NS rates apply, which is just the transportation segment from the interchange to the destination. Moreover, even if direct trucking did constitute alternative transportation, the direct trucking rates range from {{ }} higher than the through rail rates.[177]

Finally, the rate history for Lane B-73 reveals extensive abuse of NS market power. Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the

[176] See Dup. Op. Workpaper "Supply Chain Risk Mitigation Project" at 3, 8, 10, in the "DME" folder.. The title of this document refers to "152A," which is DFE.

[177] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

change in rates for the issue movements from the later of 2007 or the first DuPont rail movement in each lane. Since 2007, the through rate on Lane B-73 has increased {[redacted]}. Since 2009, when NS and UP began pricing on a Rule 11 basis, the NS rate has increased by {[redacted]}, while the UP rate has increased just {{[redacted]}}. These extraordinary NS rate increases have not been accompanied by any loss of traffic to trucks,[178] which is strong evidence of market dominance.[179]

In summary, NS possesses market dominance over all of the issue DFE movements because:

- DuPont is captive to NS at the issue destinations.
- In order to ship by trucks, DuPont would have to modify its distribution network for direct shipping to end-users, rather than distributors, by adding significant infrastructure, equipment, and personnel, at a cost exceeding {{[redacted]}}.
- DFE is not authorized by the U.S. Coast Guard for barge transportation; there are no barge terminals capable of transloading DFE; and no barges currently exist for transporting DFE.
- DFE is a highly hazardous material that requires highly specialized handling procedures and should be handled as little as possible while in transit.
- DFE cannot be transloaded, except at facilities that are especially equipped to handle both pressurized and flammable products, and have the training and equipment necessary to preserve product integrity. Very few commercial facilities exist that can or will handle DFE. Because the destinations for both of the issue DFE movements are such specialized facilities operated by distributors that purchases the DFE and resell it to end-users, it would not make sense to inject another such facility between DuPont and its customer, even if such a facility existed.
- Direct trucking costs from origin to destination are significantly higher than rail costs.
- DMIR precludes the Board from considering direct trucking alternatives because the DuPont plant origin is different from the NS interchange, which is the origin covered by the challenged rates.

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[178] See Dup. Op. Workpaper "DFE Truck Shipments" in the "DFE" folder.

[179] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

m. Dimethyl Formamide[180]

DuPont has challenged three NS rates for Dimethyl Formamide ("DMF") from Belle, WV to five destinations in the following case lanes:[181]

Lane #	Origin	Interchange	Destination	Customer
B-4	Belle, WV	E. St. Louis, IL	Brownsville, TX	Quimica Delta
B-9	Belle, WV	Streeter, IL	City of Commerce, CA	Univar USA
B-21	Belle, WV	E. St. Louis, IL	Laredo, TX	Quimica Delta
B-29	Belle, WV	Chicago, IL	St. Paul, MN	Univar USA
B-35	Belle, WV	E. St. Louis, IL	Strang, TX	South Coast Terminal

DuPont is captive to NS at the origin in all of these lanes. Lanes B-4 and B-21 are shipments to the same DuPont customer location in Mexico; the different destinations in the above chart reflect different border crossings. The challenged NS rate, however, is the same from Belle to the East St. Louis interchange regardless of the connecting rail segment route.

DMF is a Class 3 flammable hazardous material.[182] It is a highly versatile solvent that is used in applications such as pharmaceuticals, electronics, and films.[183] DMF is hygroscopic, which means that it absorbs moisture from the atmosphere.[184] The less it is handled, the drier it stays. In addition, DMF must be handled and stored using a closed nitrogen system to maintain standard technical grade specification.

DuPont is the last producer of DMF in North America. All of its competition is from foreign imports, especially from Saudi Arabia. DuPont has significant opportunities to sell DMF to purchasers in the Gulf Coast region and Mexico, but needs cooperation from its rail partners to

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[180] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Jeff Jirak, Global Business Manager Methylamines.

[181] There are just three rates for five movements because three movements are NS bottleneck segments from the same origin to the same rail interchange point.

[182] See Dup. Op. Workpaper "DMF MSDS" in the "DMF" folder.

[183] See Dup. Op. Workpaper "DMF PUSH" at 3-14.

[184] Id. at 3, 32.

compete against imported DMF. {[redacted]}

DuPont produces DMF at Belle, WV, in production campaigns that alternate with the production of monomethyl formamide ("MMF"), which is the issue commodity in Lane B-37. DuPont can produce either DMF or MMF, but not both simultaneously. DuPont has storage facilities for DMF at Belle in order to maintain an inventory during MMF production campaigns. More time is dedicated to DMF production campaigns than to MMF campaigns, because DMF is sold in greater volumes.

DuPont has just a handful of customers that receive DMF by rail, and all of those destinations are in this case. DuPont currently operates a dedicated rail fleet of 22 tank cars to handle this issue traffic. Although the vast majority of DMF is shipped from Belle by truck, trucks are not cost-effective for the issue movements.

Lanes B-4 and B-21 are cross-border shipments to the same customer in Mexico, but over different border crossings. As noted above, {[redacted]} NS has increased its rates so high {[redacted]}[185] that direct trucking from Belle, WV all the way to Mexico actually has become less costly, even though the distance from Belle just to the Mexican border is 1500 miles. Although DuPont tried shipping DMF to this customer by truck, it could not compete and the customer did not like receiving trucks.[186] This is a perfect example of NS pricing up to a much higher cost alternative, not to an effective competitive alternative. See DuPont (Plastics), slip op. at 7-8 ("A carrier

[185] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[186] See Dup. Op. Workpaper "DMF Truck Shipments" in the "DMF" folder.

possessing market power might set its rates so high that it would begin to lose business to a higher-cost alternative (such as a trucking company)."). See also FMC, 4 STB at 718.

Similarly, trucks are not competitive with rail for transportation of DMF on the remaining issue movements. Lane B-9 has a truck rate that is {{[redacted]}} higher than rail; Lane B-29 has a truck rate that is {{[redacted]}} higher; and Lane B-35 has a truck rate that is {{[redacted]}} higher.[187] This differential is substantial even after NS rate increases of {[redacted]} since just 2009.[188] Finally, per the Board's DMIR decision, directly trucking the issue movements from the Belle origin to the various destinations is not alternative transportation for the movements to which the challenged NS rates apply, which is from Belle to various interchanges with connecting carriers. DMIR, 4 STB at 292 (n. 13) and 293.

Transloading around the NS at Belle is not a practical alternative. {{[redacted]}}[189] The impracticality of transloading also is evidenced by the fact that, as discussed above, DuPont attempted to truck directly to its customer in Mexico, rather than transload, when NS rates for Lanes B-4 and 21 first became non-competitive, despite a distance of more than 1500 miles just to reach the Mexican border.

Furthermore, transloading would require DuPont to load four trucks into a single railcar. Where it takes 2-3 hours to load/unload a single truck (depending on whether using a pressure or pump transfer system), a single railcar requires just 4 hours. Thus, it would take 8-12 hours to load four trucks with DMF at Belle and another 8-12 hours to transload DMF from those four

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[187] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[188] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder). While NS has taken these sizeable rate increases since 2009, the connecting carriers have increased their rate factors by {{[redacted]}}.

[189] {{[redacted]}}

trucks into a single railcar, for a total of 16-24 hours. Contrast that with just 4 hours to directly load a single railcar.

Moreover, the bulk terminal must have the proper pumps and a nitrogen blanketing system.[190] Because of the hygroscopic nature of DMF, transloading is difficult during periods of high humidity and precipitation, especially without a closed nitrogen system. This means that trucks could incur demurrage charges at a bulk terminal if they are unable to promptly discharge their DMF loads and that customer deliveries could be delayed. Furthermore, because a key raw material in DMF is anhydrous di-methylamine, DMF has a fish-like odor that makes transloading undesirable.[191]

Finally, barge is not an option because Belle does not have a transfer system or storage capacity to load barges with DMF. Nor would it make economic sense for DuPont to invest over {{[redacted]}} to build that infrastructure for the issue traffic.[192] The smallest barges hold approximately 2.2 million pounds. The largest volume issue movement, Lane B-29, would fill approximately {[redacted]} barges annually. But the customer in this lane is in St. Paul, MN, which cannot receive barges. Nor does the customer have the storage capacity to receive a full barge at one time. The same facts are true of the other issue destinations that purchase substantially smaller volumes of DMF from DuPont. Therefore, in addition to building additional infrastructure at Belle to load barges, DuPont also would have to invest in barge terminal facilities for unloading the barges into storage tanks, and holding the DMF until purchased in smaller volumes by each case customer.

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[190] This equipment includes a stainless steel pump (centrifugal or diaphragm), Teflon or EPR gaskets and elastomers, Teflon lined or Stainless Steel hoses, and a Nitrogen system to prevent oxygen from entering the container during transfer operation.

[191] See the discussion of Anhydrous Methylamines in Part II-B-2.p.

[192] See Dup. Op. Workpaper "Barge-Truck Infrastructure Estimates" in the "AHM" folder.

After quite a lengthy search, DuPont has identified a barge terminal, operated by {[redacted]} in Joliet, IL, that is able and willing to handle DMF and that arguably might satisfy the DMIR requirements for the bottleneck segments in Lanes B-9 and 29. NS interchanges the Lane B-9 issue movement with BNSF at Streator, IL, and the B-29 issue movement with BNSF at Chicago, IL. The {[redacted]} terminal is served by BNSF and, because it is about 60 miles, in opposite directions, from both Chicago and Streator, it arguably could be sufficiently close to both interchanges to be considered the same destination as the issue movements.[193] Also, the {[redacted]} terminal is the only location where the smaller volume on Lane B-9 can be combined with the larger volume on Lane B-29 to justify even considering a barge alternative for Lane B-9.

DuPont has obtained rates from {[redacted]}, and BNSF for handling DMF over Lanes B-9 and 29. The round-trip barge rate from Belle to Joliet would be {{[redacted]}}, which is {{[redacted]}} per net ton.[194] {[redacted]} has provided DuPont with a "rough estimate" for handling DMF at Joliet.[195] The storage tank rental would be {{[redacted]}} and there would be a security surcharge of {{[redacted]}} per year. Assuming 3 barge shipments annually at 1250 tons per barge, that equates to {{[redacted]}} per net ton, plus additional services that would be provided {{[redacted]}}, which cannot be reduced to a predictable value per net ton because DuPont has no actual experience with barging or transloading DMF. Because the interchange locations with the connecting rail carriers are not exactly the same, the BNSF rates also are different, which is a significant reason why the Board

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[193] By presenting cost evidence of this barge alternative for Lanes B-9 and 29, DuPont does not concede that a rail-barge interchange that is 60 miles from the actual destination of the issue movement comports with DMIR. DuPont submits that it does not because, as explained below, the connecting carrier's rate is different.

[194] {{[redacted]}}

[195] {{[redacted]}}

should reject this alternative under the DMIR precedent. The BNSF rate is {{[redacted]}} on Lane B-9, and {{[redacted]}} on Lane B-29, which translates to {{[redacted]}} per net ton, respectively, based upon 96 tons per railcar.[196]

The combined barge and rail rate for Lane B-9 is {{[redacted]}} per net ton, which is {{[redacted]}} less than the through rail rate of {{[redacted]}}.[197] The combined barge and rail rate for Lane B-29 is {{[redacted]}} per net ton, which also is {{[redacted]}} less than the through rail rate of {{[redacted]}}.[198] Although the rates for a barge-rail transload alternative are below the through rail rates, this is before considering the {{[redacted]}} of infrastructure investments required in order to load DMF into barges at the Belle, WV origin or the various pass-through terminal costs, {{[redacted]}}, that cannot be adequately determined because DuPont has no actual experience with barging or transloading DMF.

In summary, NS possesses market dominance over all of the issue DMF movements because:

- DuPont is captive to NS at the Belle, WV origin.
- Direct trucking costs are prohibitively expensive.
- Transloading from trucks into railcars is not practical because of the much longer loading times, the need for specialized equipment, the fish-like odor, and the lack of a bulk terminal near Belle that will handle DMF.
- In order to load barges at Belle, DuPont would have to construct {{[redacted]}} of infrastructure.

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[196] See Dup. Op. Workpaper "BNSF Rates" in the "DMF" folder. The rate per net ton is based on a 96 ton railcar capacity.

[197] {{[redacted]}}. The through rail rate is the 12/1/11 rate in Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[198] {{[redacted]}}. The through rail rate is the 12/1/11 rate in Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

- Only when combined, Lanes B-9 and 29 have sufficient volume to justify consideration of a barge alternative. But because the combined barge-rail rates are just {{[redacted]}} below the through rail rate before considering the additional infrastructure investment required at Belle and the various pass-through terminal costs {{[redacted]}}, the barge-rail alternative is not an effective constraint upon NS rates.

- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

n. Dimethyl Sulfate[199]

DuPont has challenged two NS rates for Dimethyl Sulfate ("DMS") from Belle, WV to three destinations in the following case lanes:[200]

Lane #	Origin	Interchange	Destination	Customer
B-20	Belle, WV	Chicago, IL	Janesville, WI	Evonik
B-22	Belle, WV	E. St. Louis, IL	Laredo, TX	Quimikao
B-27	Belle, WV	Chicago, IL	Millsdale, IL	Stepan Co.

DuPont is captive to NS at the origin in all of these lanes. The destination in Lane B-22 is the border crossing for rail shipments ultimately destined to Guadalajara, Mexico. All three of the case lane customers use DMS to produce fabric softener. DuPont, which is the only producer of DMS in North America, produces {[redacted]} million pounds annually.

DMS is a Class 6.1, Subclass 8, TIH material.[201] It is one of the most hazardous materials that DuPont produces at Belle. According to the MSDS,:

> This compound is extremely hazardous because of its lack of warning properties and delayed biological effects. It may cause burns of the skin, eyes, and mucous membranes. Eye damage may be permanent. Effects may be delayed occurring hours after exposure. Skin permeation may occur in toxic amounts. Both the fumes and the liquid may produce severe irritation. Inhalation may cause irritation of the nose, throat and lungs. Death may occur from overexposure. Prolonged exposures may cause liver and kidney effects. DuPont controls this compound as a potential carcinogen.[202]

Its hazardous properties are compounded by the fact that DMS has no odor, looks like water, and has analgesic effects, which means that someone may not know they have been exposed until

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[199] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Jeff Jirak, Global Business Manager Methylamines.

[200] There are just two rates for three movements because two of the movements are NS bottleneck segments from the same origin to the same interchange point.

[201] See Dup. Op. Workpaper "DMS MSDS" and "DMS PUSH" at 16, both in the "DMS" folder.

[202] Id. at 2.

several hours after the fact.[203] Therefore, DMS must be handled with chemical suits, hoods, and breathing equipment.[204]

Because of these significant hazards, DuPont has special loading facilities for DMS at Belle. All DMS is handled in a secured area with restricted access. There is one truck loading spot and one railcar loading spot in a covered loading area. DuPont can load a truck in approximately 2 hours and a railcar in about 8 hours.

The U.S. Department of Transportation only permits DMS to be transported by truck pursuant to a special permit.[205] When transporting by truck, DuPont uses highly specialized dedicated equipment. The type MC-312, which are currently designated as DOT-412, trailers are stainless steel, contain internal pumps, have special electrical systems, and must carry decontamination material and breathing apparatus. The cost to purchase each trailer is approximately $245,000, plus $25,000 for the internal pump.[206] DuPont currently owns five such trailers that it uses to transport DMS. All bulk truck transportation of DMS is performed by Sentinel Transportation using team drivers, in order to ensure adequate safety precautions. Sentinel is a private motor carrier, co-owned by DuPont and ConocoPhillips, that provides trucking services only for them.

DuPont conducts routine safety inspections of its customers' facilities to ensure that they are trained and equipped to handle DMS safely. Before DuPont will ship DMS to a customer by truck, it verifies that the customer has the ability to receive DMS by truck.[207] Stepan Co., in

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[203] See Dup. Op. Workpaper "DMS MSDS" at 2, and "DMS PUSH" at 9, in the "DMS" folder.

[204] See Dup. Op. Workpaper "DMS MSDS" at 6-7, and "DMS PUSH" at 10-11, in the "DMS" folder.

[205] See Dup. Op. Workpaper "DMS Special Permit" in the "DMS" folder.

[206] See Dup. Op. Workpaper "DMS Trailer Quote" in the "DMS" folder.

[207] See Dup. Op. Workpaper "DMS PUSH" at 5, 21-22, in the "DMS" folder.

Lane B-27, cannot unload trucks.[208] This is validated by the fact that this customer has never received a single truck shipment from DuPont.[209] While the other two case lane customers are capable of unloading trucks, {{[redacted]}}[210] Regardless, direct trucking to the customer is not alternate transportation for the movement to which the challenged NS rates apply, which is transportation from the origin to the interchange with connecting contract rail carriers. DMIR, 4 STB at 292 (n. 13) and 293.

Even if the DMIR constraint did not apply, direct trucking rates are not competitive constraints upon NS rail rates despite being lower than rail rates for two of the three issue movements. As noted above, the customer in Lane B-27 cannot receive trucks despite a {{[redacted]}} lower truck rate.[211] The truck rate in Lane B-22 is {{[redacted]}} higher than the rail rate.[212] Finally, although the direct truck rate is {{[redacted]}} lower in Lane B-20, that is for a 579-mile road movement of this TIH commodity that is clearly a higher cost alternative because of the distance.[213]

Indeed, to the extent that there are alternative transportation options to NS that are comparably-priced or even less costly, the most effective way for NS to avoid its common carrier obligation is to price itself out of the transportation market for TIH materials. That appears to be what NS is doing by increasing its rates in these lanes by {[redacted]} since just 2009, while the

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[208] See Dup. Op. Workpaper "Stepan e-mail" in the "DMS" folder.

[209] See Dup. Op. Workpaper "DMS Truck Shipments" in the "DMS" folder. Although this workpaper shows 1 truck each in January 2007 and March 2008, those were shipments of portable tanks that were miscoded as tank truck shipments.

[210] {{[redacted]}}

[211] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[212] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[213] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

connecting carriers on these routes have increased their rate factors by just {{[redacted]}}.[214] The specific details for each DMS issue movement are summarized in the following chart:

Lane #	Through Rate Increase Since …	NS Rule 11 Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Truck Premium
B-20	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-22	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-27	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}

Clearly, most of the through rate increases since 2007 have occurred in the last two years as a consequence of extraordinary NS rate increases. These extraordinary NS rate increases, which have reversed the historical relationship between truck and rail rates by making trucks less expensive than rail in Lanes B-20 and B-27, have not been accompanied by any loss of traffic to trucks, which is strong evidence of market dominance.[215] Furthermore, the fact that truck rates are still {{[redacted]}} higher, after NS has increased its rate in Lane B-22 by {[redacted]} since 2009, is compelling evidence that NS does not feel constrained by truck competition.

Although DuPont ships DMS by both truck and rail, it never transloads DMS, because of the handling requirements and the consequences of a spill. Moreover, there are no non-NS bulk terminals that will transload TIH commodities anywhere in the vicinity of Belle.[216] Therefore, transloading around NS at the origin is not an option.

Finally, barge is not an option because DuPont does not have the infrastructure (*e.g.* piping and storage tanks) to load barges. Also, DuPont would have to obtain U.S. Coast Guard review and approval before transporting by barge since DMS is not currently approved for barge

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[214] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[215] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[216] {{[redacted]}}

transportation. Moreover, because the issue destinations are not on navigable waterways, barges would have to be transloaded. Because DMS is not currently barged, there are no terminals equipped for transloading and it is highly questionable whether any terminal would be willing to do so for the same reasons bulk truck terminals will not transload DMS. Furthermore, because DMS is a TIH material, DuPont would not transload it.

In summary, NS possesses market dominance over all of the issue DMS movements because:

- DuPont is captive to NS at the Belle, WV origin.
- DMS is a TIH material.
- The case customers either cannot receive bulk truck shipments or prefer rail shipments because of the hazardous nature of DMS.
- Transloading from trucks or barges does not occur because of the hazardous nature of DMS and the lack of bulk terminals able or willing to transload it.
- Truck rates are much higher for Lane B-22.
- Recent substantial rate increases by NS indicate that it is pricing up to higher cost alternatives in all three lanes.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

o. Lime[217]

DuPont has challenged the NS rate for lime shipments on Lane B-96 from Danville, Virginia to Ampthill, Virginia. NS transports the lime from Danville to Petersburg, Virginia, where it interchanges the railcars with CSX Transportation, Inc. ("CSXT"), which delivers the lime to Ampthill. DuPont is captive to NS at the Danville origin.

Lime is calcium hydroxide {{[redacted]}}

Lime has multiple characteristics that pose transportation challenges. First, it is hygroscopic and will calcify and bridge when it absorbs water, like concrete. Once lime calcifies and bridges, it must be chiseled free of the container in which it sits. Second, packing occurs naturally during shipment, even outside of the presence of moisture. If dense packing occurs, special equipment is necessary to unload the lime. DuPont does not have the equipment necessary to unload calcified or densely-packed lime {{[redacted]}}. {{[redacted]}}

[217] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Michael Faciszewski, Contract Manufacturing Manager.

[218] {{[redacted]}}

[redacted]}}, depending on the severity of the calcification and packing, the lime may no longer meet the specifications for its grade and may not be useable in the applications for which it was produced.

DuPont's lime is produced at Danville {{[redacted]}}. Upon production, the lime is placed into a storage silo that holds approximately {{[redacted]}}, or the capacity of {{[redacted]}}. {{[redacted]}}.

From the storage silo, the lime is conveyed {{[redacted]}}, to the loading facilities. The loading facilities comprise {{[redacted]}}. Although the origin facility is not designed for loading trucks, in emergency situations, trucks can be backed through the site and into the railcar loading spot, where one railcar loading silo is specially configured to also load trucks. DuPont has engaged Sentinel Transportation {{[redacted]}} and provide transportation for the infrequent emergency truck shipment. Truck loading at the silo that is specially-configured for trucks takes approximately {{[redacted]}}. {{[redacted]}} cannot increase the volume of trucks that could be loaded at the facility by also configuring the other railcar loading silos for use with trucks. For a truck to load at any one of the silos, it must park in an orientation that places it underneath all of the silos, blocking other trucks from loading simultaneously. Even if simultaneous truck loading

could occur at the origin, the facility is too small to accommodate additional truck traffic, which must back through the site to the loading spot. Neither can DuPont require {{[redacted]}} to make the necessary modifications to support simultaneous truck loading.

Truck. Trucks are impractical for the movement of lime on Lane B-96. Direct trucking is impractical because the destination, Ampthill, has limited storage capacity and must store its lime inventory in the bulk containers in which it was shipped. DuPont strives to maintain {{[redacted]}} of inventory at Ampthill and unloads a railcar {{[redacted]}} on average. However, DuPont's Ampthill facility only has {{[redacted]}} storage for {[redacted]} of lime, {{[redacted]}} to support its daily consumption of approximately {{[redacted]}},[219] of lime per day. To store the remaining {{[redacted]}} of inventory, DuPont uses its dedicated fleet of {{[redacted]}} railcars that operate in rotation over Lane B-96.[220] If DuPont were to use trailers for storage, it would need to maintain a fleet of approximately {{[redacted]}} trailers in addition to those used for transporting the lime. At a lease cost of {{[redacted]}} per trailer per month,[221] that would amount to {{[redacted]}} per month. Considering that DuPont owns its railcars outright, using trailers for storage would cost a significant premium over railcars and strand DuPont's railcar investment.

Trucking to Ampthill also suffers from other obstacles. DuPont cannot truck {{[redacted]}}. Reconfiguration would require alterations to the process equipment already in place and would cost {{[redacted]

[219] The average truckload of lime is {{[redacted]}}. See Dup. Op. Workpaper "Direct Truck Costs" in the "Lime" folder.

[220] In 2008, 2009 and 2010, DuPont shipped just {{[redacted]}}, respectively, over Lane B-96, which is {{[redacted]}} of the total volume transported in each year. Dup. Op. Workpaper "Lime Truck Shipments" in the "Lime" folder.

[221] Dup. Op. Workpaper "Sentinel Transportation Contract Exhibit B," at 6, in "Lime" folder.

[redacted]}}. In addition, {{[redacted]}} would need to upgrade its {{[redacted]}}. As mentioned above, DuPont cannot {{[redacted]}} make this modification. Moreover, direct trucking to Ampthill is not alternative transportation per the Board's DMIR decision because the challenged NS rate applies only from the Danville origin to the interchange point.

It is also impractical to truck from the Danville origin because the facility does not have the infrastructure to support a switch to trucks. As previously mentioned, it takes approximately {{[redacted]}} to load a truck and trucks must be backed into the facility. Further, dedicated truck loading spots do not exist—the truck will have to be loaded at a converted rail spot. Also, a switch to trucks would require {{[redacted]}} to upgrade its facilities to load trucks; and require DuPont to strand its railcar investment and make a new investment in four trailers for every railcar.

Transloading. Even if truck loading at {{[redacted]}} was feasible, the lime would have to be transloaded to CSX for delivery to Ampthill in railcars, since Ampthill has minimal storage capability. {{[redacted]}}. Thus, any trucking on Lane B-96 is limited to emergency bulk truck shipments.

The emergency nature of truck shipments and the impracticality of transporting the lime by truck are illustrated by the lack of truck movements of the lime. From 2006-2010, DuPont moved {[redacted]} lime shipments, of which only {{[redacted]}}.[222]

[222] Dup. Op. Workpaper "Lime Truck Shipments" in the "Lime" folder.

In summary, NS possesses market dominance over the lime movement because:

- DuPont is captive to NS at the Danville, Virginia origin.
- DuPont's supplier would have to modify its infrastructure at its Danville facility to support trucks.
- Lime cannot be transloaded, {{ [redacted] }}.
- DuPont's Ampthill facility does not have adequate fixed-storage; the cost of storing lime at Ampthill in bulk trucks exceeds the cost of storing the lime in railcars; and the cost of building fixed storage at Ampthill exceeds the cost of storing the lime in railcars.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

p. Anhydrous Methylamines[223]

DuPont has challenged eight NS rates for transporting Anhydrous Methylamines ("AHM") from Belle, WV to 19 destinations in the following case lanes:[224]

Lane #	Origin	Interchange	Destination	Customer
A-9	Belle, WV	NS-Direct	Wyandotte, MI	Taminco
B-5	Belle, WV	Chicago, IL	Burley, ID	Tessenderlo Kerley
B-6	Belle, WV	E. St. Louis, IL	Cadet, MO	Buckman Labs
B-10	Belle, WV	E. St. Louis, IL	Youens (Conroe), TX	Huntsman
B-11	Belle, WV	E. St. Louis, IL	Corsicana, TX	Corsicana Technologies
B-14	Belle, WV	E. St. Louis, IL	Ethyl, AR	Albemarle
B-15	Belle, WV	Chicago, IL	Finley, WA	GemChem f/k/a Amvac
B-18	Belle, WV	New Orleans, LA	Garyville, LA	Nalco Company
B-19	Belle, WV	New Orleans, LA	Geismar, LA	BASF
B-24	Belle, WV	Chicago, IL	Los Angeles, CA	GemChem f/k/a Amvac
B-32	Belle, WV	New Orleans, LA	St. Gabriel, LA	Taminco
B-36	Belle, WV	E. St. Louis, IL	Strang, TX	DuPont (internal movement)
B-39	Belle, WV	E. St. Louis, IL	Texas City, TX	Int'l Specialty Products
B-40	Belle, WV	E. St. Louis, IL	Verona, MO	BCP Ingredients
B-41	Belle, WV	Kansas City, MO	W. Memphis, AR	BASF
B-43	Belle, WV	E. St. Louis, IL	Wichita, KS	Air Products
B-90	Belle, WV	Atlanta, GA	Port Bienville, MS	Polychemie, Inc.
B-91	Belle, WV	Cincinnati, OH	Theodore, AL	SKW Quab Chemicals
B-121	Belle, WV	Logansport, IN	Mapleton, IL	Lonza, Inc.

DuPont is captive to NS at the origin for each of these movements, and also at the destination for Lane A-9.

AHMs are a Class 2.1 flammable gas.[225] They are both corrosive and flammable and they have a very strong fish-like odor.[226] Although AHMs are not a TIH material, NS classifies them as a Highly Hazardous Material ("HHM"), which is an intermediate category used by NS to

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[223] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Jeff Jirak, Global Business Manager Methylamines.

[224] Although there are 19 lanes, there are only eight challenged rates because the NS segment for many of the movements is from the same origin to the same interchange point.

[225] See Dup. Op. Workpapers "AHM MSDS" and "Methylamines Handling and Storage" at 5, both in the "AHMs" folder.

[226] See Dup. Op. Workpaper "Methylamines Handling and Storage" at 4, in the "AHMs" folder.

distinguish commodities that are not a TIH material, but that NS considers more than simply hazardous. It is not clear to DuPont, however, exactly what criteria NS uses to distinguish between a hazardous material and a HHM.

DuPont produces mono-, di-, and tri-methylamines, which all have the same transportation characteristics and STCC, and for which NS applies the same rate. DuPont addresses market dominance for all three anhydrous methylamines under the single category of AHM. AHMs are used in herbicides, pesticides, solvents, explosives, and pharmaceuticals.[227] AHMs are interchangeable with another case commodity, Aqueous Methylamines, with the only difference being that aqueous methylamines are a diluted form of AHMs.

DuPont's Belle facility is one of just three domestic producers of both anhydrous and aqueous methylamines. The other producers are Taminco at Pensacola, FL, and BASF at Geismar, LA. The product also is imported into the U.S. from Mexico and China.

For transportation, AHM's are compressed into clear, water-white liquid and shipped in pressurized railcars, tank trucks, or ISO tanks. Before DuPont will ship AHMs to a customer by truck or ISO tank, however, DuPont verifies that the customer has the ability to receive trucks. In 2010, approximately {[redacted]} was shipped via rail and just {[redacted]} by truck. Thus, trucks accounted for just 15% of total shipments in a year with an unusually large number of truck shipments.[228] Moreover, nearly half of those truck shipments

[227] See Dup. Op. Workpaper "Methylamines Handling and Storage" at 2, in the "AHMs" folder.

[228] In 2010, DuPont experienced a 23% spike in AHM truck shipments from Belle due to production shutdowns caused by four separate force majeure events: (1) barge supply deliveries of raw materials were disrupted by flooding; (2) DuPont had an accidental release of methanol into the river; (3) steam issues and thunderstorms disrupted production in the Summer; and (4) a fatality at the plant resulted in a month-long shut down to conduct safety reviews. Because of these production disruptions, DuPont had to ration its production across its customer base, which entailed shipping to customers on an expedited basis using faster truck service whenever a customer was threatened with a plant shut down due to an AHM shortage.

were to a single destination, {[redacted]}, which does not have rail access.[229] None of the DuPont truck shipments are transloaded; they are all either direct rail or direct truck shipments.

DuPont has dedicated fleets of 124 railcars and 12 tank trailers for AHM shipments. DuPont will not use trailers provided by commercial motor carriers. Both the rail and motor carrier equipment is special pressurized tanks. DuPont uses DOT specification 105 and 112 tank cars with thermal protection and DOT specification MC-330 and 331 tank trucks with special gaskets and safety systems to meet HM-225A requirements.[230] Due to the hazardous traits of AHMs and equipment constraints, DuPont uses team drivers for all AHM truck shipments.

Direct Trucking. The magnitude of NS rate increases over the past few years has made direct trucking cheaper than rail for 14 of the 19 issue AHM movements.[231] In other words, NS is pricing up to a higher cost competitor. The single most significant illustration of this fact is the distance at which trucks are less expensive for the issue movements. Except for Lane A-9 (which is 344 miles), the distance for all of the lower priced AHM truck movements range from a low of 520 up to 1058 road miles.[232] Indeed, 6 of the 14 AHM movements with lower truck rates involve distances above 900 miles.[233] Just as telling, all 5 of the AHM movements with higher truck prices exceed 1100 road miles, and two of those lanes have truck rates that are higher by less than 2%.[234] In other words, NS has priced the issue AHM movements so high that there is a clearly delineated threshold of 1100 miles in the NS rate structure where trucks are the

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[229] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHMs" folder.

[230] See Dup. Op. Workpaper "Methylamines Handling and Storage" at 5, in the "AHMs" folder.

[231] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). Those are Lanes A-9 and B-6, B-11, 14, 18, 19, 32, 36, 40, 41, 43, 90, 91, and 121.

[232] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). Those are Lanes B-6, 11, 14, 18, 19, 32, 36, 40, 41, 43, 90, 91, and 120.

[233] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). Those are Lanes B-11, 18, 19, 32, 36, and 43.

[234] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). Those are Lanes B-5, 10, 15, 24, and 39.

lower priced option. It simply is not credible for NS to claim that truck shipments, which require more labor and equipment and have higher fuel costs than rail, are an effective competitive alternative to rail over such long distances.

The anomaly of lower truck rates is a recent phenomenon attributable to very significant NS rate increases over just the past few years. Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the change in rates for the issue movements from the later of 2007 or the first DuPont rail movement in each lane. Since 2007, the combined through rate for all but one AHM issue movement has increased between {{[redacted]}}, with 13 of those lanes experiencing increases greater than 100%. Since 2009, when NS and its connecting carriers began pricing on a Rule 11 basis, the NS rate has increased between {[redacted]} on all but two lanes, while the connecting carrier rates have increased by no more than {{[redacted]}}. The specific details for each AHM issue movement are summarized in the following chart:

Lane #	Through Rate Increase Since …	NS Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Truck Premium
A-9	NS Direct	{[redacted]}	NS-Direct	{{[redacted]}}
B-5	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-6	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-10	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-11	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-14	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-15	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-18	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-19	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-24	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-32	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-36	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-39	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-40	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-41	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-43	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-90	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-91	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}
B-121	{{[redacted]}}	{[redacted]}	{{[redacted]}}	{{[redacted]}}

Clearly, most of the through rate increases since 2007 have occurred in the last two years as a consequence of extraordinary NS rate increases. These extraordinary NS rate increases, which have reversed the historical relationship of truck and rail rates by making trucks less expensive than rail for most of the AHM issue movements, have not been accompanied by any loss of traffic to trucks, which is strong evidence of market dominance.[235] Furthermore, the fact that NS has increased rates significantly in lanes where its rates already were higher than truck rates is a strong indicator that NS does not feel constrained by truck competition.

Trucks have not been used significantly, if at all, for any of the issue AHM movements. , For each year from 2006-2010, 13 of the 19 issue destinations did not receive a single truck of AHM from DuPont.[236] The other 6 issue destinations received *de minimis* trucks, consistent with a few emergency movements where rail could not deliver the product fast enough for the customers' needs.

Regardless of the foregoing facts, direct trucking is not an option for any of the issue AHM movements, except Lane A-9, because DuPont has challenged NS bottleneck segment rates from Belle to various interchange points. Pursuant to the Board's decision in DMIR, 4 STB at 292 (n. 13) and 293, direct trucking to the customer is not alternate transportation for the movements to which the challenged NS rates apply.

Finally, direct trucking is not feasible due to the lack of truck loading capacity at Belle, as described in the following discussion of transloading.

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[235] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[236] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

Transloading. In order to by-pass NS at the Belle origin for each issue movement of AHMs, DuPont would have to load its AHMs into trucks at Belle and transport them to a nearby bulk terminal on another railroad. There are two principal reasons why this is not a viable option. Belle lacks the capacity to load sufficient trucks and there is no bulk terminal in the vicinity of Belle that is able or willing to transload AHMs.

The principal and dispositive factor is the absence of any bulk terminal near Belle that would handle AHMs.[237] Indeed, DuPont is not aware of any bulk terminal in the country that will transload AHMs. A bulk terminal must provide a closed transfer system and a large capacity spill recovery system to ensure that none of the product escapes. During the transload process, the tank also must be vented or scrubbed. Even with these precautions, the product will omit a strong fish-like odor that is environmentally unacceptable.[238] The extensive precautions and requirements associated with handling AHMs and the noxious odor are a major reason why commercial bulk terminals will not transload these commodities.[239] This is especially true if the terminal is located near any population center.

DuPont truck shipments of AHMs to Moses, WA exemplify the extreme challenge with transloading. This is a customer without rail access. Therefore, DuPont currently trucks AHMs to this customer across the country from Belle, WV, because there simply is no other alternative. These truck shipments account for nearly half of all DuPont's truck shipments of AHM. In an effort to reduce transportation costs, DuPont searched in vain for a transloading facility that

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[237] {{ [redacted] }}

[238] In fact, anhydrous tri-methylamine is so pungent that just two drops on the 50-yard line of a major football stadium could be smelled by everyone in the stadium. A DuPont employee was ordered to leave a commercial aircraft after spending the day around anhydrous tri-methylamine because his clothes reeked of the commodity. Many DuPont employees have complained that they had to throw away clothing after exposure to AHMs.

[239] See Dup. Op. Workpaper "Methylamines Handling and Storage" at 5-16, in the "AHM" folder, for an overview of the precautions and requirements associated with handling AHMs.

would permit DuPont to rail most of the distance to Moses and then truck from the bulk terminal to this customer.[240] Because DuPont could not locate such a bulk terminal that would or could handle AHMs, DuPont was forced to continue trucking directly from Belle.

Even if a bulk terminal would handle AHMs, Belle has only one truck loading rack for AHMs that also is used to load dimethyl ether ("DME"), which is another issue commodity in this proceeding. The total time to load a truck with AHMs is 4-6 hours. Although the actual transfer of product requires 2.5-3.0 hours, there is a significant amount of pre- and post-loading work that occurs while the truck occupies the loading bay. On average, Belle can load five trucks in 24 hours, roughly the equivalent volume of a single railcar. But this loading bay also is shared with DME, which has similar loading requirements, as explained in DuPont's DME market dominance evidence.

At just 38,000 pounds per truck, DuPont's {[redacted]} million pounds of AHM rail shipments in 2010 would have required almost {[redacted]} additional truck shipments to handle. That equals over {[redacted]} additional trucks of AHMs per day, every day of the year. Therefore, DuPont would have to construct an additional loading rack for AHMs, including a truck scale and concrete pads, at a cost of approximately {{[redacted]}}.[241] DuPont also would need to hire at least 5 additional personnel to operate the new truck loading facility 24/7 at an annual cost of {{[redacted]}} per operator.[242] Finally, DuPont would need to purchase approximately {{[redacted]}} additional trucks for its dedicated fleet at a cost of {{[redacted]}} per truck.[243]

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[240] See Dup. Op. Workpaper "Moses Transload" in the "AHMs" folder.

[241] See Dup. Op. Workpaper "BargeTruck Infrastructure Estimates" in the "AHMs" folder. This is based upon recent experience when DuPont upgraded an existing truck loading bay at Belle.

[242] See Dup. Op. Workpaper "Personnel cost" in the "AHMs" folder.

[243] See Dup. Op. Workpaper "AHM Truck Purchase Estimate" in the "AHMs" folder.

Barge. DuPont does not ship AHMs by barge because Belle does not have the infrastructure to load AHMs into barges. Specifically, it lacks both piping and storage. The capacity of even the smallest barge is approximately 2.2 million pounds. Belle has just {{[redacted]}} pounds of storage for anhydrous mono-methylamine; {{[redacted]}} pounds of storage for anhydrous dimethylamine; and less than {{[redacted]}} pounds of storage for anhydrous trimethylamine. This is sufficient to handle current truck and rail volumes, with supplemental storage in railcars, but it is woefully inadequate to store AHMs for barge shipments. The cost of constructing additional storage tanks and piping would be approximately {{[redacted]}}.[244]

Even after adding the necessary infrastructure at Belle, DuPont still must find a way to get AHMs from the barges to the ultimate destinations, which are not barge accessible. None of DuPont's customers purchase AHMs in barge-sized volumes. While some may purchase the equivalent of a barge over the course of a year, they do not receive barge quantities in single shipments, nor would they have the storage capacity in which to unload an entire barge at once. Therefore, DuPont would have to transfer the AHMs from barges into tanks at barge terminals, where DuPont would have to store the AHMs until its customers order smaller quantities for either rail or truck delivery. This adds even more costs to barge transportation and requires DuPont to carry an inventory of AHMs that it does not currently maintain. But, all of the above is moot because DuPont would face the same issues finding barge terminals that would transload AHMs as it has encountered with truck terminals.

[244] See Dup. Op. Workpaper "BargeTruck Infrastructure Estimates" in the "AHMs" folder.

Lane Specific Requirements. In addition to the multiple general factors discussed above, the following customers expressly require rail delivery in their purchase contracts with DuPont:

Case Lanes	Customer Name	Contract Requirement
{{[redacted]}}	{{[redacted]}}	The section titled "Containers" specifies DuPont railcars.[245] There has not been a single truck shipment to these destinations from 2006-10.[246]
{{[redacted]}}	{{[redacted]}}	The sections titled "Quantity" and "Container" specify DuPont railcars.[247] Except for a handful of trucks in 2009 and 2010 due to production issues at Belle, there have been no trucks to this destination from 2006-10.[248]
{{[redacted]}}	{{[redacted]}}	The section titled "Containers" specifies DuPont railcars.[249] There has not been a single truck to this destination from 2006-10.[250]
{{[redacted]}}	{{[redacted]}}	The section titled "Base Price" specifies a railcar price. There is provision for a freight premium for truck shipments, which reflects the fact that trucks historically have been more expensive than rail. The section titled "Containers" refers only to rail.[251] This customer receives all of its tri-methylamine by rail, but its di-methylamine by truck, because it purchases di-methylamine in smaller volumes and has only a small holding tank in which to unload tri-methylamine.[252]
{{[redacted]}}	{{[redacted]}}	The section titled "Base Price" specifies a railcar price for DMA (Dimethylamine, Anhydrous) {{[redacted]}}.[253] This destination received between 0 and 9 truck shipments in each year from 2006-10.[254]
{{[redacted]}}	{{[redacted]}}	The section titled "Base Price" specifies a railcar price for MMA (Monomethylamine, Anhydrous) {{[redacted]}}.[255] There has not

[245] {{[redacted]}}

[246] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[247] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{[redacted]}}

[248] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[249] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{[redacted]}}

[250] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[251] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{[redacted]}}

[252] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[253] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{[redacted]}}

[254] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[255] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{[redacted]}}

		been a single truck shipment to these destinations from 2006-10.[256] The destination in {{ }} physically cannot receive trucks.[257]
{{ }}	{{ }}	The section titled "Containers" specifies railcars.[258] There has not been a single truck to this destination from 2006-10.[259]
{{ }}	{{ }}	The section titled "Containers" specifies railcars.[260] There has not been a single truck to this destination from 2006-10.[261]
{{ }}	{{ }}	The section titled "Base Price" specifies a railcar price for the issue destination.[262] {{ }}.
{{ }}	{{ }}	The section titled "Base Price" specifies a railcar price.[263] There has not been a single truck to this destination from 2006-10.[264]

Although some contracts that price only in railcars refer to trucks in the "Containers" section, that is recognition that DuPont has the flexibility to use trucks when necessary due to exceptional circumstances, but not as a regular matter. In addition to the above lanes that have explicit contract requirements for rail delivery, none of the remaining lanes has received a single truck delivery of AHMs from 2006-10, except Lane B-39, which received just two trucks in 2007.[265] This is compelling evidence that trucks are not an option for DuPont for any of the issue AHM movements.

Most of DuPont's AHM customers also rely upon DuPont railcars for storage. Despite the fact that nearly all of the issue customers have AHM storage tanks at their facilities, their

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[256] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[257] See Dup. Op. Workpaper {{ }} in the "AHM" folder.

[258] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{ }}

[259] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[260] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{ }}

[261] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[262] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{ }}

[263] See Dup. Op. Workpaper Folder "AHMs," "Customer Contracts", {{ }}

[264] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder.

[265] See Dup. Op. Workpaper "AHM Truck Shipments" in the "AHM" folder. Although the data shows four trucks in 2007 on Lane B-91, this customer cannot receive trucks. See Dup. Op. Workpaper "SKW e-mail." Those trucks were used to depressurize and clean a leaking railcar.

average hold time for the loaded railcars generally ranged from a few weeks up to as many as 15 weeks in 2009 and 2010.[266] If these customers were able to unload AHM from railcars into their own storage tanks promptly upon receipt of loaded railcars, the average hold times should be much lower.

In summary, NS possesses market dominance over all of the issue AHM movements because:

- DuPont is captive to NS at the origin.
- Most DuPont customers in the issue lanes require rail delivery and need railcars for storage.
- DuPont lacks the capacity to load substantially more trucks at Belle without a significant infrastructure investment.
- There are no bulk terminals for transloading AHMs by truck.
- Lower direct trucking rates on movements up to 1100 miles is indicative of NS pricing up to higher cost alternatives.
- DuPont would have to construct additional piping and storage at a cost of {{ [redacted] }} in order to load AHMs into barges at Belle.
- DuPont would have to find barge terminals that would be willing to store and transload AHMs. For the same reasons that DuPont has been unable to find truck transload terminal, barge terminals also would not accept AHMs.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

[266] See Dup. Op. Workpaper "Customer Hold Time" in the "Shipment Data" folder.

q. Aqueous Methylamines[267]

DuPont has challenged NS rates for transporting Aqueous Methylamines ("AQMs") from Belle, WV to 5 destinations in the following case lanes:

Lane #	Origin	Interchange	Destination	Customer
B-8	Belle, WV	E. St. Louis, MO	Channelview, TX	Lyondell Chemical
B-13	Belle, WV	Chicago, IL	East Billings, MT	Loveland
B-17	Belle, WV	E. St. Louis, MO	Freeport, TX	Nalco Company
B-25	Belle, WV	Chicago, IL	Los Angeles, CA	Polychemie, Inc.
B-33	Belle, WV	Kansas City, MO	St. Joseph, MO	Albaugh Chemical

DuPont is captive to NS at the origin for each of these movements.

AQMs are anhydrous methylamines ("AHMs"), which are another issue commodity, diluted in water. For that reason, DuPont often refers to AQMs as "solutions." As with AHMs, DuPont produces aqueous mono-, di- and tri-methylamines. All three AQMs have the same handling requirements, except that aqueous mono-methylamine receivers (including any transload operators) must have permits from the Drug Enforcement Administration under the Chemical Diversion and Trafficking Act. Therefore, DuPont addresses market dominance for all three aqueous methylamines under the single category of AQMs.

AQMs have the same uses as AHMs. Because AQMs are a diluted form of AHMs, however, AQMs are safer to handle than AHMs. Specifically, AQMs have lower vapor pressure and flammability. Nevertheless, AQMs are still corrosive, highly flammable, and exude a strong odor.[268] Because AQMs are diluted, they are more costly to transport since more AQM shipments are needed to transport an equivalent amount of AHMs. Because of the similarity between AQMs and AHMs, AQMs have most of the same limitations upon alternative transportation as AHMs. The principal exception is that, unlike AHMs, AQMs do not require

[267] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Jeff Jirak, Global Business Manager Methylamines.

[268] See Dup. Op. Workpaper "Methylamines Storage and Handling" at 5-6, in the "AHMs" folder.

pressurized transport vehicles. The design of the Belle facility also creates other constraints upon the use of alternative transportation for AQMs.

Direct Trucking. Even after the significant NS rate increases over the past few years, Lanes B-8, B-13, B-17, and B-25 have direct truck rates that are {{[redacted]}} higher than direct rail rates, respectively.[269] This is not surprising because the road distance for each lane ranges from 1160 to over 2300 miles.[270] What is surprising is that, for Lane B-33, where the direct truck rate is {{[redacted]}} lower than the direct rail rate, the road distance is still a staggering 800 miles. This is compelling evidence that NS is pricing up to a higher cost competitor. It simply is not credible for NS to claim that truck shipments, which require more labor and equipment and have higher fuel costs than rail, are an effective competitive alternative to rail at such long a distance.

This conclusion is reinforced by Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), which shows the change in rates for the issue movements from the later of 2007 or the first DuPont rail movement in each lane. Since 2007, the combined through rate for all of the AQM issue movements has increased between {[redacted]}, with 3 of those lanes experiencing increases greater than 100%. Since 2009, when NS and its connecting carriers began pricing on a Rule 11 basis, the NS rate has increased between {[redacted]} on all of the issue lanes, while the connecting carrier rates have increased by just {{[redacted]}}. The specific details for each AQM issue movement are summarized in the following chart:

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[269] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[270] Id.

Lane #	Through Rate Increase Since …	NS Rule 11 Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Truck Premium
B-8	{{ [redacted] }}	{ [redacted] }	{{ [redacted] }}	{{ [redacted] }}
B-13	{{ [redacted] }}	{ [redacted] }	{{ [redacted] }}	{{ [redacted] }}
B-17	{{ [redacted] }}	{ [redacted] }	{{ [redacted] }}	{{ [redacted] }}
B-25	{{ [redacted] }}	{ [redacted] }	{{ [redacted] }}	{{ [redacted] }}
B-33	{{ [redacted] }}	{ [redacted] }	{{ [redacted] }}	{{ [redacted] }}

Clearly, most of the through rate increases since 2007 have occurred in the last two years as a consequence of extraordinary NS rate increases. These NS rate increases have not been accompanied by any loss of traffic to trucks, which is further evidence of market dominance.[271] Furthermore, the fact that NS has increased rates significantly in lanes where its rates already were higher than truck rates is compelling evidence that NS is not constrained by truck competition.

Regardless of the foregoing facts, direct trucking is not an option for any of the issue AQM movements, because DuPont has challenged NS bottleneck segment rates from Belle to various interchange points. Pursuant to the Board's decision in DMIR, 4 STB at 292 (n. 13) and 293, direct trucking to the customer is not alternate transportation for the movements to which the challenged NS rates apply. Finally, direct trucking is not feasible due to the lack of truck loading capacity at Belle, as described in the following discussion of transloading.

Transloading. In order to by-pass NS at the Belle origin for each issue movement of AQMs, DuPont would have to load its AQMs into trucks at Belle and transport them to a nearby bulk terminal on another railroad. There are two principal reasons why this is not a viable option. First, there is no bulk terminal within a 200 mile radius of Belle that is able or willing to transload AQMs. Second, Belle lacks the capacity to load sufficient trucks.

[271] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

The principal and dispositive factor is the absence of any bulk terminal near Belle that would handle AQMs.[272] Indeed, DuPont is aware of just two facilities in the country that will transload AQMs. Both are in Texas and neither is currently transloading any AQMs.[273] A bulk terminal must provide a closed transfer pumping system, a spill containment system, and a vapor recovery system. Even with these precautions, the product will omit a strong fish odor that is environmentally unacceptable. Moreover, as noted above, DEA permits are required for any facility that handles aqueous mono-methylamines. The extensive precautions and requirements associated with handling AQMs, DEA permitting, and the noxious odor are a major reason why commercial bulk terminals will not transload these commodities.[274]

Transloading also is not practical because Belle has just two truck loading racks for AQMs that it shares with inbound raw materials. If AQMs did not have to share these truck loading racks, Belle would have the physical capacity to load {[redacted]} trucks with AQMs in a 24 hour period. {{[redacted]}}. Furthermore, DuPont has just a single storage tank at Belle for mono-AQM with a capacity that is equivalent to {{[redacted]}} trucks, and a single storage tank for di-AQM with a capacity of {{[redacted]}} trucks. Consequently, DuPont would have to produce AQMs constantly in order to serve customers regularly by truck because it must continuously refill the

[272] {{[redacted]}}

[273] Those facilities are operated by Third Coast and Delta.

[274] See Dup. Op. Workpaper "Methylamines Storage and Handling" at 5-8, 16-18, in the "AHM" folder for an overview of the precautions and requirements associated with handling AQMs.

storage tanks with new production. Since DuPont cannot load and produce AQMs simultaneously, this is a physical impossibility with the current infrastructure at Belle. The cost of adding storage capacity for AQMs and reconfiguring the piping would be {{[redacted]}}.[275]

Barge. DuPont does not ship AQMs by barge, and has been informed by Kirby Marine that it is unaware of anyone who barges AQMs. Belle does not have the piping or storage infrastructure to load AQMs into barges. A barge's capacity is over 1 million tons, and as noted above, DuPont can only store the equivalent of {{[redacted]}} truckloads of AQM, depending upon the type of AQM. The cost of constructing additional storage tanks and piping adequate for barge volumes would be approximately {{[redacted]}}.[276]

Furthermore, barges would have to be unloaded at river terminals with adequate storage and transload capabilities. None of DuPont's customers purchase AQMs in barge-sized volumes. While some may purchase the equivalent of a barge over the course of a year, they do not receive barge quantities in single shipments, nor would they have the storage capacity in which to unload an entire barge at once, as described in the next paragraph. Therefore, DuPont would have to transfer the AQMs from barges into tanks at barge terminals, where DuPont would have to store the AQMs until its customers order smaller quantities for either rail or truck delivery. This adds even more costs to barge transportation and requires DuPont to carry an inventory of AQMs that it does not currently maintain. Moreover, just as bulk terminals do not transload AQMs between trucks and railcars, barge terminals do not like to handle AQMs either.

Lane Specific Requirements. In addition to the multiple general factors discussed above, four of the five case customers that receive AQMs rely upon railcars to store their AQM purchases from DuPont. The customer in Lane B-13 does not have any storage tanks at all for

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[275] See Dup. Op. Workpaper "BargeTruck Infrastructure Estimates" in the "AHMs" folder.

[276] See Dup. Op. Workpaper "BargeTruck Infrastructure Estimates" in the "AHMs" folder.

AQM, which is consistent with no truck shipment history for this lane.[277] The customers in Lanes B-8, B-17, and B-25 have very small storage tanks that hold less volume than a single railcar. Over the 5-year period from 2006-2010, Lane B-8 received just {{[redacted]}} trucks (spread across 2006-08); Lane B-17 received just {{[redacted]}} trucks (all in 2010 when DuPont had production problems at Belle), and Lane B-25 received just {{[redacted]}} trucks (all in 2008).[278] The fact that these customers rely upon DuPont railcars for storage is evidenced by average railcar hold times in 2009 and 2010 of up to {[redacted]}.[279]

In summary, NS possesses market dominance over all of the issue AQM movements because:

- DuPont is captive to NS at the origin.
- Most DuPont customers in the issue lanes require railcars for storage.
- Direct trucking rates are much higher than rail rates for four of the issue AQM movements. Slightly lower rates for the fifth movement, which is 800 miles, is indicative of NS pricing up to higher cost alternatives.
- DuPont lacks the capacity to load substantially more trucks at Belle without a significant infrastructure investment.
- There are no bulk terminals near Belle for transloading AQMs.
- Belle lacks the infrastructure to barge AQMs, the case customers cannot receive barge quantities of AQMs, and there are no barge terminals that will transload AQMs.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

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[277] See Dup. Op. Workpaper "AQM Truck Shipments" in the "AQMs" folder.

[278] Id.

[279] See Dup. Op. Workpaper "Customer Hold Times" in the "Shipment Data" folder.

r. Monomethyl Formamide[280]

DuPont has challenged the NS rate for transporting Monomethyl Formamide ("MMF") in a single lane, B-37, from Belle, West Virginia to Strang, Texas. DuPont is captive to NS at the origin. NS interchanges this movement with UP at East St. Louis, IL for delivery to the destination. This movement is between two DuPont facilities. DuPont produces the MMF at Belle and consumes it at Strang in the production of pesticides. DuPont consumes all of its MMF production internally. Until recently, DuPont also exported MMF to Korea, but has since discontinued that business because DuPont production could not fulfill its internal needs.

MMF is not classified as a hazardous material. However, because carbon monoxide accumulates in the space above MMF within a transportation vessel, DuPont requires that its employees wear a self-contained breathing apparatus when handling MMF.[281] Additionally, because MMF reacts poorly with carbon steel, railcars must have a placite lining and truck trailers must be constructed of stainless steel.

DuPont produces MMF at Belle, WV, in production campaigns that alternate with the production of dimethyl formamide ("DMF"), which is an issue commodity in Lanes B-4, 9, 21, 29, and 35. DuPont can produce either DMF or MMF, but not both simultaneously. Because DuPont does not have any storage facilities for MMF at Belle, it relies upon railcars for storage in between MMF production campaigns, which are shorter than DMF campaigns because DMF is sold in greater volumes. DuPont operates a dedicated rail fleet of 15 tank cars to store and transport MMF.

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[280] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Jeff Jirak, Global Business Manager Methylamines.

[281] See Dup. Op. Workpaper "MMF-MSDS" in "MMF" folder.

Trucking. DuPont only ships MMF by truck in emergency situations. The cost of trucking directly from Belle to Strang is {{[redacted]}} higher than rail transportation.[282] In 2008 and 2010, DuPont experienced spikes in the number of truck shipments due to a string of emergencies.[283] In the second half of 2008, Belle had an unscheduled outage and equipment reliability issues that required trucks to supplement rail service. In 2010, DuPont had a fatality at the plant that resulted in a month-long shutdown to conduct safety reviews. Because of this month-long shutdown, DuPont depleted its inventory of MMF. MMF production still had not caught up with demand when DuPont experienced a plant failure in 2010, which caused DuPont to declare a force majeure event to its customers.[284] Because of these plant shutdowns, DuPont had to transport MMF more expeditiously by faster truck service, on a just-in-time basis. Finally, aside from the economic and practical difficulties with shipping trucks over Lane B-37, direct trucking from the origin to destination is not alternate transportation for the bottleneck NS segment to which the challenged rate applies, which is Belle to East St. Louis. See DMIR, 4 STB at 292 (n. 13) and 293.

Transloading. Transloading around the NS at Belle is neither practical nor cost-effective. First, because DuPont needs railcars at Belle to store its MMF production, DuPont literally would have to double its fleet of dedicated railcars so that there would be a railcar at Belle and at the bulk terminal. Current railcar lease costs range from {{[redacted]}} per month for either a 5 or 7 year lease term.[285] Second, transloading would cost {{[redacted]}} more than direct rail service even before considering the additional railcar expenses.[286]

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[282] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[283] See Dup. Op. Workpaper "MMF Truck Shipments" in the "MMF" folder.

[284] See Dup. Op. Workpaper "Force Majeure Letter" in the "MMF" folder.

[285] See Dup. Op. Workpaper "Trinity Quote" in the "MMF" folder.

[286] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder).

Barges. Finally, barge is not an option because DuPont does not have the transfer systems or storage capacity at Belle to load MMF into barges or at La Porte to unload barges. The volume of MMF in Lane B-37, which is DuPont's only MMF movement from Belle, does not warrant investing in this barge infrastructure. It would take DuPont {{[redacted]}} consecutive days to produce enough MMF to fill even a small barge. As noted above, because Belle does not have any MMF storage, DuPont relies upon railcars for that purpose. Therefore, DuPont would have to build storage tanks to hold MMF for barge shipments. The same storage issue exists at La Porte, which has only enough storage capacity to unload a single railcar.

At Belle, DuPont estimates the cost of constructing a 400,000 gallon carbon steel storage tank, a transfer system of piping and pumps capable of transferring MMF at 1,000 gallons per minute through a 3- or 4-inch pipe approximately 2 miles, and a nitrogen blanket or air drying system would require an investment of approximately {{[redacted]}}.[287] At La Porte, the cost of constructing a 400,000 gallon storage tank, a barge unloading facility, and a transfer system of pipes and pumps is estimated to be {{[redacted]}}.[288]

In summary, NS possesses market dominance over the issue MMF movements because:

- DuPont is captive to NS at the Belle, WV origin.
- Direct trucking costs are prohibitively expensive.
- Transloading from trucks into railcars is neither practical nor cost-effective.
- Belle and La Porte do not have the infrastructure to load/unload barges with MMF, and it would be uneconomical to build such infrastructure for a single movement at current volumes.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

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[287] See Dup. Op. Workpaper "Barge Infrastructure Estimates" in the "AHMs" folder.

[288] See Dup. Op. Workpaper "MMF Barge Estimate" in the "MMF" folder.

s. Coke Petroleum CA[289]

DuPont has challenged the NS rates for calcined petroleum coke ("Pet Coke") to DuPont's facility at Edge Moor, Delaware on the following case lanes:

Lane #	Origin	Interchange	Destination	Supplier
B-48	Cresap, WV	Hagerstown	Edge Moor, DE	Rain CII
B-69	Enid, OK	East St. Louis	Edge Moor, DE	Oxbow Calcining International LLC
B-75	Lemont, IL	Chicago	Edge Moor, DE	Oxbow Calcining International LLC
B-98	Enid, OK	East St. Louis	Edge Moor, DE	Oxbow Calcining International LLC
B-123	Lemont, IL	Chicago	Edge Moor, DE	Oxbow Calcining International LLC

Lanes B-69 and B-98 are identical movements, but the rate for B-69 is for transportation of Pet Coke in private cars and for B-98 is in railroad-owned cars. The same is true for Lanes B-75 and B-123, respectively. DuPont is captive to NS at Edge Moor.

Pet Coke is a solid by-product of the crude oil refining process. During refining, a distillation process is used to separate the different weights of carbon product within the crude. As a result, the heavier carbon product within the crude settles and solidifies into a high-carbon solid, known as Pet Coke. The solid mass is then milled into pellets, which is the form taken by the issue commodity. Pet Coke is used in a variety of processes—it is used to produce aluminum products and is a fuel for cement producers. The issue Pet Coke movements are all inbound to DuPont's Edge Moor facility, where DuPont uses the Pet Coke as a raw material in the production of titanium dioxide.

Truck. Direct truck is not an effective alternative to rail service for the Pet Coke issue movements. The absence of any truck shipments of Pet Coke at Edge Moor between 2006 and

[289] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Paul Kostrzewski, Senior Buyer—Petroleum Coke.

2010 illustrates this.[290] Furthermore, the direct truck rates for transporting Pet Coke on the case lanes exceed the direct rail rates for all but one case lane. Direct truck rates are {{[redacted]}} higher than rail on Lane B-123 and at least {{[redacted]}} higher than rail on Lanes B-69, B-75, and B-98,[291] even after substantial rate increases by NS on these lanes.[292] Only on Lane B-48 is the truck rate lower—by {{[redacted]}}[293]— than the direct rail rate, and then only because recent, substantial NS rate increases have caused the rail through rate to surpass the truck rate. Since 2009, the NS Rule 11 rate for Lane B-48 has increased by {[redacted]}, more than {{[redacted]}} the differential between rail and direct truck, while the connecting carrier rate only increased {{[redacted]}}.[294] The fact that NS has been able to surpass truck rates in just two years without losing any traffic to trucks underscores NS's market dominance.[295]

In order to receive a substantial volume of Pet Coke by truck, DuPont must reconfigure its Edge Moor facility. At present, Pet Coke is unloaded from railcars by spotting the railcars over a conveyor system and opening the railcar from underneath so the Pet Coke can fall through a floor grate onto conveyors that carry the Pet Coke into storage silos. Only bottom-unloading trucks are compatible with this system, but they are not readily available.[296] Although dump trucks are more readily available, they cannot unload at the current unloading spot because it is

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[290] Dup. Op. Workpaper "Pet Coke Truck Shipments" in the "Pet Coke" folder.

[291] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[292] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder). NS has increased its rates on these lanes by {[redacted]} since 2009.

[293] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). The differential is {{[redacted]}}.

[294] Compare Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder) with Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). The differential is {{[redacted]}}.

[295] FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[296] See Dup. Op. Workpaper "Trucking McKee's Rocks to Edgemoor" in the "Pet Coke" folder.

located within a covered shed that does not provide adequate clearance. When DuPont receives the occasional dump truck, it must unload the Pet Coke onto the ground outside the shed and push it onto the conveyor system. Even then, space constraints and overhead hazards restrict trucks to unloading only when facing South.[297] For regular truck shipments, DuPont must reconfigure the unloading spot by increasing the vertical clearance within the shed. DuPont estimates that this will cost {{[redacted]}}.[298]

In addition, direct trucking is not alternative transportation for any of the issue Pet Coke movements because DuPont is only challenging the NS rate from the interchange point to the destination on each lane. See DMIR, 4 STB at 292 (n. 13) and 293.

Transloading. Transloading from railcars to trucks does not provide effective competition. On Lane B-48, transloading increases the transportation cost by {{[redacted]}} above the direct rail rate. Although transloading costs are {{[redacted]}} less than rail for the other four issue movements, this is a product of NS's aggressive rate increases, which have caused the rail through rate to eclipse transloading costs within only the past two years, as indicated by the following table:

Lane #	Through Rate Increase Since …	NS Rule 11 Rate Increase Since …	Connecting Carrier Rule 11 Rate Increase Since…	Transload Premium
B-48	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}
B-69	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}
B-75	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}
B-98	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}
B-123	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}	{{[redacted]}}

[297] Dup. Op. Workpaper "Coke Unloading" at 10, in the "Pet Coke" folder (noting that utility lines, overhead piping, and the low building clearance prevent truck beds from being raised completely).

[298] Dup. Op. Workpaper "Coke Unloading Study" in the "Pet Coke" folder.

NS's ability and willingness to raise its rates so dramatically and so swiftly above transload costs without losing traffic indicates that transloading Pet Coke is not effective competition to NS rail service on these lanes.[299]

Moreover, as explained above, Edge Moor is not able to accept regular truck shipments of Pet Coke. Transloading would require DuPont to make extensive modifications at Edge Moor to receive trucks.

Barge. DuPont's Pet Coke supplier at Lemont, IL, in Lanes B-75 and B-123, can originate Pet Coke on barges. But, because there is no direct waterway route from Lemont to Edge Moor, barge is only an option as a barge-to-truck transload, with the truck transfer occuring at McKees Rocks, PA, or a rail-to-barge transload, with the transfer to barges occuring on the Delaware River.

A barge-to-truck transload option is not practical or feasible. This option requires DuPont to receive 1600 tons of Pet Coke at Edge Moor, delivered over 300 miles by a caravan of 80 trucks over a period of approximately 5 days. Bottom-unloading trucks, which are necessary to deliver this volume of Pet Coke to Edge Moor, are not readily available to support such a large-scale trucking operation.[300] DuPont's inventory carrying costs for Pet Coke also would be sizeable due to longer barge transit times and the fact that it would be purchasing a substantial portion of its Pet Coke long before it otherwise would be needed. In contrast, DuPont is able to space rail shipments of Pet Coke over time, which allows it to maintain a smaller inventory.

Rail-to-barge transloading is also not practical and requires overcoming significant obstacles. Before Edge Moor can receive barge shipments of any commodity, DuPont must

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[299] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition").

[300] See Dup. Op. Workpaper "Trucking McKee's Rocks to Edgemoor" in the "Pet Coke" folder.

refurbish its abandoned dock facilities at Edge Moor, which is costly, and must satisfy onerous regulatory requirements. Clearing the regulatory hurdles alone will cost at least $300,000 and take at least 2 years. These and other obstacles to receiving barges at Edge Moor are addressed in substantial detail in the Titanium Dioxide and Chlorine evidence.[301] Rather than repeat that evidence and argument here, DuPont incorporates them by reference. Moreover, if DuPont also switches to barge transportation at Edge Moor for other case commodities, such as titanium dioxide, titanium tetrachloride, and chlorine, new docks would have to be constructed, further increasing costs and the likelihood of permit denials due to the increase in potential harm to the environment.

Even assuming that DuPont could secure the permits to rebuild the Edge Moor docks, the infrastructure costs alone for dock construction would be prohibitively expensive. Using DuPont's estimates for chlorine barging at Edge Moor, less the equipment specific to handling chlorine, it would cost over {{[redacted]}} dollars just to rehabilitate the dock.[302] This does not even include the facilities that would be required to transport the pet coke from the docks to plant.

In summary, NS possesses market dominance over all of the issue Pet Coke movements because:

- DuPont is captive to NS at the Edge Moor, Delaware destination.
- On Lanes B-69, B-75, B-98, and B-123, the direct truck rate exceeds the direct rail rates by {{[redacted]}}.
- On Lane B-48, although the direct truck rate and rail rate {{[redacted]}}, that is the result of NS pricing to match the rates of higher cost truck transportation, as evidenced by dramatic NS rate increases over just two years.

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[301] See Parts II-B-2.j., supra, and II-B-2.w, infra.

[302] See Dup. Op. Workpaper "Chlorine Barge Estimate," cell K4, in the "Chlorine folder.

- On Lane B-48, the transloading rate is {{[redacted]}} higher than the direct rail rate.
- On Lanes B-69, B-75, B-98, and B-123, although the transloading rates are lower than the rail rates, NS has demonstrated its market dominance by increasing its rail rates by upwards of {[redacted]} over just two years, thereby surpassing the rates of a higher cost alternative.
- DuPont's Edge Moor facility is not configured for the high-volume dump truck unloading that is necessary to support large-scale truck deliveries of Pet Coke either by direct truck or transloaded shipments.
- Bottom-unloading dump trucks are not readily available to support large-scale truck deliveries of Pet Coke by trucks either directly or as part of a transload operation.
- Barge transportation would increase DuPont's inventory costs.
- Barging to Edge Moor requires more than {{[redacted]}} to rehabilitate Edge Moor's abandoned dock facilities, plus additional infrastructure investment to store the Pet Coke and convey it from the dock to the plant. Moreover, it would take at least 2 years and $300,000 to obtain the necessary permits to begin construction, and it is highly improbable that the permits would be granted.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

t. Polyethylene[303]

DuPont has challenged two NS rates for low density polyethylene ("Polyethylene") over the following four case lanes comprised of two origins and two destinations:

Lane #	Origin	Interchange	Destination	Customer
B-44	Bloomington, TX	New Orleans, LA	Greenville, SC	Rexam
B-45	Bloomington, TX	E. St. Louis, IL	Washington, NJ	Albea f/ka Twist Beauty Packaging
B-82	Orange, TX	New Orleans, LA	Greenville, SC	Rexam
B-83	Orange, TX	E. St. Louis, IL	Washington, NJ	Albea f/k/a Twist Beauty Packaging

The two origins are DuPont production facilities in Texas. Each plant ships to both customer destinations, which are captive to NS. NS handles each movement from an interchange point with the origin carrier to the destination. Thus, although there are four issue movements, there are only two issue rates: one for the NS bottleneck segment from the New Orleans interchange to Greenville, SC and the other for the NS bottleneck segment from the East St. Louis interchange to Washington, NJ.

Rail is the overwhelmingly dominant mode for transporting bulk polyethylene in the United States, not just for DuPont but for the entire plastics industry. The industry produces polyethylene in batches that are equivalent in volume to the capacity of a single railcar, loads polyethylene into railcars for storage until sold to a customer, and then ships the polyethylene in the same railcar to the customer. Moreover, polyethylene customers rely extensively upon railcars for storage until the polyethylene is used in the customers' production process. This minimizes the need for large storage silos both at the polyethylene production plants and the customer plants.

[303] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Travis Bond, Global Supply Chain Manager.

The lack of effective truck competition from either direct trucking or transloading for the issue movements is evidenced by the almost non-existent truck volumes to each of the issue destinations. From 2006-2010, Rexam, at Greenville, SC (Lanes B-44 and 82), received a total of {{[redacted]}} Similarly, Albea, at Washington, NJ (Lanes B-45 and 83), received a total of {{[redacted]}}.[304] Because effective competition "may be deduced from...the amount of the product in question that is transported by motor carrier where rail alternatives are available," this historical data is highly relevant evidence of market dominance. Market Dominance Determinations, 365 I.C.C. at 133. See also, Product & Geographic Competition, 2 I.C.C.2d 1, 21 (1985).

Rail has a dominant market share because it is a far superior cost alternative to trucks in most transportation scenarios. Trucks are used mostly for short distances, to serve customers without access to rail, and to expedite shipments to rail-served customers in order to prevent production shut-downs. These scenarios are few and far between, which accounts for the very small proportion of polyethylene truck shipments.

The predominance of rail transportation was summarized best over 15 years ago by a former railroad employee testifying on behalf of the Society of the Plastics Industry ("SPI") in the Union Pacific/Southern Pacific merger proceeding.[305] As part of its Comments, SPI presented the Verified Statement of Larry D. Ruple, a 17-year employee of the Southern Pacific ("SP") and its predecessor companies, whose responsibilities included "the development production and implementation of market based strategic initiatives and overall market plan to

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[304] See Dup. Op. Workpaper "Polyethylene Truck Shipments" in the "Polyethylene" folder.

[305] See, "Comments of the Society of the Plastics Industry, Inc.," Verified Statement of Larry D. Ruple, filed March 29, 1996 in Union Pacific Corp. et al.—Control and Merger—Southern Pacific Rail Corp. et al., Finance Docket No. 32760 ("Ruple V.S."). DuPont has included a complete copy of Mr. Ruple's verified statement as Dup. Op. Workpaper "Ruple V.S." in the "Polyethylene" folder.

enhance Southern Pacific's position and market share of transportation and logistic needs relative to [plastics]".[306]

At pages 12-15, Mr. Ruple presents an overview of modal competition for the transportation of plastics. First, Mr. Ruple described the logistics hurdles faced by plastic producers:

> To meet the demand for customer product specifications, resins producers may in any given period of time have to produce multiple grades of each resin. A producer's customer base usually consist [sic] of large amount of customers usually requiring a relatively small volume of product per year. Therefore, to avoid continual production changeover as to product makeup and the high costs associated with plant idling, producers forecast the demand/sales or amount of each specific product anticipated during a specific period of time, usually 90 to 120 days, and produce in what is referred to as product runs. These product runs are usually at a minimum of 6 to 10 cars and can go much higher in volume. To produce such a variety of products, with varying characteristics, to eliminate or reduce the large cost of plant shutdown or change over from one product to another, an attempt to find an economical way to store each product individually became very apparent. It was obvious that construction of multiple storage silos that could meet and maintain the high product integrity standards was economically not feasible, not to mention the requirement to shuttle product from production to each silo and then establish a network allowing access to load from these silos.

Ruple V.S. at 12-13.

Having identified the challenge faced by plastic producers, Mr. Ruple described both the significant role of rail in providing the solution and the limited role of trucks:

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

[306] Id. at 1-2.

> loaded and empty cars, and movement to final destination and return of empty cars.
>
> * * *
>
> [W]hile there is a relatively small share of product moving via truck, most likely it first began its journey via rail and subsequently is transferred from a rail car in order to service a non-rail customer, to meet an emergency shipment need (often due to the failure to achieve timely delivery of a rail car), or packaged and loaded into containers needing to be shuttled to the port.
>
> * * *
>
> No other form or combination of transportation alternatives can provide the services currently offered by rail. Rail is the most economical and efficient means of providing product storage, minimization of product degradation and contamination, and effective long haul transportation.

Id. at 13-14 (underline added).

Next, Mr. Ruple proceeded to describe the end users' dependence upon rail. First, he stressed the importance of product integrity:

> Assuring product integrity and minimizing handling to insure purity and product performance are of utmost important [sic]. Customers require specific product compositions to meet production standards along with timely delivery to maintain operations.

Id. at 12. Then, Mr. Ruple describes the many needs of end-users that are satisfied by rail:

> Each product purchased must have exacting requirements in order to meet final product performance expectations. End users…are usually characterized by requiring each product be produced with a specific chemical composition designed to meet specific performance needs; have limited on-site storage capability; require just in time inventory supply, are located on rail in order to receive the advantages of rail transportation; universally accept a rail car load as the industry standard order quantity, and utilize the rail car as their "rolling silo/warehouse".

Id. at 14-15 (underline added). These are not needs that are sporadic or that apply to just a few customers. These needs are pervasive throughout the polymer industry.

Mr. Ruple's final conclusion affirms the prevalence of rail in polymer transportation:

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

Id. at 15 (underline added). This statement remains as true today as it was 15 years ago. Indeed, the polymer industry's dependence upon rail transportation today is even greater.

Direct trucking is not an economically feasible option for any of the issue movements. The cost of direct trucking ranges from {{[redacted]}} than rail transportation for each issue movement.[307] Where there is at least a 10% rate difference after a substantial rail rate increase, the Board has found market dominance. DuPont (Plastics), slip op. at 7. Moreover, per the Board's DMIR decision, directly trucking the issue movements from the origins to the destinations is not alternate transportation for the movements to which the challenged NS rates apply, which is from various interchanges with connecting carriers to the destinations. DMIR, 4 STB at 292 (n. 13) and 293.

When DuPont does deliver polyethylene to a customer by truck, it most often is via a rail-to-truck transload operation. From 2006-10, over {{[redacted]}} of DuPont's polyethylene truck shipments were from a bulk terminal to a customer.[308] DuPont uses carefully selected bulk terminals to serve its non-rail customers, because transloading is more economical than direct trucking to these customers over long distances. DuPont has used five bulk terminals since 2006, at {[redacted]}. When shipping through a bulk terminal, DuPont must maintain an inventory of railcars loaded with polyethylene at the terminal in order to respond promptly to a customer's truck order, because

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[307] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[308] See Dup. Op. Workpaper "Polyethylene Truck Shipments" in the "Polyethylene" folder. The number of shipments with a "YES" in Column Q (1819) divided by the total number of records (3291).

customers expect DuPont to fill truck orders within 48 hours. This is because, in contrast to railcars which can be used by the customer to store polyethylene until needed in the customer's production process, trucks cannot be used for storage and thus are ordered closer to when actually needed by the customer.

DuPont's customers at both destinations have only limited storage of approximately {[redacted]}.[309] This is slightly more than {[redacted]}. Thus, both customers clearly are dependent upon railcars to store their polyethylene inventory.

If DuPont were to transload the issue movements, it most likely would serve Greenville, SC through the {[redacted]} terminal that already is used by DuPont to serve other customers, and Washington, NJ through a {[redacted]}. Currently DuPont only stages {[redacted]}, which is the polyethylene grade purchased by both case customers, at the {[redacted]} bulk terminals. Therefore, DuPont would have to establish additional {[redacted]} inventory at the {[redacted]} facilities.

DuPont has estimated the transload costs for the issue movements through these terminals would be {{[redacted]}} higher for Lane B-44; {{[redacted]}} higher for Lane B-45; {{[redacted]}} higher for Lane B-82; and {{[redacted]}} higher for Lane B-83.[310] Where there is at least a 10% rate difference after a substantial rail rate increase, the Board has found market dominance. DuPont (Plastics), slip op. at 7. Although these rate premiums alone establish NS's market dominance, there are additional costs associated with transloading that would further increase these premiums. FMC, 4 STB at 719 ("substantial rate disparity" sufficient to show lack of effective competition).

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[309] See Dup. Op. Workpapers "Albea E-mail" and "Rexam E-mail," both in the "Polyethylene" folder.

[310] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder).

The above transload rate premiums are before considering additional inventory carrying costs that are attributable to the time lag between when DuPont is able to invoice customers for rail shipments and truck shipments. Although DuPont invoices rail and truck shipments upon loading, a truck purchase will be later in time than a railcar purchase because a customer does not purchase a truck until it is ready to use the contents in its production process. Thus, inventory that DuPont's customer typically would maintain in the railcars on its own premises after a railcar purchase must now be maintained by DuPont at the bulk terminal until the truck purchase occurs.

In summary, NS possesses market dominance over all of the issue Polyethylene movements because:

- The DuPont customers are captive to NS at the issue destinations.
- Direct trucking costs are prohibitively expensive.
- Transloading is neither practical nor cost-effective.
- The customers need railcars for storage.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

u. Sodium Methylate[311]

DuPont has challenged the NS rate for transporting sodium methylate from DuPont's facility at Strang, TX to DuPont's facility at Lemoyne, AL on lane B-86. DuPont is captive to NS at Lemoyne.

DuPont produces sodium methylate in campaigns at its facility in Strang, TX, which is synonymous with La Porte, TX and referred to herein as La Porte. The campaigns last for approximately 3 months and produce up to 8 railcars of sodium methylate. DuPont ships sodium methylate to its Lemoyne, Alabama facility where it uses the sodium methylate as an intermediate in the manufacture of insecticides.

Sodium methylate is produced as a 25% or 30% solution in methanol and is classified as a class 3 flammable liquid. It is both flammable and corrosive. When it comes into contact with water, including humidity, sodium methylate degrades to sodium hydroxide and methanol, increasing flammability. Because of sodium methylate's corrosive characteristics, a railcar or truck must be lined or made of stainless steel.[312]

Truck. DuPont's ability to truck sodium methylate from La Porte to Lemoyne is very limited. DuPont's La Porte facility only has 1 truck loading spot which can be used to load sodium methylate. However, this spot is dedicated to DuPont's Velpar business unit, which uses the spot extensively to load and unload other commodities. In fact, Velpar's use of the loading spot has been so extensive since the spot was built, approximately 40 years ago, that DuPont only recently, approximately 10 years ago, installed piping to enable the loading of sodium methylate at the spot. The piping, however, was only designed to support limited loading

[311] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Greg Rupert, Senior Process Engineer.

[312] See Dup. Op. Workpaper "Sodium Methylate MSDS" in the "Sodium Methylate" folder.

operations. Consequently, the La Porte facility can only load 1 to 2 trucks of sodium methylate per month, which is less than one railcar.

Further, trucking from La Porte is impractical because the La Porte facility does not have any sodium methylate storage tanks, and therefore, must load directly into railcars, which double as transportation and storage containers. Accordingly, a switch to direct trucking on lane B-86 would require loading trucks from railcars. However, this loading operation is still limited by the availability of 1 loading spot. Due to environmental regulations, DuPont cannot simply pull a truck up to a railcar and transload—it must vent the railcar and truck to a vapor abatement device[313] that is approved by the Environmental Protection Agency ("EPA") and the truck must be loaded on a concrete pad equipped with a sump system. The only spot available to perform this operation is the same spot that would be used to load directly into trucks. Accordingly, DuPont could still only load 1 to 2 trucks of sodium methylate per month even if it loaded trucks from railcars. The difficulties of trucking sodium methylate from La Porte are manifested in the absence of any truck shipments of sodium methylate from La Porte between 2006 and 2010.[314]

The cost of constructing a new truck loading rack dedicated to sodium methylate is approximately {{[redacted]}}.[315] These costs are not justified because sodium methylate is produced, and this infrastructure will only be used, infrequently.

Trucking is also impractical due to infrastructure limitations at the destination, DuPont's Lemoyne facility, which is also called Mobile or Axis. Because DuPont only has {{[redacted]}} tons of fixed storage capacity at Lemoyne for sodium methylate, which is less than half the capacity of a

[313] These devices usually consist of a flare or carbon-bed absorber.

[314] DuPont Op. Workpaper "Sodium Methylate Truck Shipments" in the "Sodium Methylate" folder.

[315] DuPont Op. Workpaper "La Porte Truck Loading Estimate" in the "Sodium Methylate" folder.

single railcar, it relies heavily upon railcars for storage. The cost of constructing sufficient storage to eliminate the need for railcars is approximately {{[redacted]}}.[316]

Although the cost of trucking directly to Lemoyne is less than the cost of rail, this is a function of NS increasing its rate to that of a higher-cost alternative. Currently, direct trucks cost {[redacted]} than rail between La Porte and Lemoyne.[317] However, in 2008, the last year that a contract through rate applied to this lane, this gap did not exist—the rail rate was {{[redacted]}} than today's rail rate, placing it below today's direct truck cost.[318] Since then, the rail rate has increased dramatically. The through rate was {{[redacted]}} in 2009 and increased to {{[redacted]}} in 2011.[319] Tellingly, the NS portion of the through rate increased by {[redacted]} over this period, from {[redacted]}, while the UP portion increased by only {{[redacted]}}, from {{[redacted]}}.[320] These extraordinary rate increases by NS have not been accompanied by any loss of traffic to trucks, which is strong evidence of market dominance.[321]

Finally, aside from the practical difficulties with shipping trucks over Lane B-86 and NS's ability to dramatically increase rates without losing any traffic to trucks, direct trucking from La Porte to Lemoyne is not alternate transportation for the bottleneck NS segment to which the challenged rate applies, which is New Orleans to Lemoyne. See DMIR, 4 STB at 292 (n. 13) and 293.

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[316] DuPont Op. Workpaper "Lemoyne Storage Tank Estimate" in the "Sodium Methylate" folder.

[317] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[318] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder) {{[redacted]}}.

[319] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[320] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[321] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

Transloading. Although sodium methylate can be transloaded, transloading does not make economic sense. DuPont can avoid NS by transloading to trucks at {[redacted]}. However, transloading is {{[redacted]}} more expensive than the rail through rate.[322] In addition, there would be start-up costs of {{[redacted]}} for the equipment needed by the bulk terminal to handle sodium methylate.[323] Further, transloading will eliminate the delivery of sodium methylate to Lemoyne in railcars, which are needed to store the sodium methylate. Thus, DuPont would incur the cost of constructing additional storage facilities at Lemoyne if the sodium methylate is transloaded and delivered in trucks.

Barge. Barging the sodium methylate to by-pass NS on this case lane is impractical. The volume shipped in this lane during each production campaign is insufficient for barging. The smallest available barge has a capacity of 1,400 tons, which is {[redacted]} tons more than DuPont can produce in any single production campaign. Moreover, as noted above for truck shipments, Lemoyne only has fixed storage to hold {{[redacted]}} tons of sodium methylate after unloading. Accordingly, if DuPont barges to Lemoyne, DuPont will have to load the barged material into railcars for storage, build additional storage capacity, or keep the material on the barge and incur barge detention costs.

In summary, NS possesses market dominance over the issue sodium methylate movement because:

- DuPont is captive to NS at the destination.
- NS has been able to raise its rates to match the cost of trucks without losing any market share to trucks.
- DuPont can only load 1 to 2 trucks per month at the origin, unless it invests {{[redacted]}} to construct a new truck loading rack.

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[322] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder).

[323] {{[redacted]}}

- DuPont relies on railcars for storage at the destination; fixed storage at the destination is insufficient to support trucks or barges. The cost of adding sufficient fixed storage is {{[redacted]}}.
- Transloading is more costly than rail transportation and requires an EPA-approved vapor abatement device.
- Due to the commodity's high flammability, the increased risks of release associated with trucking and transloading warrant the use of rail transportation where possible.
- The volumes on this lane are insufficient to support barging.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

v. Sulfur Trioxide (SO_3)[324]

DuPont has challenged the NS rates for transportation of SO_3 on two lanes, Lane B-102, from Miami Fort, OH to Gracewood, GA and Lane B-122 from Burnside, LA to Gracewood, GA. Both movements are destined to DuPont's customer, Solvay, which is captive to NS. The traffic in Lane B-102 originates on CSXT and is interchanged to NS in Chattanooga, TN. The traffic in Lane B-122 also originates on CSXT and is interchanged to NS in New Orleans, LA.

SO_3 is a Class 8 corrosive material. It is a clear, colorless, oily liquid that, when exposed to air, rapidly takes up moisture and gives off white clouds of sulfuric acid mist.[325] SO_3, like fuming sulfuric acid ("Oleum"), is very hygroscopic so that aqueous systems must be avoided.[326] SO_3 is an Extremely Hazardous Substance under the Superfund Amendment and Reauthorization Act and a TIH material.[327] SO_3 also reacts with carbonates to generate carbon dioxide gas and with cyanides and sulfides to form the poisonous hydrogen cyanide gas and hydrogen sulfide gas. DuPont is the only shipper of liquid SO_3 in the U.S.

SO_3, like Oleum, is shipped in dedicated equipment and utilizes specially trained personnel because of the fuming characteristics. SO_3 freezes at 90° F and boils at 112° F.[328] DuPont uses specification DOT-312 trailers that comply with DOT HM-181 regulations, are equipped with a glycol heating system, and are insulated to maintain temperatures above the product's freezing point.[329] Trailers used for SO_3 must also be equipped with canned, submerged

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[324] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Ted Edward Morris, Operations Business Leader-Sulfur Products.

[325] See Dup. Op. Workpaper "SO3 and Oleum PUSH Manual" in the "Sulfur Trioxide" folder.

[326] Id. at 1, 10.

[327] Id. at 1.

[328] Id.

[329] Id. at 17, 19.

pumps for unloading, so that vapors are vented back to the trailer in a closed loop system.[330] Railcars used for SO_3 must be designed and built for SO_3 and equipped with external heating panels and fitted with an insulation jacket with electrical tracing.[331] If SO_3 freezes, it may form solid crystals that are difficult to melt.[332] In addition to using dedicated trucks, DuPont only delivers SO_3 using drivers who have been trained and equipped to safely handle SO_3. This ensures that the the proper controls are in place and minimizes the potential exposure to the general public.[333] There is a limited resource of these specialized trucks. DuPont owns 31 of these trailers to transport both sulfur trioxide and Oleum; no new trailers have been built for DuPont since 1994. A new truck would cost at least {{[redacted]}}.[334] Due to equipment and driver limitations, DuPont requires customers to pre-schedule truck deliveries.[335]

Because SO_3 gives off irritating and corrosive fumes or mist, handling requires full personal protective equipment including respiratory protection.[336] Venting during loading and unloading is required and is done into a scrubber, or back into the process. At DuPont's facilities, DuPont vents into its process. Off-site handling, such as transloading, requires scrubbers.[337]

Direct Truck. The Board must consider market dominance for the transportation to which the challenged rates apply. See 49 U.S.C. § 10707(a). Consequently, when evaluating the

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[330] Id. at 17.

[331] Id. at 17, 22

[332] Id. at 1.

[333] Id. at 18.

[334] See Dup. Op. Workpaper "Sulfur Trioxide trailer email" in the "Sulfur Trioxide" folder.

[335] See Dup. Op. Workpaper "SO3 and Oleum PUSH Manual," p. 18, in the "Sulfur Trioxide" folder

[336] Id. at 11 (describing Class B protective equipment required for connecting/disconnecting hoses to/from transport vehicles).

[337] Id. at 14 (requiring "[s]uitable scrubbing facilities for venting/evacuating unloading, storage, and handling equipment"); id. at 17 ("Provisions must also be made to scrub the large volume of pressurizing gas that results from blowing the [railcar] tank empty.").

reasonableness of bottleneck rates where the connecting carrier rates are in contracts, the Board evaluates market dominance only for transportation over the bottleneck segment. DMIR, 4 STB at 292 (n. 13) and 293. Thus, direct truck alternatives are not applicable to the market dominance analysis for the issue movements, which are bottleneck segments from the interchange to the destination.

A review of the data further indicates that direct trucking is not feasible. From 2006-2010, there were {{[redacted]}} truck shipments over Lane B-122.[338] {{[redacted]}}.[339] In Lane B-102, the number of trucks shipped in a single year has ranged from {{[redacted]}}.[340] In contrast, from 2009-2010, there were {[redacted]} railcars shipped over Lane B-102 and {[redacted]} railcars over Lane B-122.[341] This data indicates that alternate modes of transportation are not effectively constraining NS's ability to increase rail rates for this traffic.

The customer in these two lanes, Solvay, prefers rail[342] and its contract with DuPont is replete with references to railcars.[343] Trucking of SO_3 requires nearly five trucks to equal one railcar. The additional handling, labor, and equipment needed for trucking increases costs and risks for the purchaser when handling this TIH material.

All of the above factors demonstrate that direct trucking is not an effective constraint upon NS rates in Lanes B-102 and 122, despite truck rates that are {{[redacted]}} less than

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[338] See Dup. Op. Workpaper "Sulfur Trioxide Truck Shipments" in the "Sulfur Trioxide" folder.

[339] See Dup. Op. Workpaper "Burnside Truck Rack Estimate" in the "Sulfur Trioxide" folder.

[340] See Dup. Op. Workpaper "Sulfur Trioxide Truck Shipments" in the "Sulfur Trioxide" folder.

[341] See Dup. Op. Workpaper "2009-10 Rail Shipments" in the "Shipment Data" folder.

[342] See Dup. Op. Workpaper "Solvay e-mail" in the "Sulfur Trioxide" folder.

[343] See Dup. Op. Workpaper "Solvay Contract" in the "Sulfur Trioxide" folder (§§ 5.2, 6.4, 9, and Attachment A.).

rail rates, respectively.[344] Indeed, the fact that truck rates are so much lower than rail for a TIH material at distances of 536 and 671 miles, respectively, is evidence that NS is setting its rates above transportation alternatives with much higher cost structures.[345] Furthermore, this is a stark reversal of the historical relationship between rail and truck rates over these lanes. Since 2007, the through rail rate for the issue movements has risen by {{[redacted]}} in Lane B-102 and by {{[redacted]}} in Lane B-122. Since 2009, when NS and the CSXT implemented Rule 11 pricing over these Lanes, the NS rate has increased by {[redacted]} in Lane B-102 and by {[redacted]} in Lane B-122, while the CSXT rate {{[redacted]}}. Clearly, most of the through rate increases since 2007 have occurred in the last two years as a consequence of extraordinary NS rate increases, perhaps in an attempt to de-market this TIH material.

Transloading. To DuPont's knowledge, SO_3 is not transloaded anywhere in this country because it is a TIH. Every time hoses are connected to or disconnected from a transport vehicle is another opportunity for a leak. Just a cursory review of the engineering and design factors for handling SO_3 explains why no bulk terminals will transload this product. These factors include locating facilities away from densely populated areas and major highways; suitable scrubbing facilities for venting/evacuating unloading, storage, and handling equipment; and a means of isolating tank cars or trucks with remotely actuated block valves in the event of a hose failure.[346] The first factor alone is largely disqualifying because most bulk terminals, by design, are located near a major highway.

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[344] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[345] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[346] See Dup. Op. Workpaper "SO3 and Oleum PUSH Manual" at 14-15, in the "Sulfur Trioxide" folder.

If the above facts were not sufficient to demonstrate the infeasibility of transloading, the actual transloading process would do so. The temperature must be strictly controlled because of the narrow range between the freezing and boiling points of sulfur trioxide. Because the vapor pressure in railcars is too high to use an external pump for the transfer process, any transload would have to occur via a pressurized transfer. This process, however, creates a sulfuric acid mist that must be scrubbed using a solution of 93% sulfuric acid. The scrubbing process creates a 98% sulfuric acid solution. Thus, a transfer facility must have storage for the 93% solution used to scrub sulfur trioxide and have a means to dispose of the 98% solution created by the scrubbing process. In essence, a bulk terminal must operate as a mini chemical plant, which commercial bulk terminals are not equipped to do and have no desire to do.

In summary, NS possesses market dominance over all of the issue Sulfur Trioxide movements because:

- The customer is captive to NS at the destination.
- DuPont lacks the capability to load trucks at Burnside without significant infrastructure investment.
- Because Sulfur Trioxide is a TIH material, DuPont and its customer prefer rail shipments over truck shipments, which require five times as many hook-ups to load and unload.
- The customer has received no more than {{[redacted]}} trucks in any single year since 2006.
- NS has set its rates above higher cost truck alternatives with triple digit rate increases while retaining its predominant market share.
- This TIH material is not transloaded.
- A small fleet of specialized trucks precludes significant shifts in volume from rail to truck delivery.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

w. Titanium Dioxide[347]

DuPont has challenged the NS rates for transporting titanium dioxide slurry from DuPont production facilities at Edge Moor, DE and New Johnsonville, TN over the following 25 case lanes:[348]

Lane #	Origin	Interchange	Destination	Customer
A-11	Edge Moor, DE	NS-Direct	Chicago, IL	Superior Carriers (Carry Transit)
A-12	Edge Moor, DE	NS-Direct	Chillicothe, OH	Ph Glatfelter
A-13	Edge Moor, DE	NS-Direct	Mahrt, AL	Meadwestvaco
A-14	Edge Moor, DE	NS-Direct	Riverwood Intl, GA	Graphic Packaging International
A-15	Edge Moor, DE	NS-Direct	Wabash, IN	Paperworks Industries
B-50	Edge Moor, DE	Meridian, MS	Garland, TX	Valspar Corp.
B-51	Edge Moor, DE	Chicago, IL	Groos, MI	NewPage Corporation
B-52	Edge Moor, DE	E. St. Louis, MO	Laredo, TX	DuPont Mexico (c/o Interamerica Forwarding)
B-53	Edge Moor, DE	Rouses Point, NY	Madawaska, ME	Twin Rivers Paper
B-55	Edge Moor, DE	Buffalo, NY	Port Huron, MI	Domtar Pulp & Paper Products Inc.
B-56	Edge Moor, DE	Mechanicville, NY; Ayer, MA	Portland, ME	Monson Companies Inc.
B-57	Edge Moor, DE	Chicago, IL	Portland, OR	Bulk Transportation
B-58	Edge Moor, DE	Chicago, IL	Quinnesec, MI	Verso Paper
B-59	Edge Moor, DE	Mechanicville, NY; Ayer, MA	Rileys, ME	Verso Paper
B-60	Edge Moor, DE	Mechanicville, NY; Ayer, MA	Rumford, ME	NewPage Corporation
B-62	Edge Moor, DE	Mechanicville, NY; Ayer, MA	Shawmut, ME	SAPPI NA
B-63	Edge Moor, DE	Chicago, IL	Snoboy, CA	Truck Rail Handling

[347] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Leslie Muir, North America Logistics Planner, DuPont Titanium Technologies.

[348] Although there are 25 case lanes, there are only 16 challenged rates because the NS segment for many of the movements is from the same origin to the same interchange point.

Lane #	Origin	Interchange	Destination	Customer
B-64	Edge Moor, DE	Streeter, IL	Snoboy, CA	Truck Rail Handling
B-65	Edge Moor, DE	Chicago, IL	St Paul, MN	Rock-Tenn
B-67	Edge Moor, DE	Meridian, MS	West Monroe, LA	Graphic Packaging International
B-68	Edge Moor, DE	Chicago, IL	Wheeling, IL	Valspar Corp.
B-97	Edge Moor, DE	Cincinnati, OH	New Johnsonville, TN	DuPont
B109	New Johnsonville, TN	Cincinnati, OH	Chapman, PA	Behr Process Corp.
B-111	New Johnsonville, TN	Chattanooga, TN	Morrow, GA	Sherwin Williams Company
B-124	New Johnsonville, TN	Chattanooga, TN	McDonough, GA	Behr Process Corp.

DuPont is captive to NS at the origin for all movements from Edge Moor and at the destination for all movements from New Johnsonville. In addition, DuPont is captive to NS at the origin and destination on Lanes A-11 through A-15.

Titanium dioxide is a white, non-hazardous compound that, because of its extreme white color, is used as a pigment in a variety of products, including plastics, cosmetics, paper, paints, and coatings. It can be manufactured as either a dry powder or wet slurry and is transported in dry or slurry form. Most grades of titanium dioxide are manufactured dry, shipped dry, and combined with water upon delivery to create a slurry. However, certain high-quality grades are manufactured and shipped wet, in slurry form. The titanium dioxide that DuPont ships on the case lanes is shipped in slurry form.

Truck. Trucking directly to customers from Edge Moor and New Johnsonville does not provide effective competition to NS rail service. For 21 of the 25 issue movements of titanium dioxide, trucking cannot compete even on price. For the other four lanes, there is stark evidence that NS is pricing to match higher cost alternatives. Finally, even if trucks were price

competitive, there are multiple remaining logistical obstacles that would dramatically increase the cost to DuPont.

First, direct trucking can only be an alternative for the Complaint Exhibit A issue movements because those are the only movements where the challenged NS rates apply to the same origin and destination as the direct truck rates. See DMIR, 4 STB at 292 (n. 13) and 293. Thus, direct trucking from the origin to destination cannot constitute alternative transportation for the Complaint Exhibit B movements.

Second, for 21 of the titanium dioxide issue movements (including all 5 of the Exhibit A movements), direct trucking is not economically feasible. Rather, direct trucking on these lanes is {{[redacted]}} more expensive than rail.[349] The Board has found market dominance where the rate difference is more than 10% after a rail rate increase. E.I. DuPont de Nemours & Co. v. CSXT Transp., Inc., STB Docket No. 42099, slip op. at 7 (served June 30, 2008).

On the 4 lanes where direct trucks are not at least 10% more expensive than rail, NS has priced up to the higher cost truck alternative. On lanes B-111 and B-124, where the truck rate is {{[redacted]}} and {{[redacted]}} greater than the direct rail rate, NS has increased the rate for its portion of the movements by {{[redacted]}} from 2009 to 2011.[350] Tellingly, the connecting carrier on these lanes, CSXT, has only increased its rate by {{[redacted]}} over the same period.

Pricing up to a higher cost alternative also explains lower truck rates on lanes B-67 and B-68, which measure 1,188 and 759 road miles, respectively. It simply is not credible for NS to claim that truck shipments, which require more labor and equipment and have higher fuel costs

[349] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder). Those 21 lanes are A-11, A-12, A-13, A-14, A-15, B-50, B-51, B-52, B-53, B-55, B-56, B-57, B-58, B-59, B-60, B-62, B-63, B-64, B-65, B-97, and B-109.

[350] See id. (indicating the truck rates in each lane); Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder) (showing the change in NS and the connecting carrier's rates over time).

than rail, are an effective competitive alternative to rail at such long distances. Also, on Lane B-68, NS increased its rate by {[redacted]} from 2009 to 2011, while the connecting carrier increased its rate by only {[redacted]}.[351] This underscores that the rate differential on this lane is a result of NS price increases, not the competitiveness of truck transportation.

Direct trucking also is not practical due to the additional storage needed to replace railcars, increased risk of spills, and special equipment requirements. DuPont relies on railcars to store titanium dioxide. At Edge Moor, DuPont pipes newly-produced titanium dioxide directly into holding tanks, from which DuPont can load railcars, tank trucks, and isotanks.[352] Because the holding tanks at Edge Moor do not have sufficient capacity, DuPont also loads titanium dioxide directly into railcars, which are used for storage until the titanium dioxide is actually shipped to the customer. Also, each week, DuPont loads railcars at Edge Moor based upon titanium dioxide orders for the following week.

To support the use of railcars for storage, DuPont has made significant investments. DuPont owns storage track with a capacity to hold 53 cars (empty and loaded) of titanium dioxide. If DuPont switched to trucking on the case lanes, it must strand a sizeable portion of its fleet of 397 dedicated titanium dioxide railcars.[353] In addition, DuPont would have to build a 150 dry metric ton weigh tank, which costs {{[redacted]}},[354] and add a truck scale and loading spot, which costs {{[redacted]}}.[355]

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[351] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

[352] An isotank is a 15 metric ton tank that is situated within a rectangular frame so that it can be used in containerized ocean transportation. DuPont uses the isotanks to ship titanium dioxide to Europe by ocean carrier.

[353] See Dup. Op. Workpaper "Railcar Leases by Lane" in "Railcars" folder.

[354] See Dup. Op. Workpaper "Slurry Storage Weigh Tank" in "Titanium Dioxide" folder.

[355] See Dup. Op. Workpaper "Truck Scale and Loading" in "Titanium Dioxide" folder.

Using trucks also increases the risk of costly spills. Because one tank car of titanium dioxide is equivalent to approximately 4.5 tank trucks, using trucks to transport titanium dioxide increases the opportunity for a spill during loading and unloading by a factor of at least four. Further, a titanium dioxide spill triggers a large, expensive response. Even though titanium dioxide is not hazardous, it is difficult and costly to clean because a full-scale excavation may be necessary if the slurry seeps into the ground.

DuPont's ability to use truck transportation for titanium dioxide also is constrained by equipment needs. Titanium dioxide must be shipped in stainless steel tank trucks without rubber lining to avoid rust contamination and discoloration. Because of this need, DuPont cannot use just any available truck to transport titanium dioxide slurry.

When DuPont does use trucks to transport titanium dioxide, it does so for reasons unrelated to transportation economics. If a customer is not rail-served, or purchases only small volumes, DuPont must use trucks. DuPont also uses trucks for expedited shipments to rail customers. For example, in July 2010, Edge Moor experienced production issues and shutdowns over a 30 day period. To avoid customer shutdowns[356] while DuPont resolved its production issues, DuPont needed to keep its customers supplied as leanly as possible. Accordingly, it used trucks to keep its customers supplied on a day-to-day basis. Similarly, in May and June 2010, DuPont increased trucking out of New Johnsonville in order to cope with rail delays and rail service cessation due to flooding.[357]

Transloading. Transloading is not an option for the five Complaint Exhibit A titanium dioxide issue movements because both the origin and destination on each movement are captive to NS. Thus, two transloads would be required on these lanes. For all 17 of the Complaint

[356] DuPont's paper mill customers cannot operate without titanium dioxide.

[357] See Dup. Op. Workpaper "Titanium Dioxide Truck Shipments" in the "Titanium Dioxide" folder.

Exhibit B issue movements that originate at Edge Moor, alternative transportation to NS would require DuPont to load trucks at Edge Moor and ship to a nearby {{[redacted]}} bulk terminal on CSXT in Wilmington, DE for transloading into railcars. The cost of doing so, however, is {{[redacted]}} more expensive than direct rail transportation for 16 of those 17 lanes.[358]

Even if transloading were cost competitive with direct rail service, it would be highly unorthodox to transload titanium dioxide from trucks into railcars and DuPont would have to make a significant infrastructure investment to do so. Although theoretically possible, DuPont does not transload titanium dioxide from trucks into railcars; it only loads railcars into trucks. Nor is DuPont aware of any other titanium dioxide producer that transloads from trucks into railcars. Because 4-5 trucks would be needed for every railcar loaded, DuPont would have to significantly increase its storage and truck loading capacity, as discussed above for direct trucking alternatives. Thus, those limitations apply in addition to the specific transloading limits discussed below.

Assuming that transloading physically is possible and the expanded truck loading infrastructure is in place, several costly logistical hurdles still remain. Today, DuPont washes its railcars after each load of titanium dioxide and performs routine inspections and maintenance at Edge Moor. DuPont also recycles the waste water from its washing facility back into the titanium dioxide production process, which is more environmentally sustainable and minimizes the cost of waste water treatment. Under a transload scenario, DuPont's railcars would not return to Edge Moor after each loaded movement. Therefore, either the bulk terminal would have to provide car-washing services for a fee, the cars would have to be switched between Edge

[358] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder). The only exception is Lane B-97, where transloading is {{[redacted]}} less costly. But as described in the subsection called "Lane Specific Rail Requirements," truck is not an option for this movement for other reasons.

Moor and the bulk terminal for washing after every movement, or the cars would have to be switched between the bulk terminal and another car washing facility after each movement.

To ensure product integrity, DuPont only uses carefully selected car washing facilities. There are only four DuPont-approved facilities in the entire country, at Altoona, PA; Victoria, TX; Cleveland, TX; and Hugo, OK. The nearest of these facilities to Edge Moor, in Altoona, PA, also is on the NS. Therefore, whether DuPont continues to wash its railcars at Edge Moor or sends them to Altoona, NS would be a participant in the movement.

Because transloading from rail to truck near the destination is more typical, the three lanes that originate at New Johnsonville have fewer obstacles to transloading. The economics, however, reveal higher transloading prices for two of those lanes. Lanes B-111 and B-124 have transloading prices that are more than {{[redacted]}} higher than direct rail.[359] Although Lane B-109 is {{[redacted]}} less, this customer prefers rail deliveries, as discussed in the subsection entitled "Lane Specific Rail Requirements." Moreover, NS rate increases totaling {[redacted]} since 2008, contrasted with the connecting carrier's {{[redacted]}}, indicate that NS is exercising market power to increase rates to match a higher cost alternative.[360]

Barge. DuPont does not barge titanium dioxide, is unaware of anyone else who does, and doubts that it ever has been done for all of the reasons presented below. Although Edge Moor and New Johnsonville are located on navigable waterways, significant obstacles to barging titanium dioxide from these origins exist.

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[359] See id.

[360] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

At New Johnsonville, DuPont has functional barge facilities, but it does not have the infrastructure for loading titanium dioxide into barges.[361] Even if this infrastructure was present, DuPont could not use barges on the titanium dioxide case lanes originating at New Johnsonville. The customers on these lanes consume, at most, 2 barges of titanium dioxide per year. Accordingly, each barge shipment that they receive would be subject to no less than 6 months of storage. Titanium dioxide cannot be stored for such extended periods. Extended storage causes the slurry at the top of the tank and along the tank walls to dry out and form hard, undispersible pigment particles that, even in low concentrations, cause the slurry to fall outside of its specifications. In addition, during these extended storage periods, bacteria develops within the slurry, contaminating it. For these reasons, DuPont advises customers to follow strict storage procedures that involve agitating, circulating, and humidifying the slurry hourly.[362]

At Edge Moor, the dock facilities are not suitable for use and require a substantial investment to rehabilitate and renovate. These facilities have not been utilized for at least 25 years and have fallen into such a state of disrepair that DuPont has restricted access to them for safety reasons. Moreover, the Edge Moor dock facilities are not outfitted with the piping, pumps, and storage tanks necessary to load barges with titanium dioxide. To make the facilities operational, DuPont would have to build land-based infrastructure, including pipes and pumps, to transport finished titanium dioxide approximately ½ mile from the production facility to the docks, perform extensive repairs to and reinforce the docks, construct containment structures to prevent spillage into the river during loading, and complete a substantial amount of dredging to remove the 25 years of accumulated silt and mud that inhibits barge access to the docks. Using

[361] DuPont will mothball the New Johnsonville dock facilities upon completion of an adjoining chlorine production plant, because chlorine is the only commodity that uses the New Johnsonville docks.

[362] DuPont Op. Workpaper "Handling Practices" in the "Titanium Dioxide" folder.

DuPont's estimates for chlorine barging at Edge Moor, less the equipment specific to handling chlorine, it would cost over {{[redacted]}} dollars just to rehabilitate the dock.[363] Additionally, DuPont would have to construct storage tanks because DuPont does not have enough storage tank capacity to load barges, which could hold 1,600 tons of titanium dioxide. DuPont estimates that the cost of building additional storage to support barge transportation is significant given that a 150 dry metric ton weigh tank costs {{[redacted]}}.[364] In addition, approximately {{[redacted]}} in recent upgrades to DuPont's rail yard and siding at Edge Moor would be stranded.

Also at Edge Moor, DuPont must overcome multiple regulatory hurdles to shipping titanium dioxide by barge. Under Delaware's Coastal Zone Act ("CZA"), the construction and extension of dock facilities and piers that serve a single manufacturing facility in Delaware's coastal zone, like Edge Moor, is allowable by permit only.[365] In addition, any new use of the Edge Moor dock facilities requires a permit.[366] Obtaining a permit is a difficult, expensive, and time consuming process for which there are no guarantees of success. A permit application requires an environmental impact statement and detailed descriptions of the proposed use, the aesthetic and economic effects, and impact on neighboring land uses.[367] In addition, any application that will result in a negative environmental impact must contain an offset proposal, which must more than offset the negative environmental impacts associated with the proposed activity.[368]

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[363] See Dup. Op. Workpaper "Chlorine Barge Estimate," cell K4, in the "Chlorine" folder.

[364] See Dup. Op. Workpaper "Slurry Storage Weigh Tank" in "Titanium Dioxide" folder.

[365] Del. Code tit. 7, §§ 7002(b), 7003, 7004(a); Del. Admin. Code tit. 7, § 101-6.1.

[366] Del. Admin. Code tit. 7, § 101-6.3.

[367] Id. § -8.1.

[368] Id. § -9.1.1. Because the primary medium at risk is the river environment and subaqueous soil, any DuPont offset would need to target spawning fish populations, benthic invertebrates, and submerged vegetation in the Delaware River.

Approval of a permit application is in the discretion of the Secretary of the Delaware Department of Natural Resources and Environmental Control ("DNREC").[369] When evaluating a permit application, the Secretary must consider economic effect, aesthetic effect, the supporting facilities required, effect on neighboring land uses, and local land use and conservation plans.[370] While the Secretary has 90 days to rule on an application, the 90-day clock does not start until the Secretary has determined that the application is complete.[371] Accordingly, DuPont's environmental counsel anticipate that it would take 8 months for the Secretary to rule on an application to rehabilitate and use the dock facilities at Edge Moor and cost at least $50,000 to $75,000 in legal, consulting, and application fees. Despite these efforts, there is a high likelihood that the Secretary will deny a permit to use the Edge Moor dock facilities to load titanium dioxide onto barges because of the potential for spills of titanium dioxide into the Delaware River, the need for extensive dredging, increased ship and barge traffic close to the riverbank, and the 1/2 mile separating the Edge Moor dock facilities from a picnic area on the riverbank at Fox Point State Park.

Even if DuPont could obtain a permit, additional regulatory hurdles remain. DuPont must obtain subaqueous land leases and permits,[372] certify that refurbishment or expansion of docking facilities is consistent with Delaware's coastal zone management program,[373] obtain water quality certification,[374] and obtain permits from the U.S. Army Corps of Engineers

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[369] Del. Code tit. 7, § 7005(a).

[370] Id. § 7004(b).

[371] Id. § 7005(a).

[372] Del. Admin. Code tit. 7, § 7504-2.3.3, -2.4.2.

[373] 16 U.S.C. § 1456(c)(3)(A).

[374] 33 U.S.C. § 1341(a)(1).

("USACE").[375] USACE permits are needed for the rehabilitation and any expansion of the dock facilities as well as the discharge of dredge or fill material.[376] Because this does not fall under nationwide permits for minimal impact activities,[377] DuPont would need to obtain an individual permit. The burden of obtaining an individual permit is "not trivial[;]. . . the average applicant for an individual permit spends 788 days and $271,596 in completing the process."[378] Moreover, there is no guarantee that a permit will be issued.

In order to obtain the USACE permits, DuPont must also certify to USACE and DNREC that any proposed activity affecting water use in the coastal zone complies with Delaware's approved coastal management program and will be conducted in a manner consistent with such program.[379] The certification must include a detailed description of the project and its associated facilities, a copy of the federal permit application package, an assessment of the effects of the project on any land or water use or natural resource of the coastal zone, findings that the proposed activity and associated facilities are consistent with the Delaware Coastal Zone Management Program ("DCMP").[380] DNREC's review of the certification includes twenty-five policy areas.[381] If DNREC finds that the proposed activity is inconsistent with the DCMP, it may object to the certification, thereby precluding USACE from issuing a permit unless the Secretary of Commerce, on appeal, overrides DNREC's objection.[382]

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[375] 33 C.F.R. §§ 322.3(a), 323.3(a).

[376] Id.

[377] See 33 C.F.R. Part 330.

[378] Rapanos v. United States, 547 U.S. 715, 721 (2006)

[379] 16 U.S.C. § 1456(c)(3)(A). See also DNREC, Delaware Coastal Management Program: Comprehensive Update and Routine Program Implementation §3.2 (2011).

[380] DNREC, supra note 379, § 3.2.2.

[381] Id. § 5.0.

[382] Id. § 3.2.6.

To obtain the necessary water quality certification, which is a prerequisite to obtaining the USACE permits,[383] and subaqueous land leases and permits, DuPont must submit a combined application containing engineering drawings and a wetlands delineation to the Wetlands and Subaqueous Lands Section ("WSLS") of DNREC, which will evaluate the application using a multitude of criteria, including: environmental impact, erosion control, impact on public use, impact on ecosystems, serviceability, impact of dredge or fill activities, and impact on Delaware surface water quality.[384] Applications for subaqueous lands permits and leases are subject to a public notice requirement and, if a meritorious request for hearing is received or WSLS finds a public interest in the project, a public hearing before a hearing officer.[385] Given the scope of any dock facility rehabilitation and expansion and its implication of the CZA, a hearing is likely. If the permit application is denied, there is no right of appeal.[386]

The presence of so many regulatory obstacles, the cost of pursuing the multiple required permits, and the potential that any single permit denial can block the entire project substantially eliminates any potential constraint that the possibility of barge competition might have on rail rates. See Gen. Elec. Co. v. Balt. & Ohio R.R., No. 38125S, 1984 ICC LEXIS 206, *6 (ICC served Oct. 12, 1984) ("[W]hether such a dock and unloading facility could actually be constructed is far from certain, since the record shows that environmental requirements of several jurisdictions would have to be met, and the government agencies involved might not permit construction for the handling of such a hazardous substance."). All of this is before

[383] 33 U.S.C. § 1341(a)(1).

[384] Del. Admin. Code tit. 7, § 7504-4.0

[385] Del. Code tit. 7, § 7207, 7208.

[386] Id. § 7210.

investing the millions of dollars required to build the infrastructure that is necessary to make barge transportation a physical possibility at Edge Moor.

For all of the issue movements, no customer purchases titanium dioxide in quantities that could take advantage of direct barge transportation. Therefore, DuPont would have to barge titanium dioxide to bulk terminals with large capacity storage tanks and ship to customers from those terminals by truck or rail. This, however, is impractical considering the susceptibility of titanium dioxide to degradation during storage. As mentioned above, extended storage causes slurry along the storage tank's extremities to dry out and clump into hard pigment particles, causing the slurry to fall outside of its specifications. In addition, bacteria propagate within the slurry and contaminate it during extended storage.

Moreover, there are significant questions as to whether titanium dioxide can be barged effectively. Unloading titanium dioxide from railcars and tank trucks is already a difficult task, because of the thick consistency of the slurry, which causes large heels to form within these containers. Barges, which would hold much larger quantities than even railcars, would magnify this unloading challenge, for which there currently is no solution.

Lane-Specific Rail Requirements. In addition to the multiple general factors discussed above, the following customers expressly require rail delivery in their purchase contracts with DuPont:

Case Lane	Contract Requirement
{{[redacted]}}	Pages 3 and 4 of the portion of the contract titled "Exhibit A, Scope of Work" specifies delivery in tank cars.[387]
{{[redacted]}}	Section 6, titled "Payment and Freight Terms" specifies railcar as the normal mode and trucks by request.[388]
{{[redacted]}}	Schedule A specifies tank cars for delivery to the case lane destination.[389]
{{[redacted]}}	Section 4, titled "Delivery and Changes," specifies tank cars, but permits the customer to make "changes in the delivery of the Product."[390]

The following customer-specific factors also favor rail shipment:

Lane #	Customer Consideration
A-12	In 2007, the customer transitioned away from trucks and toward railcars in an effort to simplify its supply chain through increased shipment size and lower frequency shipments. Accordingly, lane truck volumes dropped from {{[redacted]}} trucks in 2007 to {{[redacted]}}.
B-51	{{[redacted]}}
B-59	Customer requires truck and rail shipments. Two parts of the customer's plant use titanium dioxide but only one can accept railcar shipments and there is no way to transfer titanium dioxide that arrives by rail to the portion of the plant that cannot accept rail shipments.
B-60	Customer requires truck and rail shipments. Two parts of the customer's plant use titanium dioxide but only one can accept railcar shipments and there is no way to transfer titanium dioxide that arrives by rail to the portion of the plant that cannot

[387] See Dup. Op. Workpaper {{[redacted]}} in the "Titanium Dioxide" folder.

[388] See Dup. Op. Workpaper {{[redacted]}} in the "Titanium Dioxide" folder.

[389] See Dup. Op. Workpaper {{[redacted]}} in the "Titanium Dioxide" folder.

[390] See Dup. Op. Workpaper {{[redacted]}} in the "Titanium Dioxide" folder.

[391] See Dup. Op. Workpaper {{[redacted]}} Schedule A, in the "Titanium Dioxide" folder.

Lane #	Customer Consideration
	accept rail shipments.
B-65	Requires railcars for storage because storage tank is equivalent to only half a railcar. For this same reason, cannot receive railcars during cold winter months because the residual product that cannot be loaded into storage tank would freeze inside the railcar. Therefore, this customer has a spike in truck shipments during winter months.
B-97	This slurry product is only semi-finished and difficult to truck because its thicker consistency leads to the formation of large heels and makes the product difficult to pump out of a truck.
B-109	{ [redacted] } The customer, however, prefers railcars.

In summary, NS possesses market dominance over all of the issue titanium dioxide movements because:

- DuPont is captive to NS at the origin and destination on lanes A-11, A-12, A-13, A-14, and A-15.
- For all of the "B" lanes with an Edge Moor origin, DuPont is captive to NS at the origin.
- For all of the "B" lanes with a New Johnsonville origin, DuPont is captive to NS at the destination.
- Direct trucking rates are at least 10% higher than rail rates on 21 of the 25 lanes.
- Where direct trucking rates are below or less than 10% above rail rates, NS has priced up to higher cost truck alternatives.
- Trucks that carry titanium dioxide are specialized and must be made of stainless steel, which limits the ability of DuPont to use just any tank truck.
- Trucks are used primarily to serve non-rail destinations. For the issue movements, trucks are used in response to expedited customer requests in emergency situations caused by DuPont production issues, natural disasters, and to handle unforecasted spikes in customer consumption.
- Using trucks quadruples the risk of spills, which require costly and extensive cleanup.
- The New Johnsonville origin lanes have NS-captive destinations that do not have access to barge or vessel transportation.
- DuPont lacks the capability to load barges at Edge Moor and New Johnsonville without significant infrastructure investment at both plants and in intermediate transfer terminals.
- Storage at intermediate barge terminals, in order to serve multiple customers via barge, is not practical because of product integrity issues that arise with long-term storage.

- DuPont faces significant regulatory obstacles to obtain the permits needed to construct barge loading infrastructure at Edge Moor.

- DuPont's contracts with certain customers specify delivery in railcars.

- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

x. Titanium Tetrachloride[392]

DuPont has challenged the NS rate for transporting titanium tetrachloride ("TiCl4") from DuPont's facility at Edge Moor, DE to BASF in Pasadena, TX on Lane B-54. DuPont is captive to NS at Edge Moor.

TiCl4 is a Class 8 corrosive liquid compound that DuPont produces as an intermediate chemical during the manufacture of titanium dioxide. It is used as a catalyst in the production of coatings and as a raw material in the production of titanium sponge. When in contact with water, including normal atmospheric humidity, TiCl4 reacts violently, releasing hydrochloric acid, titanium dioxide, heat, and hydrogen chloride gas.[393] Inhalation of this vapor causes lung irritation that may result in pulmonary edema or death.[394] Accordingly, the Hazardous Materials Regulations classify TiCl4 as a material toxic by inhalation ("TIH").[395]

Direct truck. DuPont avoids trucking TiCl4 whenever possible for safety reasons. Because one railcar is equivalent to 4 trucks, trucking involves additional commodity handling and an increased risk of exposure to this TIH material. From 2006 to 2010, DuPont delivered only 3 trucks of TiCl4 to BASF's Pasadena facility and all of these shipments were rush orders occurring during a four-day period in June 2010 to prevent a plant shutdown.[396] Moreover, DuPont only shipped the trucks after performing a Transportation Route Assessment, which evaluates the safety risks along the route and identifies necessary safety precautions.[397]

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[392] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager—NA Region, and James Kanicky, Ore Products Business Manager.

[393] See Dup. Op. Workpaper "TiCl4 Emergency Response Sheet" in the "Titanium Tetrachloride" folder.

[394] Id.

[395] Id.; see also 49 C.F.R. § 172.101.

[396] See Dup. Op. Workpaper "Titanium Tetrachloride Truck Shipments" in the "Titanium Tetrachloride" folder.

[397] See Dup. Op. Workpaper "Moore e-mail" in the "Titanium Tetrachloride" folder.

DuPont's history of TiCl4 truck shipments from 2006 through 2010 further indicate that TiCl4 moves by truck only when necessary or risk is minimal. Over this five-year period, DuPont made 1,574 truck shipments of TiCl4 and these shipments were limited to export shipments to ports in ISO tanks, which are very short distance local moves, and special needs shipments.[398] In fact, of the 1,574 truck shipments, 404 were ISO tanks for export. Of the remaining 1,170 truck shipments, 1,153 were between Edge Moor, DE and Deepwater, NJ, which are only 13 miles apart. Of the remaining 17 truck shipments, three were the expedited shipments to Pasadena, as mentioned above, six were shipments for product qualification purposes to a potential new customer in Salt Lake City, UT in 2006, and eight were to a customer that does not have rail unloading capability.

While direct truck from Edge Moor to Pasadena costs less than rail, this is a result of NS raising its prices above a higher cost alternative. Pasadena is 1,472 road miles from Edge Moor. It simply is not credible for NS to claim that truck shipments of this TIH commodity, which require more labor and equipment and have higher fuel costs and accident risks than rail, are an effective competitive alternative to rail for transportation of this TIH material over such a long distance.

Moreover, the rate history for the issue movement confirms that NS has been inflating its prices to surpass the rates of higher cost alternatives. Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder), shows the change in rates for the issue movement over the past five years. Since 2007, the through rail rate has increased by {{[redacted]}}. Since 2009, when NS and its connecting carrier on this lane began pricing on a Rule 11 basis, NS's rate has increased by {[redacted]}, which is {[redacted]}, while the connecting carrier's rate has risen {{[redacted]

[398] See Dup. Op. Workpaper "Titanium Tetrachloride Truck Shipments" in the "Titanium Tetrachloride" folder.

[redacted]}}. Thus, although the direct truck cost for this lane is {{[redacted]}}[399] less than the direct rail cost, this pricing differential is a direct result of extraordinarily large NS rate increases since 2009. Because this extraordinary rate increase has not been accompanied by any loss of traffic to trucks, it serves as strong evidence of NS's market dominance.[400]

Finally, aside from the practical difficulties with shipping trucks over Lane B-54, direct trucking from the origin to destination is not alternate transportation for the bottleneck NS segment to which the challenged rate applies, which is Edge Moor to East St. Louis. See DMIR, 4 S.T.B. at 292 n.13, 293.

Transloading. Transloading is not a viable option for by-passing NS because of the safety hazards associated with transferring a TIH material. There is no transloading facility within the vicinity of Edge Moor that will handle a TIH.[401]

Water Transportation. The potential for barge and vessel transportation on Lane B-54 is not a competitive constraint on NS's rates. Barge-to-rail transloading and direct vessel transportation is not practical and requires overcoming significant obstacles.

First, the Delaware River is only accessible to river barges via the Atlantic Ocean. Because river barges cannot traverse the open ocean, TiCl4 would have to be transferred between barges and ocean vessels at both the origin and destination. Because this is a TIH material, DuPont does not transload TiCl4.

Second, Edge Moor does not have barge loading facilities. Its only dock facility is an abandoned dock that once was used to load iron chloride onto barges for offshore dumping. This

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[399] See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[400] E.g., FMC, 4 STB at 718 ("the fact that [a carrier] matches prices set by alternatives with significantly higher costs, while maintaining a dominant market share, is not enough to demonstrate effective competition"); Special Procedures, 353 I.C.C. at 929 ("the absence of any diversion after a reasonable time following a rate increase" is strong evidence of market dominance).

[401] See DuPont Workpaper "Transloading question e-mail" in the "Titanium Tetrachloride" folder.

dock is in a state of disrepair that would require an extensive infrastructure investment at Edge Moor to rehabilitate the dock, retrofit it for loading TiCl4, and building piping and storage to connect the dock with the DuPont facility. There is no need to even consider whether those infrastructure investments are warranted, however, because it is highly improbable that DuPont could obtain the permits required to rehabilitate the Edge Moor docks. Those obstacles, which arise under the Delaware Coastal Zone Act, are addressed in substantial detail in DuPont's evidence regarding chlorine and titanium dioxide. Rather than repeat that evidence and argument here, DuPont incorporates them by reference.[402] Moreover, if DuPont also switches to barge transportation at Edge Moor for other case commodities, such as titanium dioxide, pet coke, and chlorine, DuPont would have to construct new docks in addition to rebuilding the existing docks, further increasing costs and the likelihood of permit denials due to the increase in potential harm to the environment.

Even assuming that DuPont could secure the permits to rebuild the Edge Moor docks, the infrastructure costs alone for storage tanks, piping and pier construction would be prohibitively expensive. Using DuPont's estimates for chlorine barging at Edge Moor, which is another TIH material, it would cost {{[redacted]}} dollars to rehabilitate the dock and another {{[redacted]}} to install the piping, pumps, tanks, and other infrastructure necessary to store and pipe TiCl4 from the plant to the dock.[403]

[402] See Parts II-B-2.j. (chlorine) and II-B-2.w (titanium dioxide); see also Part I-A-2.b.(8).

[403] See Dup. Op. Workpapers "Chlorine DOME Estimate" and "Chlorine Barge Estimate", both in the "Chlorine" folder.

In summary, NS possesses market dominance over the issue titanium tetrachloride movement in Lane B-54 because:

- DuPont is captive to NS at the origin.
- TiCl4 is a TIH and the risk of a release is substantially higher for truck transportation of this movement 1,472 miles across the country.
- Lower direct truck rates over the 1,472 mile highway route indicates that NS is deliberately pricing well above its higher cost competition.
- The only truck movements on this lane illustrate that trucks have been used only in emergency situations and rail is the preferred transportation mode, even where rail is more expensive than truck, because of the safety risks.
- Using barges or vessels to transport TiCl4 from Edge Moor requires a substantial investment of approximately {{[redacted]}} to rehabilitate Edge Moor's abandoned dock facilities. In addition, it would take at least 2 years and $300,000 to obtain the necessary permits to begin construction. Also, it is highly probable that the permits would be denied under the Delaware Coastal Zone Act.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

y. Waste Flammable Liquid[404]

DuPont has challenged the NS rates for transporting waste flammable liquid ("WFL") from DuPont's facility at Lemoyne, AL (a/k/a Mobile or Axis) to two destinations:

Lane #	Origin	Interchange	Destination	Customer
A-16	Lemoyne, AL	NS-Direct	Giant, SC	Giant Cement
B-76	Lemoyne, AL	Meridian, MS	Artesia, MS	Energis (Geocycle)

DuPont is captive to NS at the origin and destination on lane A-16 and only at the origin on lane B-76.

WFL is a Hazard Class 3 flammable and combustible liquid. It is a highly flammable hazardous material, due to its extremely high methanol content, and it is a hazardous waste. DuPont does not intentionally produce WFL. Rather, WFL is a waste byproduct during the manufacture of insecticides. In order to dispose of WFL, DuPont sends it to an incinerator or to cement producers, which burn WFL as a fuel. In both cases, DuPont must pay the receiver to take the WFL. The receivers of both of the issue WFL movements are cement producers.

Truck. WFL can be shipped by rail or truck. However, direct trucking is not effective competition for direct NS rail service on Lane A-16 because the direct truck rate is {{[redacted]}} higher than the NS rate.

In contrast, the direct truck rate is {{[redacted]}} less expensive than rail on lane B-76; but, this disparity has been created by recent large rate increases from NS. Since 2008, the through rail rate has increased by {{[redacted]}}. Since the adoption of Rule 11 rates in 2009, the NS rate has increased by {[redacted]} compared with just a {{[redacted]}} increase by the connecting carrier, which strongly indicates that NS is responsible for this extraordinary rate increase.[405] Although

[404] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and Mark Mclendon, Master Scheduler at DuPont's Lemoyne facility.

[405] See Exhibit II-B-3 (Dup. Op. Workpaper "Case Lane Rate History" in the "Rates" folder).

DuPont's rail volumes have decreased in Lane B-76, that volume has not shifted to trucks,[406] which is evidence that trucks are not a competitive constraint for this movement. Moreover, notwithstanding the lower truck rate, direct trucking does not constitute alternative transportation for Lane B-76, because the challenged rate only applies to transportation from the origin to the interchange, not all the way to the destination. See DMIR, 4 STB at 292 (n. 13) and 293.

Transloading. Transloading does not makes sense for Lane A-16 because DuPont is captive to NS at both the origin and destination.

DuPont also cannot by-pass NS on lane B-76 by transloading. As mentioned above, DuPont is captive to NS at the origin, Lemoyne. DuPont has not been able to identify a bulk terminal between Lemoyne and Artesia that will transload WFL. Because WFL is a hazardous waste, bulk terminals that transload it must obtain permits from the Environmental Protection Agency ("EPA"). Moreover, under EPA regulations, WFL cannot be kept on site at a bulk terminal for more than 7 days. Because this regulatory burden is so great, most bulk terminals do not handle WFL.

In summary, NS possesses market dominance over the issue WFL movements because:

- DuPont is captive to NS at the origin and destination on Lane A-16 and at the origin on Lane B-76..
- The direct truck rate for Lane A-16 is {{[redacted]}} more expensive than the NS rail rate.
- The direct truck rate for Lane B-76 is {{[redacted]}} less than the through rail rate only after the rail rate increased by {{[redacted]}} since just 2008.
- There are no transloading facilities between Lemoyne and Artesia that handle WFL.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

[406] See DuPont Op. Workpaper "Waste Flammable Liquid Truck Shipments" in the "WFL" folder.

z. Zircon Sand[407]

DuPont has challenged the NS rates for transporting Zircon sand ("Zircon") from DuPont's mine at Starke/Lawtey, FL to Huntsville, AL on the following lanes:

Lane #	Origin	Interchange	Destination	Customer
B-116	Starke/Lawtey, FL	Decatur, AL	Huntsville, AL	Saint Gobain
B-117	Starke/Lawtey, FL	Decatur, AL	Huntsville, AL	Saint Gobain

On both lanes, DuPont is captive to NS at the destination. Although the lanes have identical segments, B-116 applies to transportation in private railcars and B-117 applies to transportation in NS-owned railcars.

Zircon is a mineral that DuPont extracts from open-pit surface mines in Starke, Florida. In addition to Zircon, DuPont mines ilmenite and staurolite at this same location. The only other Zircon mining site in North America is in Virginia and operated by a competitor. Over 95% of DuPont Zircon is sold domestically.

Zircon is a very pure form of sand that is clean and contains very few imperfections. Upon mining Zircon, DuPont processes it to remove foreign minerals, such as titanium and staurolite. DuPont then sells the Zircon in two grades, standard and premium, both of which are shipped on Lanes B-116 and B-117. Upon processing by DuPont's customers, standard Zircon is used to make abrasive products such as grinding discs and sandpaper, and premium zircon is used in higher-end products such as jet engines and industrial turbines. Because of its very small grain size, Zircon is highly susceptible to leakage and loss whenever handled.

Lanes B-116 and B-117 involve the transportation of premium and standard Zircon from the mine in Florida to DuPont's customer, St. Gobain, in Huntsville, AL. St. Gobain melts the Zircon in a furnace to remove silica, resulting in 99% pure zirconia. Then, St. Gobain sells the

[407] The evidence and testimony in this section is jointly sponsored by Mary Pileggi, Logistics Manager-NA Region, and James R. Kanicky, Ores Business Manager.

zirconia to steel producers. {{[redacted]}}

Truck. For economic and practical reasons, direct trucking is not effective competition for NS rail service. To transport Zircon by truck, DuPont can use pneumatic bulk trucks ("pneumatic trucks") or trucks carrying bulk bags of Zircon ("bag trucks"). Although both trucks carry the same amount of Zircon, pneumatic trucks are more costly than bag trucks. Direct truck rates for pneumatic trucks are {{[redacted]}} higher than rail on the case lanes, while rates for bag trucks are {{[redacted]}} less expensive than rail.[409] Despite their cost advantage over pneumatic trucks, bag trucks suffer from significant practical disadvantages that make them unsuitable for regularly transporting Zircon.

Using bag trucks poses safety risks for St. Gobain and increases the potential for product loss, which is a significant concern because Zircon is valued at {{[redacted]}}.[410] St. Gobain's facility is designed for unloading railcars from the bottom into a chute that feeds a conveyor to the Zircon storage silos. Thus, to unload bag trucks, St. Gobain uses a forklift to hold the 4,000 pound bags over the chute and then cuts them open using a utility knife. This is a difficult and potentially dangerous process for St. Gobain's employees and also increases the potential for product loss because some of the Zircon will get caught within crevices in the bags and bags are susceptible to being punctured by the forklifts. With pneumatic trucks, product loss is minimal and no safety issues exist with unloading the Zircon into the railcar unloading chute.

[408]See contracts in Dup. Op. Workpaper "St. Gobain Contracts" folder in the "Sand Zircon" folder.

[409]See Exhibit II-B-1 (Dup. Op. Workpaper "Direct Truck Costs" in the "Rates" folder).

[410]See DuPont Op. Workpaper "St. Gobain Invoice" in the "Sand Zircon" folder.

Notwithstanding the practical disadvantages of using bag trucks, DuPont has used bag trucks to ship Zircon to St. Gobain on an expedited basis. Through most of 2011, the market for Zircon was extremely short and Zircon consumers had to scramble to meet their supply needs. Considering the lack of market supply and that DuPont's Starke mine is one of the only two locations in the U.S. where Zircon is mined, DuPont occasionally must truck Zircon to customers to help them avoid shutdowns and other production delays. Thus, DuPont's truck shipments of Zircon, including its truck shipments to St. Gobain are attributable to the need for expedited transportation of Zircon.[411]

Moreover, direct trucking is not alternative transportation for any of the issue Zircon movements because DuPont has only challenged the NS bottleneck segment rates from the interchange point to Huntsville, AL. See DMIR, 4 S.T.B. at 292 n.13, 293.

Transloading. Transloading Zircon is not practical because it is more expensive than rail transportation and the extra handling would result in unacceptable product loss, which as indicated above, would be costly. The cost of transloading using pneumatic trucks is {{[redacted]}} higher than rail transportation.[412] As mentioned above, pneumatic trucks are necessary to support regular transportation to St. Gobain.

[411] See "Zircon Sand Truck Shipments" in the "Sand Zircon" folder (showing shipments concentrated within discrete periods, which is characteristic of emergency shipments).

[412] See Exhibit II-B-2 (Dup. Op. Workpaper "Transload Cost Analysis" in the "Rates" folder). For B-116, transloading would cost {{[redacted]}} more than using only rail. For B-117, transloading would cost {{[redacted]}} more than using only rail.

In summary, NS possesses market dominance over the issue Zircon Sand movements because:

- DuPont is captive to NS at the destination.
- {{[redacted]}}
- The direct truck rates for these movements are {{[redacted]}} higher than rail, using pneumatic trucks. Although less expensive, bag trucks are unsuitable for regular transportation on the case lanes.
- Delivering Zircon in bag trucks exposes DuPont and St. Gobain to costly product loss. Shipping bags by truck has safety implications for unloading.
- There is an increased likelihood of valuable commodity loss during transloading due to Zircon's very fine grain size.
- Transloading costs are {{[redacted]}} higher than rail.
- Due to the short market for Zircon, all trucking on this lane is conducted on an exception basis, where customer supply needs require faster transit times than those available on rail.
- Because DMIR precludes the Board from considering alternative transportation options between points other than those covered by the challenged rates, direct transportation options between the origin and destination are not transportation alternatives to the NS bottleneck segment.

PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

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

OPENING EVIDENCE AND ARGUMENT OF

E.I. DU PONT DE NEMOURS AND COMPANY

Volume III:
Stand-Alone Cost Evidence and Witness Qualifications

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CASE GLOSSARY

AEP Texas 2006	*AEP Texas Northern Co v. BNSF Ry.*, STB Docket No. 41191 (Sub-No. 1) (served Nov. 8, 2006)
AEP Texas	*AEP Texas Northern Company v. BNSF Railway,* STB Docket No. 41191 (Sub-No. 1) (served Sept. 10, 2007)
AEPCO	*Arizona Electric Power Cooperative, Inc. v. BNSF Railway Company and Union Pacific Railroad Company,* STB Docket No. 42113 (served Nov. 22, 2011)
APS	*Arizona Pub. Serv. Co. and Pacificorp. v. The Atchison, T. and Santa Fe Ry.*, 2 S.T.B. 367 (1997)
Bottleneck Decision	*Central Power & Light Company v. Southern Pac. Transp. Co, et al.*, 1 STB 1059 (1996), aff'd sub nom. *MidAmerican Energy Company v. Surface Transportation Board,* 169 F.3d 1099 (8th Cir. 1999)
Coal Rate Guidelines or Guidelines	*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)
Coal Trading Corp.	*Coal Trading Corp. v. The Baltimore & Ohio R.R., et al.*, 6 I.C.C. 2d 361 (1990)
Consolidated Papers	*Consol. Papers, Inc. v. Chi.& Nw. Transp., Inc.*, 7 I.C.C.2d 330 (1991)
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DMIR I and II	*Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry.*, 4 S.T.B. 64 (1998), on reconsideration, 4 S.T.B. 288 (1999)
Duke/CSXT	*Duke Energy Corp. v. CSX Transportation Inc.,* STB Docket No. 42070 (served Feb. 4, 2004)
Duke/NS	*Duke Energy Corp. v. Norfolk Southern Railway,* STB Docket No. 42069 (served Nov. 6, 2003)

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DuPont (Plastics)	*E.I. du Pont de Nemours and Company v. CSX Transportation, Inc.*, STB Docket No. 42099 (served June 30, 2008)
FMC	*FMC Wyo. Corp. v. Union Pacific Railroad Company*, 4 S.T.B. 699 (2000)
General Electric	*Gen. Elec. Co. v. Balt.& Ohio R.R.*, No. 38125S, 1984 ICC LEXIS 206 (ICC served Oct. 12, 1984)
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KCPL	*Kansas City P & L Co. v. Union Pac. R.R. Co.*, STB Docket No. 42095 (served May 19, 2008)
Major Issues	*Major Issues in Rail Rate Cases*, STB Ex Parte No. 657 (Sub-No. 1) (served Oct. 30, 2006)
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McCarty Farms	*McCarty Farms v. Burlington N., Inc.*, 3 I.C.C.2d 822 (1987)
Nevada Power II	*Bituminous Coal – Hiawatha, Utah to Moapa, Nevada*, 10 I.C.C.2d 259 (1994)
OG&E	*Oklahoma Gas & Electric Co., v. Union Pacific Railroad Company*, STB Docket No. 42111 (served July 24, 2009)
Otter Tail	*Otter Tail Power Co., v. BNSF Ry.*, STB Docket No. 42071 (served Jan. 27, 2006)

CASE GLOSSARY

PP&L	*PPL Montana, LLC v. The Burlington Northern and Santa Fe Ry. Co.*, 6 S.T.B. 286 (2002)
PSCo/Xcel	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served June 8, 2004)
PSCo/Xcel II	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served Jan. 19, 2005)
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TMPA	*Texas Municipal Power Agency v. Burlington Northern and Santa Fe Railway,* 6 S.T.B. 573 (2003)
WFA/Basin	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Sept. 10, 2007)
WFA/Basin II	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Feb. 18, 2009)
Wisconsin P&L	*Wisconsin Power and Light Co., v. Union Pacific Railroad,* 5 S.T.B. 955 (2001)
West Texas Utilities	*West Texas Utilities Co. v. Burlington Northern Railroad,* 1 STB 638 (1996), aff'd sub nom. *Burlington Northern Railroad v. STB,* 114 F.3d 206 (D.C. Cir. 1997)

ACRONYMS

The following acronyms are used:

AAR	Association of American Railroads
AASHTO	American Association of State Highway Officials
AEI	Automatic Equipment Identification
AEO	EIA's Annual Energy Outlook Forecast
AHM	Anhydrous Methylamines
AII-LF	All-Inclusive Less Fuel Index, published by AAR
AQM	Aqueous Methylamines
AREMA	American Railway Engineering and Maintenance-of-Way Assoc.
ARRA	American Reinvestment and Recovery Act of 2009
ATC	Average Total Cost
ATF	Across-the-Fence
ATV	All-Terrain Vehicle
B&B	Bridge and Building
BNSF	Burlington Northern Santa Fe Railway Company
C&S	Communications and Signals
CAGR	Compound Annual Growth Rate
CFS	2007 Commodity Flow Survey
cmp	Corrugated Aluminized Metal Pipe
CMP	Constrained Market Pricing
CN	Canadian National Railway
CNW	Chicago & NorthWestern
COBRA	Consolidated Omnibus Budget Reconciliation Act
CPI	Consumer Price Index
CSXT	CSX Transportation, Inc.
CTC	Central Traffic Control
CWR	Continuous Welded Rail
CY	Cubic Yards
DCF	Discounted Cash Flow
DFE	Difluoroethane
DME	Dimethyl Ether
DMF	Dimethyl Formamide
DMS	Dimethyl Sulfate
DOT	U.S. Department of Transportation
DP	Distributed Power
DRR	DuPont Stand-Alone Railroad
DTL	Direct to Locomotive Fueling
EDI	Electronic Data Interchange
EEO	Equal Employment Opportunity
EIA	Energy Information Administration
EOTD	End of Train Device
FED	Failed-equipment Detector
FRA	Federal Railroad Administration
FSC	Fuel Surcharges

G&A	General and Administrative
GDP-IPD	Gross Domestic Product – Implicit Price Deflator
GWR	Gross Weight on Rail
HCl	Hydrochloric Acid (a/k/a Muriatic Acid)
HDF	On-Highway Diesel Fuel Index
HR	Human Resources
ICC	Interstate Commerce Commission
IDC	Interest During Construction
IDS/IPS	Intrusion Detection System/Intrusion Prevention System
ISS	Interline Settlement System
IT	Information Technology
KCS	Kansas City Southern Lines
LAN	Local Area Network
MACRS	Modified Accelerated Cost Recovery System
MIT	Massachusetts Institute of Technology
MGT	Million Gross Tons
MLO	Manager of Locomotive Operations
MMF	Monomethyl Formamide
MMM	Maximum Markup Methodology
MOW	Maintenance of Way
MTO	Manager of Train Operations
NCREIF	National Council of Real Estate Investment Fiduciaries
NDGPS	Nationwide Differential GPS
NPI	NCREIF Property Index
NS	Norfolk Southern Railway Company
NT/PC	Network Personal Computer
O/D	Origin/Destination
OS	Operating Station
OSHA	Occupational Safety and Health Administration
PDO	Bio-Propanediol
Pet Coke	Calcined Petroleum Coke
PPI	Producer Price Index
PTC	Positive Train Control
R/VC	Revenue to Variable Cost
RCAF-A	Rail Cost Adjustment Factor, adjusted for productivity
RCAF-U	Rail Cost Adjustment Factor, unadjusted for productivity
RMI	A GE Transportation Company
RMS	RMI's Revenue Management Services System
ROW	Right of Way
RSIA	Rail Safety Improvement Act of 2010
RTC	Rail Traffic Controller Model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
SEC	Securities Exchange Commission
SO3	Sulfur Trioxide
SPLC	Standard Point Location Code
STB	Surface Transportation Board

STCC	Standard Transportation Commodity Code
STEO	Short-Term Energy Outlook
T&E	Train and Engine
TCS	Triple Crown Services
TDIS	Thoroughbred Direct Intermodal Services
TiCl4	Titanium Tetrachloride
TiO2	Titanium Dioxide
TMS	RMI's Transportation Management Services System
TRN	NS Train Event Train Symbol
UP	Union Pacific Railroad
UPS	Uninterruptible Power Supply
URCS	Uniform Railroad Costing System
WAN	Wide Area Network
WFL	Waste, Flammable Liquid
WTI	West Texas Intermediate

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Part III-A

PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

E. I. DUPONT DE NEMOURS AND COMPANY	)	
Complainant,	)	
v.	)	**Docket No. 42125**
NORFOLK SOUTHERN RAILWAY COMPANY	)	
Defendant.	)	

PART III

STAND-ALONE COST

A. STAND-ALONE TRAFFIC GROUP

The testimony in this Part is being sponsored by Thomas D. Crowley, Michael E. Lillis, Robert D. Mulholland and Sean D. Nolan, all of L.E. Peabody & Associates, Inc. Their credentials are detailed in Part IV and summarized herein.

For the last forty-one (41) years, Mr. Crowley has been analyzing and evaluating economic and transportation options available to users of all transportation modes, as well as the transporters of products. In addition to the railroads, pipelines and truck transporters, Mr. Crowley has assisted shippers of chemical traffic, coal and aggregate traffic, grain and agriculture traffic, lumber and raw material traffic analyze and evaluate different transportation options available to them in both competitive and captive environments in all parts of the United States. Mr. Crowley has sponsored economic evidence in every maximum rate proceeding based on the stand-alone cost test filed at the STB and its predecessor agency, the ICC, since the adoption of the 1985 *Guidelines.*

Mr. Lillis has more than twenty-five (25) years of experience solving economic, transportation and fuel supply problems for different shippers throughout the United States. He has performed extensive analyses in the area of stand-alone costing including traffic group identification, route layout, design and construction costs, revenue development, forecasting and the development of detailed operating plans for various stand-alone railroads.

Mr. Mulholland has over sixteen (16) years of experience conducting and directing studies, analyzing many different facets of the freight transportation industry, with an emphasis on economic and policy issues. He has worked in both the private and public sectors with or for shippers, carriers, facility operators, and regulators. Much of his work has focused on the operations, cost and pricing structures of the rail and trucking industries. He has developed and sponsored evidence regarding traffic selection, shipment routing, and traffic and revenue forecasts in several rate reasonableness proceedings before the STB.

Mr. Nolan has spent his twenty (20) year consulting career evaluating railroad cost of service, pricing and operations issues on behalf of shippers and government departments and agencies. The nature of his work has been supporting shippers in their procurement initiatives including the purchasing of fuel, transportation services, equipment and management of inventories. His development and analysis of alternative scenarios have been supported by tailored financial models used to estimate cost reductions and savings, actual versus budgeted variances, revenue to variable cost of service relationships, cash flows, and break-even and sensitivity analyses.

A more detailed description of each of the above witnesses' credentials is included in Part IV of this opening evidence.

The DRR is made up of 7,273 route miles. In addition, DRR will operate over 819 miles under trackage rights or joint facility agreements (as NS does today).[1] The DRR system includes route miles in twenty (20) states – Alabama, Delaware, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia and West Virginia. A schematic of the DRR system appears in Exhibit III-A-1.

The DRR stand-alone traffic group and associated revenues are discussed in the remainder of this Part III-A under following topical headings:

1. Stand-Alone Railroad Traffic
2. Re-routed Traffic
3. Volumes (Historical and Projected)
4. Revenues (Historical and Projected)

1. <u>Stand-Alone Railroad Traffic</u>

The DRR transports a broad range of commodities over its system, similar to what NS does over the same rail lines today. The DRR traffic group was developed using NS car and container waybill data and NS car and intermodal event data for the June 1, 2009 through December 31, 2010 time period, which were produced by NS in response to DuPont discovery requests.

As discussed in more detail in Part III-A-3 below, the waybill and car/intermodal event data was used in conjunction with several other files that were provided by NS in multiple disparate formats and with varying levels of common data fields that did not always enable efficient and/or complete database linking. The processes used to link the tables and difficulties encountered and overcome in developing those processes are detailed in Exhibit III-A-2.

[1] Total operating route miles = 8,101. *See* e-workpaper "DUPONT RR Route Miles Opening.xlsx" at level "DUPONT RR Miles".

Like NS, the DRR traffic includes chemical, intermodal, agricultural, coal, automotive, metals, paper, and construction materials shipments.[2] A detailed summary of the 2010 traffic group for the DRR is included in our workpapers.[3]

The DRR moves its shipments in the same manner that NS handles the traffic today on intermodal, unit, manifest (mixed general freight), and local trains. The DRR 2010 traffic is made up of { } agricultural products, { } metals, { } construction materials, { } paper, { } chemicals, { } automotive, { } coal, and { } intermodal on a carload or container basis. The 2010 carloads/containers and net tons associated with this traffic are shown in Table III-A-1 below.

Table III-A-1
Summary of DRR 2010 Carloads/Containers and Net Tons

	2010 Traffic Data		
Commodity	**Carloads/ Containers**	**Net Tons**	**Percent of Col (2) Total**
(1)	(2)	(3)	(4)
1. Agricultural Products (10)	{ }	{ }	{ }
2. Metals(20)	{ }	{ }	{ }
3. Construction Materials (25)	{ }	{ }	{ }
4. Paper (30)	{ }	{ }	{ }
5. Chemicals (40)	{ }	{ }	{ }
6. Automotive (60)	{ }	{ }	{ }
7. Coal (80)	{ }	{ }	{ }
8. Intermodal (IM)	{ }	{ }	{ }
9. Total	6,199,201	340,508,985	100.0%

Source: *See* e-workpapers "2010 IM.xlsx"; "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx".
NOTE: Numbers or letters in ( ) = NS commodity code

[2] The traffic and corresponding NS commodity code groupings include: Agriculture (10), Chemicals (40), Automotive (60), Coal (80), Intermodal (IM), and "General Merchandise" consisting of Metals (20), Construction (25), and Paper (30).

[3] *See* e-workpapers "2010 IM.xlsx"; "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx".

The DRR 2010 traffic consists of approximately 6.2 million carloads/containers or 340.5 million tons as shown in Table III-A-1 above.

2. Re-routed Traffic

As detailed further in Part III-C, the routing of certain trains moving on the DRR differs in part from the routing followed by the corresponding trains on NS rail lines. These re-routes are entirely internal to the DRR. That is, the operational change only affects the manner in which the trains move between the DRR on-junction and the DRR off-junction, and any trains that carry "cross-over" traffic are still interchanged with NS at a point along the actual route of movement. Board precedent permits such re-routes as long as they are reasonable, and do not adversely impact the quality of service that the customers in question otherwise would receive from NS.[4] The DRR re-routes meet these standards. The four (4) DRR segments over which trains will be re-routed are discussed below.

a. Bannon, OH to Kellysville, WV

NS has two alternative north-south routes in Ohio/West Virginia over which it moves trains between Bannon, OH and Kellysville, WV. One is via Chillicothe, OH and Kenova, WV, and the other is via Point Pleasant, WV and Belle, WV. The DRR will build only the eastern route via Point Pleasant, WV and Belle, WV and will move all selected through traffic, except intermodal and auto traffic, over the constructed segment. Intermodal and auto traffic will remain on the western route where NS moves it in the real world and will be interchanged to/from NS at Chillicothe, OH and Kellysville, WV. Because NS actually uses the chosen route (which is 0.3 miles shorter than the alternative[5]), and the RTC model results demonstrate that the "real world" service level is maintained, this DRR re-route is valid.

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[4] *See TMPA,* at 594-595; *AEP Texas* at 11.

[5] *See* e-workpaper "PERT_MILES.xls."

b. Altavista, VA to Riverton Jct.,VA

NS has two alternative north-south routes in Virginia over which it moves trains between Altavista, VA and Riverton Jct, VA. One is via Roanoke, VA and Waynesboro, VA, and the other is via Lynchburg, VA and Manassas, VA. The DRR will move all selected through traffic via Roanoke, VA and Waynesboro, VA. The chosen route is 8.3 miles longer[6] than the real-world alternative but the RTC model results demonstrate that the "real world" service level is maintained. Therefore, this DRR re-route is valid.

c. Roanoke, VA to Abilene Cross, VA

NS has two alternative east-west routes in Virginia over which it moves trains between Roanoke, VA and Abilene Cross, VA. One is via Lynchburg, VA and the other is via Altavista, VA. The DRR has no need for both routes, and will build only the southern route via Altavista, VA and will move all selected through traffic over the constructed segment to maximize DRR traffic density and minimize cost. Because NS actually uses the chosen route (which is 4.3 miles shorter than the alternative[7]), and the RTC model results demonstrate that the "real world" service level is maintained, this DRR re-route is valid.

d. Green, GA to Bremen, GA

NS has two alternative north-south routes in Georgia over which it moves trains between Green, GA and Bremen, GA. One is via Cedartown, GA and the other is via Austell, GA. The DRR will move unit coal train shipments destined for Wansley and Yates via Austell, GA. Although the chosen route is 38.1 miles longer[8] than the real-world alternative, the RTC model

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[6] Id

[7] Id

[8] Id

results demonstrate that the actual historical service level is maintained, and this DRR re-route is valid.

As discussed in Part III-C-3, while some of the routes selected by the DRR are somewhat longer, all are reasonable under the *TMPA* and *AEP Texas* standards because:

a. The re-routes will not alter the operations of the residual NS, or require it to incur any additional costs;

b. The DRR will construct sufficient infrastructure on the constructed routes to maintain or increase operational efficiency and improve performance;

c. DuPont's RTC Model simulation of the DRR's operations shows average transit times for affected trains that are equal to or faster than those recorded by NS for 2010; and/or

d. In some cases, the route is shorter than the actual route and therefore presumed to be more efficient.[9]

3. <u>Volumes (Historical and Projected)</u>

The DRR begins operating on June 1, 2009. The DRR traffic group is composed of: (1) actual selected NS traffic (including issue traffic) moving from the start date through the end of 2010, and (2) forecasted traffic volumes over the January 1, 2011 through May 31, 2019 time period.

For all commodity groups (see Table III-A-1 above), the 2011 through 2015 DRR volumes were projected by adjusting the actual 2010 volumes using an annual volume change index developed from NS internal shipment forecasts provided in discovery. Specifically, NS produced the 2011-2015 internal forecasts it developed in December 2010. On a commodity-by-commodity group basis, DuPont aggregated the NS forecasted carload and container totals and developed year-over-year volume change indexes. DuPont then applied the annual volume change indexes it developed from the NS forecast data to the selected 2010 DRR movements

[9] *See Duke/NS* at 26 where the STB stated "If a rerouting shortens the distance, the Board will presume it is acceptable, unless the defendant railroad demonstrates otherwise."

based on the 2-digit "AR_MAJOR_COMMODITY_GRP" code provided in the NS waybill data. Aggregation of forecast data on a commodity-by-commodity group basis was necessary to maintain consistency between the traffic volume forecast and the train forecast because shipments that move together on a given train may be forecasted to grow at different rates in the NS forecast.

By developing commodity-by-commodity group-specific growth rates, DuPont was able to accurately reflect forecasted volume growth in the peak year train list. This aggregate approach is also consistent with the model accepted by the STB in *CP&L*.[10] In *CP&L*, the Board recognized that coal business in the east constantly shifts on an O/D pair basis and that an O/D pair-specific approach to forecasting the traffic group would be too restrictive and result in understated volume growth. The same holds true for this case.[11] Although some of the historical movements do not appear in the NS forecast (and would be excluded from the DRR volume forecast using an O/D specific approach), the forecast includes other comparable movements that are not included in the historical data. Therefore, including only the historical lanes would not be reflective of the actual system-wide growth NS projects.

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[10] *See CP&L* at 16-18.

[11] Although the issue in *CP&L* was limited to coal volume forecasting, the principles behind the Board's decision in that case are relevant to the forecast of coal and other commodities in this case, and DuPont applied the *CP&L* volume forecasting methodology to all selected movements in its forecast model. As stated by the STB in its December 23, 2003 *CP&L* decision, a customer may ship from one mine in one year, then shift to another the next year, and back to the first mine in the following year. Similarly, a customer may not ship from a SARR-served mine in the base year but it may do so in some or all subsequent years. Consequently, requiring exact origin-destination matches between forecasted traffic volumes and the selected base year is unduly restrictive and does not fairly reflect the traffic that would be available to the SARR in any given year. The better (and Board-endorsed) approach is to view the base year traffic group selected by the shipper as a snapshot that is reflective of the coal traffic that can reasonably be assumed to be available to the SARR for any given year of the model period. Thus, the fact that some traffic would not continue to move from a specific origin to a specific destination throughout the SAC analysis period does not mean that other traffic would not move from the mines served by the SARR. It is therefore reasonable to treat the base traffic group selected by the shipper as a representative traffic group for all modeled years. Theoretically there is no difference between coal and other commodities in this regard, so we have extended this Board approved logic to cover all existing carload movements on the SARR.

For the January 2016 through May 2019 time period, DRR volumes were determined by adjusting the prior year volume by the 2-digit commodity-specific[12] compound annual growth rate ("CAGR") developed utilizing 2 years of NS actual and 5 years of NS internal forecast data representing the 2009 to 2015 DRR time periods.[13] The average tons per car will remain the same throughout the study period.

Table III-A-2 below summarizes the year-over-year DRR growth rates by NS-designated commodity group.

Table III-A-2
DRR Traffic Growth Rates by NS Commodity Group

Time Period	Agriculture (Code 10)	Chemicals (Code 40)	Automotive (Code 60)	Coal (Code 80)	Other Freight (Code 20/25/30)	Intermodal (Code IM)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. 2010	XXX	XXX	XXX	XXX	XXX	XXX
2. 2011	{ }	{ }	{ }	{ }	{ }	{ }
3. 2012	{ }	{ }	{ }	{ }	{ }	{ }
4. 2013	{ }	{ }	{ }	{ }	{ }	{ }
5. 2014	{ }	{ }	{ }	{ }	{ }	{ }
6. 2015	{ }	{ }	{ }	{ }	{ }	{ }
7. 2016	{ }	{ }	{ }	{ }	{ }	{ }
8. 2017	{ }	{ }	{ }	{ }	{ }	{ }
9. 2018	{ }	{ }	{ }	{ }	{ }	{ }
10. 5/31/2019	{ }	{ }	{ }	{ }	{ }	{ }

Source: e-workpaper "DRR Traffic Revenue Forecast – OPEN.xlsx".

[12] The NS database code that reflects the 2-digit commodity is "AR_MAJOR_COMMODITY_GRP."

[13] *See AEPCO* at 23.

a. Merchandise Traffic

Merchandise (or "General Freight") traffic handled by the DRR was developed as described above. Some of the merchandise traffic originates and/or terminates on the DRR and some moves in overhead service. Table III-A-3 below summarizes the commodity groups, carloads, and tons moved in general freight service over the DRR in 2010.

Table III-A-3
Summary of DRR 2010 Merchandise Traffic

NS Major Commodity Group (1)	Carloads (2)	Net Tons (3)
1. Agriculture Products (10)	{ }	{ }
2. Metals (20)	{ }	{ }
3. Construction Materials (25)	{ }	{ }
4. Paper (30)	{ }	{ }
5. Chemicals (40)	{ }	{ }
6. Automotive (60)	{ }	{ }
7. Total	2,082,449	170,492,459

Source: *See* e-workpapers "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx".
Note: Numbers in ( ) = NS commodity code.

Merchandise carloads and tons handled by the DRR during each study year are shown in DuPont's workpapers. [14]

b. Intermodal Traffic

The intermodal traffic handled by the DRR is developed as described above. Some of the intermodal traffic is originated and/or terminated on the DRR system, and some moves in overhead service on the DRR. Table III-A-4 below summarizes the 2010 containers moved by the DRR in intermodal service by customer.

[14] *See* e-workpapers "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx".

Table III-A-4
Summary of DRR 2010 Intermodal Traffic

	Transporter (1)	Containers (2)
1.	JB Hunt Transport Inc.	{ }
2.	Triple Crown Services	{ }
3.	Hub Group Inc.	{ }
4.	United Parcel Service Inc.	{ }
5.	Hanjin Shipping Company Ltd.	{ }
6.	Maersk Inc.	{ }
7.	NYK International	{ }
8.	The Railbridge Corp.	{ }
9.	Hub Group	{ }
10.	Hapag-Lloyd America Inc.	{ }
11.	Alliance Shippers Inc.	{ }
12.	OOCL USA Inc.	{ }
13.	Rail Bridge	{ }
14.	Interdom Partners Ltd.	{ }
15.	Cosco North America Inc.	{ }
16.	TDIS	{ }
17.	All Other	{ }
18.	Total Intermodal Traffic	2,929,465

Source: *See* e-workpaper "2010 IM.xlsx."

Intermodal containers handled by the DRR for each year of the DCF model are shown in DuPont's workpapers.[15]

c. Coal Traffic

The coal traffic handled by the DRR is developed as described above. The DRR will serve 23 origin coal mines directly and will receive trainloads of coal in interchange from NS and other railroads. Coal moving over the DRR terminates at generating stations and industrial facilities located on the DRR system and will be interchanged (interline forwarded) with NS and other railroads that will transport this traffic to electric utilities, marine coal terminals or industrial facilities located off the DRR system.

Electric utility coal volume growth was capped at an 85 percent plant capacity level at identified generating stations consistent with prior STB decisions in rate reasonableness

[15] *See* e-workpaper "2010 IM.xlsx."

proceedings involving the forecasted growth of coal to electric utilities. Because capping the amount of traffic to individual generating stations results in overall DRR coal volumes below the level that would result from universal application of the aggregate growth factor implicit in the NS coal volume forecast (adjusted by the annual growth factors described above), DuPont recalibrated the growth factor for non-capped generating stations to accommodate the give-and-take needed to retain the overall NS growth projections. For example, assume a SARR serves two coal customers and each shipped 1 million tons in the base year (2 million tons in total). Also assume an aggregate forecast growth rate of 10 percent in year two, or 1.1 million tons to each generating station for a total of 2.2 million tons. Now assume one plant is capped at 1.05 million tons based on the 85 percent capacity factor limitation. The foregone growth from the limited generating station would be moved to the generating station with no capacity limit. In effect, one generating station would be receiving 1.05 million tons and the other 1.15 million tons resulting in the retention of the original aggregate 10 percent growth projection.[16]

DuPont's workpapers[17] show the on and off system coal destinations and total tons of coal handled by the DRR for each year of the DCF model.

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[16] *See AEPCO* at 21.

[17] *See* e-workpapers "2010 IM.xlsx"; "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx".

d. Peak Year Traffic

The peak traffic year for the DRR will be June 1, 2018 through May 31, 2019, the final year of the ten year SAC analysis period. A summary of the peak year traffic is shown in Table III-A-5 below.

Table III-A-5
Summary of DRR Peak Year Traffic –June 2018- May 2019

Traffic Type (1)	Carloads/ Containers (2)	Tons (3)	Percent of Col (2) Total (4)
1. General Freight	{ }	{ }	{ }
2. Coal	{ }	{ }	{ }
3. Intermodal	{ }	{ }	{ }
4. Total	9,778,343	492,609,078	100.0%

Source: e-workpaper "III-A-Table.xlsx."

4. Revenues (Historical and Projected)

DuPont developed total movement revenue for each selected movement using the revenue and revenue adjustment data provided by NS in discovery for the June 1, 2009 through December 31, 2010 time period. DuPont then forecasted the movement revenues for each year of the SAC analysis period based on the methodology below. DuPont allocated the movement revenues between the DRR and residual NS using the Board's modified average total cost ("ATC") methodology. A description of the general process DuPont used to develop movement revenues (including forecasted revenues) by traffic type is outlined below and followed by a discussion of the development of DRR revenue for each movement.

Calculating base net revenues was a difficult and cumbersome process. The difficulty arose from the nature and scope of the waybill revenue data and the revenue adjustment data provided by NS in discovery. Specifically, NS provided revenue data in an inconsistent manner

in the waybill file, in multiple files, and in multiple different media types containing multiple record layouts and few common data fields that would enable efficient and precise linking of files. Exhibit III-A-2 contains a detailed description of the problems encountered and solutions developed to process and utilize the complex, disparate, and extremely voluminous data NS provided in an orderly, automated, repeatable way. There is no doubt that our automated model was unable to make positive links between and among the many data tables for some shipments. These broken links are due entirely to data deficiencies and were unavoidable in the development of our system of straightforward, intuitive, and understandable scripts and models to pull all the disparate data sources together in a way that facilitated the SAC analysis.

a. Historical Revenues

DuPont developed movement revenues, (which included fuel surcharges, absorbed switching charges, other revenue claims and handling/haulage settlement payments) for each unique shipment[18] handled by the DRR. A unique shipment is defined by Origin/Destination ("O/D") pair, commodity group, and contract, if available. Using this data, NS movement revenues were developed as follows:

1. For merchandise, coal and non-TCS/TDIS[19] intermodal moves, the following fields were summed:[20]
   a. Line Haul Revenues
   b. Fuel Surcharge Revenues
   c. Accounts Receivable Adjustments
   d. Other NS Revenue Adjustments
   e. Contract Refunds
   f. Dumping Amounts
   g. Net Switching Payments (where applicable)[21]

[18] A shipment is defined as a car/container or group of cars/containers moving under the same waybill.

[19] NS classifies intermodal shipments the following three ways: 1) intermodal; 2) TCS= Triple Crown Services; and 3) TDIS= Thoroughbred Direct Intermodal Services.

[20] All revenue fields were summed because negative revenue adjustments were captured as negative values in the data processing models. For example, contract refunds are recorded as negative amounts.

[21] Switching charges/payments were provided in separate data tables and often could not be positively linked to the waybill data based on the common fields provided. To the extent that links could be made, switching charges were considered in the development of NS movement revenues.

h. Net Handling Line Payments (where applicable)[22]
i. Net Haulage Receivable Payments (where applicable)[23]

2. For TDIS Intermodal moves, the following fields were summed:
   a. TDIS Net Revenues (total revenues less drayage expenses)
   b. Fuel Surcharge Revenues
   c. Accounts Receivable Adjustments
   d. Other NS Revenue Adjustments
   e. Contract Refunds
   f. Dumping Amounts
   g. Net Switching Payments (where applicable)
   h. Net Handling Line Payments (where applicable)
   i. Net Haulage Receivables Payments (where applicable)

3. For TCS Intermodal moves, the following fields were summed:
   j. TCS Net Revenues (total revenues less drayage expenses)
   k. Fuel Surcharge Revenues
   l. Accounts Receivable Adjustments
   m. Other NS Revenue Adjustments
   n. Contract Refunds
   o. Dumping Amounts
   p. Net Switching Payments (where applicable)
   q. Net Handling Line Payments (where applicable)
   r. Net Haulage Receivables Payments (where applicable)

b. Projected Revenues

DRR revenue forecasts for 2011-2019 were developed using: (1) NS 2010 traffic and revenue data; (2) NS pricing authorities; (3) NS internal revenue forecasts; and (4) publicly available forecasts of key economic indices.

Table III-A-6 summarizes the revenue forecast procedures that DuPont used during the study time period.

[22] Handling Line charges/payments were provided in separate data tables and often could not be linked to the waybill data based on the common fields provided. To the extent that links could be made, handling line charges were considered in the development of NS movement revenues.

[23] Haulage receivable payments were provided in separate data tables and often could not be linked to the waybill data based on the common fields provided. To the extent that links could be made, haulage receivables payments were considered in the development of NS movement revenues.

Table III-A-6
Summary of Revenue Forecast Procedures

NS Major Commodity Group (1)	Study Period 2011-2015 (2)	Study Period 2016-5/31/19 (3)
Revenue Less Fuel Surcharge		
1. Agriculture (10)	NS Internal Forecasts	All-LF [1/]
2. Metals (20)	NS Internal Forecasts	All-LF [1/]
3. Construction (25)	NS Internal Forecasts	All-LF [1/]
4. Paper (30)	NS Internal Forecasts	All-LF [1/]
5. Chemicals (40)	NS Internal Forecasts	All-LF [1/]
6. Automotive (60)	NS Internal Forecasts	RCAFU [1/]
7. Coal (80)	NS Internal Forecasts	AEO East Escalator [2/]
8. Intermodal (IM)	NS Internal Forecasts	All-LF [1/]
Fuel Surcharges ("FSC")		
9. All Commodity Groups	NS WTI FCS Program [3/]	NS WTI FSC Program [3/]

[1/] Rail Cost Adjustment Factor Forecast, March 2012, Global Insight. If there is no FSC in 2010 actual data, RCAF-U is applied.
[2/] Transportation Escalator from the Annual Energy Outlook 2012, 2009-2035
[3/] EIA 2012 forecasts of WTI in its Short Term and Annual Energy Outlooks.

As summarized in Table III-A-6 above, DuPont adjusted the "Revenues Less Fuel Surcharge" portion of revenues during the 2011-2015 time period, based on NS' internal forecasts. During the 2016-5/31/19 time period, DuPont used the Global Insights March 2012 forecast of the AAR All Inclusive Index Less Fuel ("AII-LF") for all commodities except coal. Coal rates were adjusted using the annual percentage change in the 2012 AEO's Transportation Rate Escalator for the Eastern U.S., consistent with Board precedent.[24]

DuPont's forecasting procedures for the 2011 through 2015 portion of the study period, for each commodity group shown in Table III-A-1 above, are described as follows:

[24] EIA uses its Transportation Rate Escalators to forecast future coal transportation prices. It applies the escalators based on coal origins. EIA uses its Eastern Escalator for coal originating east of the Mississippi River, and its Western Escalator for coal originating west of the Mississippi River. Coal produced in the Powder River Basin or Rocky Mountains and destined to locations east of the Mississippi River would have transportation rates adjusted based on the Western Escalator. *See, e.g.*, *WFA/Basin* at 30; *PSCo/Xcel* at 55.

1. DuPont forecasted the revenues by developing indices based on the NS forecasts that separately recorded "Revenues Less Fuel Surcharge" and "Fuel Surcharges" ("FSC") for all commodity groups;

2. DuPont restated "Revenues Less Fuel Surcharge" on an average per unit basis for each forecast year from 2011-2015 by dividing the applicable "Revenues Less Fuel Surcharge" by the corresponding shipments in the NS provided forecasts for each commodity group. DuPont then developed an annual growth rate for each commodity group based on the annual average per unit revenues;

3. For the "Revenues Less Fuel Surcharge", DuPont applied either the commodity-group-specific revenue-per-unit growth index developed from NS forecasts or the applicable contract rate adjustment mechanism for each DRR shipment, as appropriate;

4. For movements where contract data was provided by NS, contract rate adjustment mechanisms were used to forecast the "Revenues Less Fuel Surcharge" portion of revenues for the duration of the contract term;

5. After expiration of the contract, "Revenues Less Fuel Surcharge" were adjusted based on the commodity-group-specific revenue-per-unit growth index DuPont developed from NS forecasts; and

6. If no contract was provided by NS, "Revenues Less Fuel Surcharge" were adjusted based on the commodity-group-specific revenue-per-unit and growth index DuPont developed from NS forecasts for 2011-2015.

DuPont assumed that moves subject to NS fuel surcharge ("FSC") programs in 2010 will be subject to NS fuel surcharge programs throughout the SAC analysis period. DuPont separated the 2010 fuel surcharge revenue from the movement revenues described above and forecasted the two revenue components separately.[25] The fuel surcharge portion of the revenues for these movements was adjusted based on the fuel surcharge growth rate implicit in the NS fuel surcharge tariffs and the price of West Texas Intermediate ("WTI") fuel based on the EIA's Short Term Energy Outlook ("STEO") and Annual Energy Outlook ("AEO") forecasts.

DuPont adjusted revenues for movements that were not subject to NS fuel surcharge programs in 2010 based on the Global Insights March 2012 forecast of the Unadjusted Rail Cost

[25] This revenue split was made for all traffic except automotive related traffic. Total movement revenues for automotive traffic were treated as base revenues for forecasting purposes because the NS provided forecast data did not separate revenues between base revenues and FSC revenues.

Adjustment Factor ("RCAF-U"). In addition, because NS forecasts did not separate fuel surcharges from total revenues for automotive traffic, the RCAF-U index was applied to total automotive traffic revenues when contract rates and terms were not available.

c. Revenue By Traffic Type

The 2010 DRR revenues by commodity type outlined in the previous section are discussed and summarized by traffic type in this section. DRR handles single-line traffic, interline traffic, cross-over traffic and re-routed traffic.

Single-line traffic is traffic that originates and terminates on the DRR. Interline traffic is traffic that either originates or terminates on the DRR and is interchanged with a railroad other than NS. Cross-over traffic is traffic that presently moves over a portion of the NS system that is beyond that which the DRR replicates and is interlined between the DRR and NS. Re-routed traffic is traffic that moves over a different route than historically used by NS but does so more efficiently on the DRR.

The total revenue attributable to the DRR equals $6,643 million in 2010 as shown in Table III-A-7 below by traffic type. Re-routed traffic revenues are included in Table 7 below in the appropriate category of traffic.

Table III-A-7
Summary of DRR 2010 Net Revenue
($ in millions)

	Revenue by Traffic Type			
Traffic Type	**Single-Line**	**Interline**	**Cross-Over**	**Total**
(1)	(2)	(3)	(4)	(5)
1. General Freight	$337.7	$598.9	$3,012.6	$3,949.3
2. Coal	28.3	157.7	1,113.9	1,299.9
3. Intermodal	166.7	127.2	1,099.7	1,393.6
4. Total	$532.7	$883.8	$5,226.2	$6,642.8

Source: e-workpapers "III-A-Tables.xlsx"

Each of the four traffic types is discussed further below.

i. Single-Line Traffic

In its first partial calendar year of operation (June 1, 2009 through December 31, 2009), the DRR handles 116,190 carloads of general freight, 14,103 carloads of coal, and 222,138 intermodal containers/trailers in single-line service, i.e., service in which both the origin and the destination are located on the DRR. In the first full calendar year of operations (2010), the DRR handles 193,661 carloads of general freight, 12,038 carloads of coal, and 343,065 intermodal containers/trailers in single-line service. By the tenth year of operation (June 1, 2018 through May 31, 2019), the DRR will handle 276,718 carloads of general freight, 17,480 carloads of coal, and 609,160 intermodal containers/trailers in single-line service.

DRR revenue for single-line traffic was developed assuming 100 percent of the NS movement revenue accrues to the DRR. The total revenue for all single-line DRR traffic is shown in DuPont's workpapers.[26]

ii. Interline Traffic

In the first partial calendar year of operations (June 1, 2009 through December 31, 2009), the DRR handles 155,369 carloads of general freight, 70,730 carloads of coal traffic and 176,400 containers/trailers in interline service, i.e., traffic that involves at least one interchange with a railroad other than NS and where DRR handles the traffic between the same two stations as NS. In the first full calendar year of operation (2010), the DRR handles 256,787 carloads of general freight, 101,207 carloads of coal, and 262,661 intermodal containers/trailers in interline service. In the peak year of operations (June 1, 2018 through May 31, 2019), 355,873 carloads of general

[26] *See* e-workpapers "2010 IM.xlsx"; "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx."

freight, 117,586 carloads of coal traffic and 462,661 containers will move over the DRR in interline service.

DRR revenues for this traffic are the same as revenues generated by NS on the same movements. The total revenue for interline traffic handled by DRR is summarized in DuPont's workpapers.[27]

iii. Cross-Over Traffic

The largest grouping of traffic handled by the DRR is cross-over traffic; *i.e.,* traffic that currently moves over a larger portion of the overall NS system than is replicated by the DRR. These shipments are assumed to be interlined between the DRR and NS. The DRR portion of revenues for these movements is calculated using the Modified Average Total Cost ("ATC") revenue division approach pursuant to the Board's decision in *Major Issues.*[28]

In implementing the STB's ATC methodology, DuPont encountered multiple problems with the NS provided electronic data. A summary of these problems and the modifications made by DuPont to overcome the NS data deficiencies is included in Exhibit III-A-3. A detailed description of the methodology followed by DuPont to calculate DRR's share of revenue on cross-over traffic is included in DuPont's electronic workpapers.[29]

The steps followed by DuPont to implement the ATC methodology follows:

i. Variable Costs – DuPont calculated variable costs per unit for both the DRR segment ("on-SARR") and the residual NS segment ("off-SARR") of each cross-over movement in the DRR traffic group. Variable costs were developed using the nine (9) URCS Phase III inputs identified in *Major Issues.*[30] DuPont

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[27] *See* e-workpapers "2010 IM.xlsx"; "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx".

[28] As modified by the STB in *WFA/Basin* at 12-14 and *AEPTexas* at 11-16.

[29] *See* e-workpaper "DuPont_ATC_Metholology.docx."

[30] The STB stated that its June 27, 2011 decision in *AEPCO* "properly framed this issue for future rate litigants to consider and brief" at 36. The STB's June 27, 2011 *AEPCO* decision related to the calculation of variable costs for the maximum markup methodology ("MMM") model and not the ATC model. Exhibit III-A-3 explains, in part, why the URCS Phase III variable costs should not be adjusted in the ATC model.

utilized the Board's 2010 NS URCS unit costs to develop the URCS Phase III costs for both the on-SARR and off-SARR segments.

ii. Fixed Costs Per Route Mile – DuPont calculated fixed costs per route mile for both the on-SARR and off-SARR segments of each cross-over movement in the DRR traffic group. DuPont first calculated the density for each segment of the entire movement of DRR cross-over traffic (both on-SARR and off-SARR). DuPont developed density data by segment from data produced by NS in discovery. The density data was developed on a net ton basis as called for in the STB's ATC methodology. DuPont then calculated the NS fixed cost per route mile[31] by subtracting NS's total system variable costs from NS's total costs as developed in URCS and dividing the difference by NS's total system route miles.[32]

iii. Fixed Costs Per Ton – With the fixed cost information developed above, DuPont calculated the fixed cost per net ton for each segment of the actual route of movement of the cross-over traffic. NS's fixed cost per ton was calculated by multiplying the NS fixed cost per route mile by each segment's route miles and dividing the resulting aggregate fixed cost per segment by the density for each segment. DuPont aggregated the DRR fixed cost per net ton for the DRR (on-SARR) segments and aggregated the residual NS fixed cost per net ton for the non-DRR (off-SARR) segments of the total movement.[33]

iv. Net SARR Revenue – On-SARR variable costs plus the off-SARR variable costs were subtracted from the total NS net revenue.[34] If the result was negative (i.e., variable costs exceeded revenues), then the NS net revenues were allocated to the DRR and residual NS based on the ratio of on-SARR to total variable costs and the ATC process for the movement was complete. If the result was positive (i.e., revenues exceeded variable costs) then the total movement contribution was calculated by subtracting the total variable costs from the total NS revenues. The contribution was allocated between the DRR and residual NS as follows:

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[31] Because of the limitations of NS data, DuPont did not calculate a separate fixed cost per route mile for trackage rights segments. Instead DuPont calculated a fixed cost per route mile for all segments (the sum of NS owned segments and NS trackage rights segments). DuPont's calculations are described more fully in Exhibit III-A-3.

[32] Total route miles are from NS's 2010 Annual Report Form R-1, Schedule 700, Line 57, Column (c).

[33] In performing the calculations described above, DuPont relied upon NS provided car and intermodal event data produced in discovery and additional publicly available data from PC*MILER/Rail. PC*MILER/Rail was used primarily to identify the actual detailed route of movement on-SARR and off-SARR for each shipment. It was also used to identify the stations on the DRR system where cross-over traffic is either received from NS or would enter the DRR system and where cross-over traffic is interchanged to NS for off-SARR delivery or would leave the DRR system. PC*MILER/Rail is point-to-point rail routing, mileage and mapping software for the North American rail network. The software is available for purchase and is utilized by the STB and the railroad industry.

[34] In developing the ATC divisions, URCS variable costs and URCS-based fixed costs are used. Implicit in URCS costs are total NS fuel costs recovered through the base rates plus the fuel surcharge. Therefore, to ensure that the costs and revenues that are used to allocate are on the same basis, total net revenues including fuel surcharges are included in this calculation.

(1) Calculate the total cost per ton for both the on-SARR and off-SARR segments for each movement by adding the variable cost per net ton and the fixed cost per net ton;

(2) Calculate the ratio of on-SARR total costs to full movement total costs; and

(3) Apply the item (2) ratio to the total contribution for the evaluated movement and add this result to the on-SARR variable cost to arrive at the DRR share of the total movement revenue for each cross-over movement.

The DRR ATC revenue division ratios developed using the above procedures are held constant during each year of the DCF model life, regardless of when the movement over the DRR starts or terminates.[35] A complete summary of DuPont's cross-over revenue allocations using the ATC methodology is shown in our workpapers.[36]

iv. Re-routes

DRR movements that were internally rerouted required a special procedure. Specifically, DuPont identified the portion of NS revenue attributable to the actual on-SARR route of movement for these shipments and assigned that portion of total revenue to the DRR. Stated differently, the ATC calculation was based on real-world routes of movement, not the SARR reroutes.

[35] *See AEP Texas* 2006 at 3.

[36] *See* e-workpapers "2010 IM.xlsx"; "2010 GEN Merch.xlsx"; "2010 COAL 80-Chem 40 – AUTO 60.xlsx"; and "2010 AG 10.xlsx".

Part III-B

III. B. STAND-ALONE RAILROAD SYSTEM

The testimony in this Part is being sponsored by Richard H. McDonald, President of RHM Consulting, Inc. and Charles A. Stedman of L.E. Peabody & Associates, Inc. Their credentials are detailed in Part IV and summarized herein. Mr. McDonald has over 40 years of experience in the railroad engineering and operations fields, primarily at the former Chicago and NorthWestern ("CNW") which is now part of the Union Pacific Railroad. Mr. McDonald began his railroad career in 1958 at the New York Central Railroad, where he held positions as Assistant Engineer, Roadmaster and Division Engineer (for both the New York Central and Penn Central). In 1974, Mr. McDonald left Penn Central and joined CNW, where he held several positions of increasing responsibility in the Engineering and Operating Departments including Assistant Division Manager-Engineering and later Division Manager at St. Paul, MN, Vice President-WRPI, Vice President-Operating Administration, Vice President-Transportation, Vice President-Operations, and Vice President-Planning & Acquisitions.

Mr. Stedman has over thirty (30) years of experience in solving economic, marketing, transportation and fuel supply problems. He has directed and performed extensive analyses in the area of stand-alone costing, including route layout, design and construction costs, as well as the development of detailed operating plans for various stand-alone railroads.

1. Routes and Mileage

The DRR is an extensive system that has essentially twenty-three (23) main line segments. The twenty-three (23) main line segments include:

1. Chicago, IL east to Bellevue, OH;
2. Chicago, IL east to Cleveland, OH;
3. Calumet City, IL south to Bement, IL;
4. Kansas City, MO east to Mosser/Decatur, IL;
5. St. Louis, MO east to Fort Wayne, IN;
6. East St. Louis, IL east to Danville, KY;
7. Bellevue, OH north to Detroit, MI;
8. Bellevue, OH east to Harrisburg, PA;

9. Buffalo, NY east to Rockville, PA;
10. Harrisburg, PA east to Bayway, NJ;
11. Banks, PA east to Edgemoor, DE;
12. Harrisburg, PA south to Roanoke, VA;
13. Roanoke, VA east to Petersburg, VA;
14. Roanoke, VA southwest to Chattanooga, TN;
15. Bradley, TN south to Cohutta, GA;
16. Bellevue, OH south to Walton, VA;
17. Columbus, OH south to Chattanooga, TN;
18. Chattanooga, TN south to New Orleans, LA;
19. Chattanooga, TN west to Memphis, TN;
20. Burstall, AL south to Mobile, AL;
21. Lynchburg, VA south to Atlanta, GA;
22. Austell, GA west to Birmingham, AL; and
23. Ooltewah, TN south to Mahrt, AL.

The DRR includes 36 branch lines across the system. The DRR constructs all or part of 27 branch lines and 9 are operated utilizing trackage rights and joint facility agreements. These branch lines serve DuPont issue locations, power plants and other industrial destinations, water/rail transfer terminals, and interchange locations. The total route miles operated by the DRR equal 8,095.81. The DRR will construct 7,276.94 miles and utilize trackage rights and joint facilities agreements for the remaining 818.87 miles. The DRR's route is shown on Exhibit III-A-1. Exhibit III-A-1 also shows DuPont issue origins, destinations and interchange points.

The constructed route mileages for the DRR's main and branch line segments are summarized in Table III-B-1 below.[1] NS operating timetables and track charts that were used to develop the DRR rail lines being replicated, which were produced by NS in discovery, are the primary source documents used to identify the DRR route mileages.[2] Maps and schematics of various parts of the DRR route that were used to develop the DRR route miles are also included in DuPont's opening work papers.[3]

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[1] *See* e-workpaper "DuPont RR Route Miles Opening errata.xlsx."

[2] The timetable and track chark pdf files provided by NS in discovery are included in DuPont's opening electronic work papers.

[3] *See* e-workpaper "Additional DRR mileage support.pdf."

Table III-B-1
DRR Constructed Route Mileage

	Segment (1)	Constructed Miles (2)
1.	Chicago, IL east to Bellevue, OH	273.14
2.	Chicago, IL east to Cleveland, OH	344.35
3.	Calumet City, IL south to Bement, IL	40.02
4.	Kansas City, MO east to Moser/Decatur, IL	335.28
5.	St. Louis, MO east to Fort Wayne, IN	348.15
6.	East St. Louis, IL east to Danville, KY	353.04
7.	Bellevue, OH north to Detroit, MI	66.49
8.	Bellevue, OH east to Harrisburg, PA	443.98
9.	Buffalo, NY east to Rockville, PA	260.63
10.	Harrisburg, PA east to Bayway, NJ	147.44
11.	Banks, PA east to Edgemoor, DE	88.27
12.	Harrisburg, PA south to Roanoke, VA	313.98
13.	Roanoke, VA east to Petersburg, VA	174.26
14.	Roanoke, VA southwest to Chattanooga, TN	389.77
15.	Bradley, TN south to Cohutta, GA	13.93
16.	Bellevue, OH south to Walton, VA	458.34
17.	Columbus, OH south to Chattanooga, TN	447.76
18.	Chattanooga, TN south to New Orleans, LA	504.30
19.	Chattanooga, TN west to Memphis, TN	271.00
20.	Burstall, AL south to Mobile, AL	250.32
21.	Lynchburg, VA south to Atlanta, GA	467.00
22.	Austell, GA west to Birmingham, AL	141.31
23.	Ooltewah, TN south to Mahrt, AL	347.03
24.	Total Main Line Route Miles	6,479.79
25.	Total Branch Line Miles	797.15
26.	Total constructed route miles	7,276.94

Source: e-workpaper "DuPont RR Route Miles Opening errata.xlsx."

All of the 7,276.94 route-miles shown in Table III-B-1 represent lines that are being constructed by the DRR. In addition, the DRR operates over 818.87 miles using trackage rights

and joint facilities agreements. The DRR's rail lines are shown in the stick diagrams for the DRR. The stick diagrams are the track charts for the DRR.[4]

The DRR interchanges traffic with six (6) Class I railroads (UP, BNSF, CN, CSXT, KCS and NS) along with numerous regional and short-line railroads that NS actually interchanges with today.[5]

2. Track Miles and Weight of Track

The DRR's track and yard configuration was developed by DuPont's expert operating witnesses McDonald and Stedman. The system configuration was developed to accommodate the DRR's traffic group, using several tools, including information provided by DuPont Witness Nolan (and supported by data produced by NS) concerning the DRR's peak-year traffic volumes and flows, and the trains that will move over the DRR system in the peak week of the peak traffic year; the DRR operating plan developed by Mr. McDonald; NS's operating timetables and track charts for the divisions and subdivisions involved; and a simulation of the DRR's operations executed by Mr. Daniel Fapp using the Rail Traffic Controller ("RTC") model, which has been accepted by the Board as an appropriate operational modeling tool in several previous rail rate cases.[6] The DRR stick diagrams contain detailed track diagrams for the entire DRR system.

The DRR's track miles are shown in Table III-B-2 below.[7]

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[4] *See* e-workpaper "DRR Opening Sticks errata.pdf."

[5] A listing of DRR interchanges is included in e-workpaper "DRR interchanges.xlsx."

[6] *See, e.g., PSCo/Xcel* at 27; *WFA/Basin* at 15. A detailed explanation of the RTC Model simulation that was conducted in developing the DRR system configuration is set forth in Part III-C-2.

[7] *See* e-workpapers "DuPont RR Route Miles Opening Grading errata.xlsx." and "DRR Yard Matrix errata.xlsx."

Table III-B-2
DRR Constructed Track Miles

Type of Track (1)	Constructed Miles (2)
1. Main line track	
a. Single first main track[1/]	7,276.94
b. Other main track[2/]	3,185.41
c. Total main line track	10,462.35
2. Helper pocket and setout tracks	75.46
3. Yard tracks (including interchange tracks)[3/]	853.10
4. Total track miles	**11,390.91**

[1/] Single first main track miles equal total constructed route miles including branch lines, but excluding yard tracks and the 818.87 route miles of trackage rights that are operating miles that the DRR does not construct.
[2/] Equals total miles for constructed other main tracks and passing sidings.
[3/] Includes all tracks in yards, such as locomotive repair and servicing tracks and classification storage tracks.

a. Main Line

As shown in the DRR stick diagrams, the DRR's main line consists of single main track with sections of additional main track (including signaled passing sidings) at appropriate intervals to enable the DRR to move its peak period trains efficiently and without delay. The DRR has a total of 10,462.35 single main track miles and second main track/passing sidings.

All constructed main track and passing sidings in line segments carrying 20 million tons or more gross tons per year ("MGT") consist of new 136-pound continuous welded rail ("CWR"). Standard rail is used for all mainline track except that premium (head-hardened) rail is used on curves of 3 degrees or more, where rail wear is heaviest. The main tracks in segments carrying less than 20 MGT consist of new 115-pound CWR.

All of the DRR's track and structures are designed to accommodate a gross weight on rail ("GWR") of 286,000 pounds per car and maximum train speeds of 60 mph, conditions permitting.

b. Branch Lines

As described above, the DRR will construct all or part of 27 branch lines and operate 36 branch lines in total. These branch lines are used to serve industrial facilities (including DuPont issue locations), destination power plants, water/rail transfer terminals, and interchange points. The track configurations for these branches are shown in the DRR stick diagrams.

c. Sidings

The DRR's passing sidings are considered part of its main tracks in both main lines and branch lines, and are discussed in Subparts a. and b. above.

d. Other Tracks

Other tracks include pocket tracks for helper locomotives, and set-out tracks for bad order cars. Yard tracks (including interchange tracks) are discussed in the next section.[8]

e. Helper pocket and other setout tracks -- The DRR has 4 helper districts as described in Part III-C. Each helper district has helper pocket tracks at both ends of the district if no yard exists. These tracks are double-ended tracks, 600 feet in length.

In addition, one setout track is placed on each side of each of the DRR's Failed-Equipment Detectors ("FEDs"), as described in Parts III-C and III-F, with one FED on each track in areas with multiple main tracks. All of these setout tracks are single-ended tracks, 735 feet in length. This provides 600 feet in the clear, past the switch, to accommodate both the occasional bad-order car and the temporary storage of maintenance-of-way ("MOW") equipment.

[8] *See* e-workpaper "DRR Yard Matrix errata.xlsx."

The locations of the helper pocket and setout tracks are shown in the DRR stick diagrams.[9] They consist of 115-pound new CWR. The DRR has a total of 75.46 track miles for these tracks.

3. Yards

The DRR has a total of one hundred twenty-three (123) yards. This total includes (6) major yards, thirty five (35) mid-size yards, where yard crews are employed and eighty-two (82) other yards. These yards are used for train staging, 1000/1500-mile car inspections, crew changes, locomotive servicing and fueling, interchanges, local train operations and originating/terminating traffic. A listing of all the DRR yards is included in DuPont's opening work papers.[10] Table III-B-3 below shows the DRR major yard locations.

Table III-B-3
DRR Major Yard Locations

Location (1)
1. Elkhart, IN
2. Conway, PA
3. Roanoke, VA
4. Chattanooga, TN
5. Atlanta, GA
6. Bellevue,OH

Source: *See* e-workpaper "DRR Yard Matrix errata.xlsx".

a. Major Yard Characteristics

Car inspections are performed at all DRR major yards. Fueling platforms are located at all major yards. Locomotive shops are located at Elkhart, Roanoke, Chattanooga and Bellevue. Crew change facilities are located at all major yards.

[9] *See* e-workpaper "DRR Opening Sticks errata.pdf."

[10] *See* e-workpaper "DRR Yard Matrix errata.xlsx."

b. Miles and Weight of Yard Track

The DRR's one hundred twenty-three (123) yards contain a total of 853.10 miles of track.[11] The yard tracks have 115-pound new CWR.

4. Other

a. Joint Facilities

The DRR utilizes 818.87 miles of joint facilities owned by other carriers. A complete description of the joint facilities used by the DRR and owned by other carriers is included in Part III-C.

b. Signal/Communications System

Current federal law mandates that the DRR be equipped with Positive Train Control ("PTC") by December 31, 2015. Rather than construct a Central Traffic Control ("CTC") system at the outset of DRR operations (June 1, 2009) and then convert it to PTC, the DRR will install PTC at the beginning of DRR operations. The PTC system is discussed in more detail in Part III-F-6. Power switches also are used for the connections between the main line and the DRR's branch lines, the helper pocket and setout tracks, the yard lead and relay tracks, and the connections to local origins and destinations. Interior yard switches and set-out track switches are hand-thrown switches.

Communications are conducted using a microwave system, with microwave towers at appropriately-spaced intervals as described in Part III-F-6. All locomotive engineers, dispatchers and field supervisory personnel are equipped with radios connected to the microwave system. Certain employees also will be equipped with cellular telephones for emergency railroad use, as a back-up to the radios. Further details on the DRR's signal and communications system are provided in Part III-F-6.

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[11] *See* e-workpaper "DRR Yard Matrix errata.xlsx."

c. Turnouts, FEDs and AEI Scanners

All turnouts between the DRR's main tracks are No. 20 turnouts. This permits trains to operate through the turnouts at speeds of up to 40 miles per hour (conditions permitting). No. 20 turnouts also are used for connections between the main line and branch lines, as well as for the yard leads and the main running tracks at both ends of each of the DRR's yards. No. 14 turnouts are used between main tracks and all other tracks, including the connections with the origin and destination spurs, and helper pocket tracks, where trains move at slower speeds. Trains can operate through these turnouts at a speed of up to 25 miles per hour. No. 10 turnouts are used within yards and for setout and MOW equipment storage tracks.

FEDs, which include hot-bearing, dragging-equipment, cracked-wheel and wide/shifted load detection systems, have been spaced approximately every 35 miles along the DRR's route. Multiple FEDs are provided at each location that has multiple main tracks, one for each track. Each FED is accompanied by two setout tracks, each located within two miles on either side of the FED. Each such track is a 735-foot single-ended track (with 600 feet in the clear) to facilitate the setout of bad-order cars after a train has passed an FED. These tracks are used primarily for temporary storage of bad-order cars detected by the FEDs, as well as for temporary storage of work equipment.

Automatic Equipment Identification ("AEI") scanners are located at or near each of the locations where the DRR interchanges trains with other railroads as described above. A total of 108 AEI scanners have been provided. The AEI scanners have been placed so as to enable them to capture all train movements that occur on the DRR, including both local and interline movements.

Part III-C

III. C. STAND-ALONE RAILROAD OPERATING PLAN

The operating plan for the DRR was designed by Richard H. McDonald, one of the nation's leading rail operations and management experts, with assistance from Mr. Philip H. Burris of L. E. Peabody & Associates, Inc. who developed the operating specifications and Mr. Daniel L. Fapp and Mr. William W. Humphrey also of L. E. Peabody & Associates, Inc. who performed a simulation of the DRR's peak-period operations using the Rail Traffic Controller model ("RTC Model") with operating inputs provided by Mr. McDonald.

The operating plan is designed to enable the DRR to transport its peak-year traffic volume, and the trains moving on the system during the peak week of the peak year, in a manner that meets the transportation needs of its traffic group, and in full compliance with all applicable NS transportation and service commitments to the customer group involved. The operating plan and the RTC Model are used to optimize the DRR's system track configuration, as described in Part III-B, and provide the basis for many of the DRR's annual operating expenses shown in Part III-D.

A key series of NS records needed to perform the multiple, inter-related analyses required to produce a viable operating plan for the SARR are the NS' train event records or train movement data. DuPont requested train event records from NS in the discovery phase of this proceeding through Requests for Production No. 21 and No. 22. In response, NS provided eight text files that included limited train event data for 2009 and 2010.

We developed Exhibit III-C-1 in order to identify the numerous problems and errors included in the NS provided train event data that resulted in a huge increase in DuPont analytical time in order to evaluate and utilize the NS provided train event data. In addition, Exhibit III-C-1 documents the numerous "fixes" that DuPont had to employ in order to utilize this NS provided train event data.

1. General Parameters

The DRR's configuration and operating plan have been designed to accommodate its peak seven-day traffic volume and train frequencies during the 10-year DCF period. The peak traffic volume and train movements were developed by DuPont Witness Fapp using the 2009 and 2010 traffic and car/train movement data provided by NS in discovery, and the traffic forecast procedures described in Part III-A-2.

The DRR system and operating plan were developed as follows. First, Mr. McDonald reviewed the NS operating timetables and track charts for the lines being replicated,[1] as well as maps of various facilities, joint facility/joint use agreements between NS and other railroads for the lines being replicated, and NS interrogatory responses describing the operation of DuPont traffic and other trains. A preliminary track configuration for the DRR was developed, starting with NS's present main-track/passing siding configuration for all of the lines being replicated. Then, the operating plan elements to be input into the RTC Model were developed.

The DRR operating plan was developed to accommodate the railroad's peak year traffic group. As indicated in Part III-A, the DRR's peak traffic year is June 1, 2018 through May 31, 2019, which is also the final 12-month period in the 10-year DCF. As described in Part III-A-1, the DRR's traffic group consists of general freight, coal, and intermodal traffic moving primarily in trainload service. The traffic moves in various flows over different parts of the system. The DRR peak year total traffic volumes are shown in Table III-C-1 below.

[1] The NS operating timetables and track charts for all of the lines involved are reproduced in Part III-B e-workpapers.

Table III-C-1
DRR Peak Year Traffic Volume – 3Q18 to 2Q19

Train Type (1)	Cars/ Containers (2)	Millions of Tons (3)
1. General Freight		
a. Local	276,718	25,821,923
b. Interline	355,873	30,075,821
c. Overhead	2,337,362	187,544,710
2. Coal		
a. Local	17,480	1,812,676
b. Interline	117,586	13,659,735
c. Overhead	1,493,522	161,773,037
3. Intermodal		
a. Local	609,160	8,681,768
b. Interline	462,661	6,357,862
c. Overhead	4,107,981	56,881,545
4. Total	**9,778,343**	**492,609,078**

Source: *See* e-workpaper "III-A-Tables.xls."

The DRR's operating plan reflects the different commodities it handles and the types of service they require. The DRR serves various local origins and destinations, including industrial facilities, coal mines, power plants, intermodal ramps, and water/rail transfer terminals. The DRR also serves interchange points with other railroads including BNSF, NS, CSXT, KCS, CN, CP and UP and more than 40 regional and short line railroads.

As described in Part III-B, the DRR has been divided into twenty-three (23) mainline segments and thirty-four (34) branch lines. A schematic of the DRR's route is attached as Exhibit III-A-1.

a. Traffic Flow and Interchange Points

The DRR's peak-year (June 1, 2018 through May 31, 2019) traffic volume consists of 243 million tons of general freight traffic, 177 million tons of coal traffic, and 72 million tons of

intermodal traffic. The traffic density varies over different line segments. The busiest segments are Chicago to Toledo and Conway to Harrisburg. The Base Year trains moving over several DRR's line segments are shown in Table III-C-2 below.

Table III-C-2
Base Year Trains By Line Segment
(trains moving in the peak simulation period)

Line Segment[1/]	No. of Trains
(1)	(2)
1. Chicago, IL – Elkhart, IN	17,209
2. Elkhart, IN – Toledo, OH	10,210
3. Altoona, PA – Conway, PA	17,104
4. Conway, PA – Harrisburg, PA	16,737
5. Danville, KY – Cincinnati, OH	7,530
6. Columbus, OH – Dickinson, WV	2,545
7. Harrisburg, PA – Roanoke, VA	4,545
8. Cleveland, TN – Knoxville, TN	3,020
9. Chattanooga, TN – Memphis, TN	4,953
10. Altanta, GA – Birmingham, AL	5,458

Source: *See* e-workpaper "Unique Crew Locations.xlsx"
[1/] Trains shown for a line segment are the maximum trains moving over any part of the segment – volumes may not be uniform for the entire segment.

The DRR handles DuPont traffic from origin to destination or to terminating carrier. It also directly serves three coal mine origins or coal loadout facilities in Indiana, Kentucky and West Virginia, and 29 coal destinations (23 power plants and six rail/water transload facilities) to which it delivers 129 million tons of coal in 2010. The DRR also handles coal originated and terminated by other railroads. In addition, the DRR handles other general freight and intermodal traffic in interline and local service, interchanging such traffic with other railroads across the DRR system.

The DRR's operating plan takes into account its total traffic volume and the traffic flows described in Part III-A and summarized above and also reflects the DRR's interchange relationships with the other Class I carriers and various regional and short line railroads. These

relationships are based on NS's joint use and interchange agreements with such carriers; the DRR steps into NS's shoes under these agreements. All trains interchanged with other railroads are run-through trains, which mean the locomotive power stays with the train.[2]

b. Joint Use and Interchange Agreements

The DRR steps into the shoes of NS and utilizes existing joint use and trackage agreements at 32 locations. A brief description of each one of these agreements is included in Exhibit III-C-2.

c. Track and Yard Facilities

The DRR's track and yard facilities are described in Part III-B-2.[3] The DRR's main lines consist of single track with appropriately-spaced sections of second main track (essentially signaled passing sidings with power switches). The branch lines consist of a single main track, with passing sidings as needed to efficiently move the traffic. The siding configuration and spacing were developed by DuPont Witness McDonald with assistance from Witnesses Fapp and Humphrey's RTC Model simulation of the DRR's peak-period operations.

All of the DRR's main tracks are constructed to a standard that allows for maximum train speeds of 60 mph, conditions (including gradient and curvature) permitting. Trains on all branch lines are limited to a maximum speed of 40 mph, except where existing NS speed limits are higher. All tracks are being constructed to permit a maximum GWR of 286,000 pounds per car.

All of the DRR's main lines are equipped with PTC and main-track power switches. Power switches are also installed at a few key points on the DRR's branch lines.[4]

Wood crossties are being used on all DRR tracks. The tie and other track and subgrade specifications (including rail section, turnouts, other track material, ballast and side slopes) are

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[2] *See* e-workpaper "DRR Interchange.xlsx."

[3] *See* e-workpaper "DRR Yard Matrix errata.xlsx."

[4] *See* e-workpaper "DRR Yard Matrix errata.xlsx."

described in Parts III-F-2 and III-F-3 and associated e-workpapers. The track and subgrade specifications enable the DRR to handle its expected peak-period traffic volume efficiently, consistent with lowest feasible cost, while enabling all customer service requirements to be met.

d. Crew-Change Locations/Times

i. Road Crews -- Many of the DRR's crew changes take place at origins, yards, interchange points or destinations. The DRR follows the efficient modern railroad practice of calling train crews sufficiently in advance of a train's arrival at the designated crew-change point so that the crew is ready to board the train when it arrives and the in-coming crew has de-trained. The crews in each district are qualified to operate to and from other intermediate origins, destinations and interchange points within the district.

Mr. McDonald's operating plan for the DRR provides for straight-away and turn crew assignments at 28 crew district locations in the DRR's North Region and 20 crew locations in the DRR's South Region. The crew districts and assignments are listed in Exhibit III-C-3. Based on a review of materials provided by NS in discovery, many of the DRR crew assignments mirror those currently used by NS.

These crew districts and assignments reflect a least-cost SARR's flexibility to maximize the efficiency of its crew assignments within the constraints of the federal "12-hour" (hours of service) law, including the amendments thereto wrought by the recently-enacted Rail Safety Improvement Act of 2010 ("RSIA") (Public Law No. 110-432). Since the DRR is a new, start-up, non-unionized operation, its crew districts can be, and have been, designed for maximum efficiency. DRR road crews are not limited to operating over a single route, but instead are flexible enough to operate over several different routes on which they are certified. For example, crews stationed in the Harrisburg, PA area can operate west to Altoona and Conway, north to

Sunbury and Binghamton, east to Allentown and New Jersey, east to Baltimore or south to Shenandoah and Roanoke as necessary.

ii. Helper crews -- The helper crews are engineer-only crews. Helper service is provided at 5 locations on the DRR. A total of 32 employees are needed to staff the helpers on a 24/7 basis, with each crew working an eight-hour shift.

e. Switching and Yard Activity

i. Locomotive inspections and fueling -- FRA-required 92-day locomotive inspections are performed at DRR's locomotive shops and DRR yards during the car-inspection process for all trains receiving a 1500-mile or 1,000-mile car inspection.[5] DRR locomotive shops are located at Elkhart, IN, Conway, PA, Chattanooga, TN and Roanoke, VA. Road locomotive(s) requiring inspection are removed from the train and moved to the locomotive shops. If a locomotive requires fueling, but not a scheduled inspection, it is fueled during the dwell time of the car inspection process. Fueling is accomplished at stations provided in yards where shops are located and at other points where traffic warrants. All other fueling is performed by tanker truck. If a locomotive requires fueling but not a 92-day inspection, it is fueled during the dwell time allotted for car inspections.

ii. Railcar Inspections

(a) Inspection Procedures -- The DRR conducts 1,500-mile inspections of coal trains and 1,000-mile inspections of non-coal trains using state-of-the-art procedures, while complying at all times with FRA-mandated safety and inspection rules. DRR performs 1,500-mile and 1,000-mile inspections on through trains at Elkhart, IN, Conway, PA, Roanoke, VA, Chattanooga, TN, Atlanta, GA and Bellevue, OH. DRR also performs inspections

[5] Inspection procedures are further detailed below.

on originating trains by car inspection crews at fifteen (15) yard locations. Road train crews perform inspection functions at other yards as necessary.

DRR uses two and four-person inspection crews, with one crew member on each crew serving as foreman. A summary of the car inspection crews on duty at each of the fifteen (15) yards is included in DuPont's workpapers.[6]

Roadways are provided between each of the yard relay tracks where inspections are performed. Each inspection crew stationed at a yard is equipped with a low-slung, four-wheel ATV-type vehicle. The vehicles carry spare parts, such as brake shoes and air hoses. Some parts are also placed periodically adjacent to the rails on the inspection tracks for ready availability. Coupler knuckles are rarely replaced during 1,500- or 1,000-mile inspections and can be transported to a specific car needing a knuckle by a company pick-up truck as needed. Two trains are inspected simultaneously by a four-person crew.

(b) Trains requiring inspection -- Each of the DRR's yards where trains originate is an inspection point and all trains are inspected either by a car inspection crew or by the train crew. In addition, coal and non-coal trains that travel more than 750 miles on the DRR receive an inspection at one of the through train inspection locations listed previously.

f. Trains and Equipment

i. Train Sizes

The DRR operates complete trains, including general freight, coal and intermodal trains, in local and interline (including overhead) service. The DRR's train sizes are no larger than those for the comparable NS trains operated from June 1, 2009 through May 31, 2010 ("Base

[6] *See* e-workpaper "Inspection Teams.xlsx."

Year") for which NS produced car movement data. Non-coal trains that are interchanged with NS have the same mix of traffic as the comparable NS trains that moved between the same points in the Base Year.

All trains have sufficient locomotives to provide a horsepower-to-trailing ton ratio that assures they are adequately powered to meet present contractual transit-time commitments and service requirements. This was confirmed by the RTC simulation.

The DRR operating plan assumes that the maximum train sizes (for a given train type) and locomotive consists will remain the same throughout the 10-year DCF period.[7] Increased volumes are accounted for by adding cars to existing trains consistent with the DRR's (and NS's) ability to handle them with the same locomotive consist and track configuration (yards/sidings). If a train would be too long using this procedure, "growth" trains are added that are equivalent or smaller in size to the comparable trains NS operated in the Base Year, as shown in the car event and train movement data it produced in discovery. The maximum train size is 207 cars and 8 locomotives. All growth trains are limited to the same size and weight, and no growth train has more than six (6) locomotives (excluding helpers).

ii. Locomotives

The DRR requires a total of 664 locomotives to handle its Base Year traffic volume. The railroad has three types of locomotives: GE ES44AC locomotives for road and helper service, GP-38 locomotives for local train and work train service and EMD SW1500 locomotives for yard switching service. The number of locomotives required for each kind of service is shown in Table III-C-3 below. The DRR's road locomotive requirements take into account the need to equalize the locomotive power used in run-through service for the NS and other

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[7] Maximum train sizes were identified for each train symbol ("TRN") included in NS' train event data. As indicated in Exhibit III-C-1, however, NS' train event data was riddled with erroneous and missing information, including information on maximum train sizes.

interchange trains, any intermediate setting out or picking up of blocks of cars, and a spare margin which is described below.

Table III-C-3
DRR Peak Locomotive Requirements

Type of Service (1)	Quantity (2)
1. Road – ES44AC	483
2. Local/Work Train– GP38	101
3. Switch – SW1500	80
4. Total	664

Source: *See* e-workpapers "DRR Operating Expense_ Errata.xlsx", "Base Year Train List_Statistics_Open_ Errata.xlsx", tab "Local Locos" and "DRR Yard Locos".

(a) Road Locomotives

The DRR's "standard" road locomotive consist for all trains is two locomotives in a 1/1 distributed power ("DP") configuration, although some heavy coal, general freight and intermodal trains require three or more road locomotives for all or part of their runs on the DRR system (not including helpers at certain locations). Where additional units are needed, they are placed at the front of the train. For example, all trains moving between Dickinson, WV and Elmore, WV require two additional locomotive units in each direction to traverse the grades in this area. As both Dickinson and Elmore are crew change points for these trains, the additional locomotives are added and removed at these locations when the crews are changed.

The DP configuration involves positioning one locomotive on the front of the train and one locomotive on the rear of the train (hence the "1/1" designation). The rear (DP) locomotive has no engineer and is remotely controlled by radio signals from the lead locomotive. The use of a DP locomotive configuration reduces the drawbar tension between cars and enables the same number of locomotives to haul heavier trains or the same size trains at higher speeds. It also

facilitates reversal of direction by a train, as locomotives do not have to be repositioned from one end of the train to the other. DP locomotive configurations are standard practice on the western Class I railroads, and DP is also being used by NS.[8]

As stated previously, local trains and work trains are powered by GP38 locomotives, using one locomotive per train where possible. When this is not possible due to train size or topography, the DRR adds a second GP38 locomotive, or in some instances uses an ES44AC locomotive on local trains. The count of road locomotives for the peak year includes a spare margin and a peaking factor, consistent with prior STB decisions.[9]

Spare Margin -- The total number of road locomotives required includes a spare margin of { } percent for ES44AC locomotives and { } percent for GP38 locomotives. This spare margin is based on information provided by NS in response to DuPont's discovery requests. The information provided includes locomotive bad order time, transit time and total equivalent units in service by locomotive type for 2008, 2009 and 2010. From this information we developed the amount of time locomotive units were unavailable for service on a three year weighted average basis to yield the locomotive spare margin for both ES44AC locomotives and GP38 locomotives.[10]

Peaking Factor -- In addition to using the spare margin, DuPont's experts determined the DRR's locomotive peaking factor by dividing the average number of train starts per day in the peak week of the Peak Year by the average number of train starts per day moving in the Peak

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[8] *See, e.g.*, http://www.progressiverailroading.com/pr/article/Class-Is-employ-fuelsaving-practices-that-promise-stingier-diesel-usage--22736 and e-workpaper "Helper Service Locations (NS-DP-C-10310).pdf."

[9] *See WFA/Basin* at 33-34.

[10] *See* e-workpaper "Loco Utlization.xlsx" A similar calculation was accepted by the Board in *AEP Texas* at 43-44.

Year. This is the same process as that approved by the Board[11] and results in a peaking factor of 5.4 percent.[12]

(b) Helper Locomotives

The DRR uses ES44AC road locomotives for helper service to minimize the diversity of road locomotive types in DRR service. Where necessary the DRR uses one or more units in helper service, with the locomotives coupled back-to-back. This enables the helper consist to operate in either direction with the cab end forward on the lead locomotive. The DRR has five helper districts. Exhibit III-C-4 provides the location of the helper district, distance trains are helped, direction of helper service and the number of helper units per consist at each location.

The RTC Model simulation indicates that a total of 879 trains moving during the ten-day simulation period require helper assistance. The breakdown of these trains for the entire simulation period and for the peak day for each district, used to confirm the DRR's helper locomotive needs, is shown in Table III-C-4 below.

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[11] *See PSCo/Xcel II* at 13.

[12] As indicated in Exhibit III-C-1, DuPont was required to adjust many of its peak period train statistics due to the flaws discovered in NS's train event data. Because making these adjustments to the entire peak year train lists would have been impossible in the time required to present this case, DuPont based its peaking factor on the pre-adjustment peak period and peak year train lists. *See* e-workpaper "Coal Train List.xlsx."

Table III-C-4
DRR Peak Trains Requiring Helper Assistance

Helper District (1)	Number of Trains: Helper Service Miles (2)	Number of Trains: Peak Period Trains per Day (3)
1. Louisville, KY to Duncan, IN	10.4	3.4
2. Bulls Gap, TN to Knoxville, TN	46.8	5.8
3. Cincinnati, OH to Erlanger, KY	7.8	15.0
4. Altoona, PA to Johnstown, PA	37.9	33.4
5. Johnstown, PA to Altoona, PA	37.9	30.3

Source: Exhibit III-C-4

(c) Switch/Work Train Locomotives

The DRR uses EMD SW1500 locomotives for switch service. This type of locomotive is commonly used by Class I and other railroads (including NS) for such service.

The DRR requires a total of 80 SW1500 locomotives for use in switch service. The number of locomotives assigned to each yard is dependent on the number of switch assignments working in each yard.

iii. Railcars

Car ownership for the DRR traffic group was determined from the shipment data produced by NS in discovery. This data shows that most of the DRR's general freight and coal traffic moves in shipper-provided equipment and that nearly all of its intermodal traffic moves in shipper-provided containers and trailers. It is assumed that all flatcars used to transport intermodal containers and trailers are system cars. Table III-C-5 below summarizes the ownership of railcars and intermodal units for each traffic type.

Table III-C-5
Percent Of Car Ownership By Traffic Type

Traffic Type	System	Foreign	Private
(1)	(2)	(3)	(4)
1. General Freight	19.9%	16.8%	63.3%
2. Coal	44.0%	2.9%	53.1%
3. Containers & Trailers	3.7%	0.0%	96.3%
4. Intermodal Flats	100.0%	0.0%	0.0%

Source: *See* e-workpaper "DRR Car Costs_Errata.xls."

The DRR car requirements for all of the movements in its traffic group were developed based on the 3Q09-2Q10 base-year traffic and the simulated transit time output from the RTC Model. The resulting DRR car requirements were increased by a { } percent spare margin[13] and the 5.4 percent peaking factor described earlier. A complete description of the development of car ownership costs for system, foreign and private cars is set forth in Part III-D-2.

g. RTC Model Procedures and Results

The essential elements of the operating plan (described above), the main-track configuration, and the yard and interchange locations were provided to Messrs. Fapp and Humphrey for input into the RTC Model. Messrs. Fapp and Humphrey also input various physical characteristics for these lines, which were obtained from NS track charts, operating

[13] The { } percent spare margin is based on a review of coal transportation contracts provided by NS in discovery which show spare margins which range from { } to a high { } percent. Further, review of the public record in *AEPCO* shows that both parties relied on a 5.0 percent spare margin, which is also based on review of transportation contracts in that proceeding, and is nearly the same as that used herein. *See* AEPCO's Opening Evidence (Public Version) in Docket. No. 42113 filed January 25, 2010 at III-C-15 and AEPCO's Rebuttal Evidence (Public Version) in Docket No. 42113 filed July 1, 2010 at III-C-16. In addition, the 5.0 percent spare margin for shipper-provided cars was accepted by the Board in *WFA/Basin* at 39 and *Otter Tail* at C-5, and was also based on the transportation contracts produced in discovery in those proceedings. DuPont is relying on public information and common industry practice concerning the railcar spare margin from other maximum rate proceedings as described above.

timetables and other documents produced in discovery, including RTC simulations performed by NS along the DRR's route. These included train speed restrictions at various locations, grades, curves, topography and turnouts (switches). The final steps were to populate the RTC Model with the DRR's trains during the simulation period, which includes the peak traffic week (in terms of train movements) in the DRR's 10-year DCF existence, and input random "outage" and maintenance events.

DuPont Witnesses Fapp and Humphrey developed DRR's trains moving during the peak-ten day simulation period in the DRR's 10-year DCF life, based on the NS trains carrying traffic in the DRR's traffic group that moved during the peak simulation period in the 2009-2010 Base Year, forecast to the same period in the June 1, 2018 through May 31, 2019 peak year.

All road trains and local trains carrying DRR identified cars moving on the DRR network were included in the RTC simulation. The simulation includes stops in route for crew changes, inspections, fueling, helper service and spotting and pulling cars at customer locations for all road trains and local trains operating in straight-away service between two locations. Local trains in turn service, i.e., trains identified in NS' train event data designated as local trains which originate and terminate at the same location, are also included in the RTC simulation. The data contained in NS' train event files for these trains related to their route of movement and stops in route is unintelligible at best. Through a laborious manual process, DuPont's consultants were able to estimate the furthest location from the train's home location traveled and have included in the simulation the movement of the local turn train from its home location to the furthest location and return. A description of the infirmities of the NS train event data, and the steps DuPont took to overcome these infirmities is included in Exhibit III-C-1.

The RTC simulation runs began after inputting the DRR's track and other relevant facilities, peak-period trains and operating parameters (including random outages and

maintenance outages). Changes were made on an iterative basis until the RTC Model ran to a successful conclusion. These changes included the relocation, addition or deletion of certain passing sidings and segments of second main track, refinement of the locations and configuration of yards and interchange tracks, and the addition of locomotives to certain trains. A detailed description of the DRR modeling procedures and results is included in Exhibit III-C-5.

2. Cycle Time

A SARR's operating plan must enable it "to meet the transportation needs of the traffic the SARR proposes to serve."[14] As the Board noted in *WFA/Basin*, a SARR:

> need not match existing operating practices of the defendant railroad, as the objective of the SAC test is to determine what it would cost to provide the service with optimal efficiency. However, the assumptions used in the SAC analysis, including the operating plan, must be realistic, i.e., consistent with the underlying realities of real-world railroading.

Id. at 15. This means that the complainant shipper must demonstrate that its SARR can provide service to its customers (i.e., traffic group members) that meets their requirements. DuPont has accomplished this by showing that the train transit times during the peak period in the peak year are similar to or lower than the NS's actual cycle and transit times during the comparable period of the most recent year for which data is available.

The starting point for the analysis in this case is the DRR's peak-year traffic volume and its peak-period train counts, which were developed from NS's train movement and car movement data for the traffic included in the DRR's traffic group for 2009 and 2010, the most recent year for which such data was available. The peak trains, DRR system configuration and relevant aspects of the operating plan were then input into the RTC Model to verify that the configuration and operating plan are realistic and adequate to enable the DRR to operate its

[14] *See WFA/Basin* at 15; ("the operating plan must be capable of providing, at a minimum, the level of service to which the shippers in the traffic group are accustomed").

peak-period trains efficiently and in accordance with its customers' requirements as measured by train cycle/transit times.

The key outputs generated by the RTC Model for the transit time analysis were elapsed train running times over each of the DRR's line segments, and train transit times (used to develop locomotive and car hours and train-crew counts) over the portion of the DRR system used by each train during the peak seven days of the ten-day period modeled by DuPont's operating experts. A schematic diagram of the DRR's tracks as they appear in the RTC Model is attached as Exhibit III-C-6. The electronic files containing the RTC Model runs, output and case files are included in DuPont's Part III-C e-workpaper folder "RTC."[15]

As the Board has acknowledged, the SAC test must be equally workable in the Eastern and Western contexts.[16] The same holds true with regard to variances in the amount and usability of railroad traffic and operating data in a given proceeding. Accommodating both the nature of Class I rail operations in the East generally, and the NS traffic data produced in discovery in particular, the RTC simulation of the DRR's operations in the peak week of its peak traffic year confirm that the DRR's configuration, facilities and operating plan are feasible. The DRR's trains operate in a manner that produces faster train speeds and transit times on average than NS demonstrated in the Base Year. The DRR's ability to provide service equal to or better than NS', and thus commensurate with its customers' requirements, therefore is confirmed.

3. Other

a. Rerouted Traffic

It is well established that in stand-alone cost proceedings, Complainants are permitted the flexibility to design and route traffic differently than the actual operations of the defendant

[15] DuPont understands that the Board's staff is a licensee of, and has, the RTC Model, so the RTC Model itself is not being provided to the Board. Messrs. Fapp and Humphrey used Version 64(G) of the RTC Model for the simulation of the DRR's peak-period operations presented in e-workpaper folder "RTC."

[16] *See CP&L* at 17.

railroad.[17] In this proceeding, to rationalize NS' system and to create a more efficient railroad, DuPont's experts have not constructed all of NS' parallel routes and instead have determined to include existing rail lines which best serve the DRR's customers while minimizing, if not eliminating, duplicate routes. As a result, some traffic is re-routed over a different route than used by NS for moving the traffic. The STB has categorized re-routed traffic as either an "internal re-route" or and "external re-route," where the traffic moves between two points on the actual route of movement over routes that are not the same as those used by the defendant.

An internal re-route is where the movement is originated by the SARR (or interline received by the SARR) at a location on the actual route of movement and then terminated by the SARR (or interline forwarded back to the incumbent carrier) at a location on the actual route of movement. The SARR is free to move the traffic in any way it deems efficient between the two points on the actual route. Note, however, that if the SARR moves the traffic over track that is not on the actual route of movement, the SARR must meet or exceed the service criteria (e.g., transit time) currently realized by the incumbent carrier between the two points on the actual route.

An external re-route is a re-route where the movement is originated by the SARR (or interline received by the SARR) at a location on the actual route of movement and then interline forwarded back to the incumbent carrier by the SARR at a location NOT on the actual route of movement. For an external re-route, the SARR is responsible for any costs incurred by the incumbent carrier as a result of having to move the re-routed traffic over track not normally used to handle the traffic. Examples of such costs would be capacity enhancements, e.g., passing sidings and enhanced signaling systems.

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[17] *See*, e.g., *AEPCO* at 15.

DuPont's experts have re-routed traffic in four instances. Each of these reroutes are "internal reroutes" and are discussed below.

i. Bannon, OH to Kellysville, WV -- NS currently has two routes between Columbus, OH and Kellysville, WV. One extends through Dickinson and Elmore, WV and serves the DuPont facility in Bent,WV. The other route extends through Chillicothe, OH, and Kenova, WV to Kellysville. The DRR does not include the Kenova route and reroutes general freight and coal traffic over the Dickinson/Elmore line. Intermodal traffic is not rerouted over the Dickinson/Elmore line because of curve restrictions on the line. The route miles for the two lines is nearly identical with the Dickinson/Elmore route equal to 323.0 miles and the Kenova route equal to 323.3 miles.

ii. Riverton, VA to Altavista, VA – NS currently has two routes between Riverton, VA and Altavista, VA. The route included in the DRR network extends south from Riverton through Shenandoah and Roanoke, then east to Altavista. NS' alternative route extends east of Riverton to Manassas Jct, VA then south through Charlottesville and Lynchburg, VA to Altavista. The Shenandoah/Roanoke route included in the DRR network is 224.6 miles compared to the Charlottesville/Lynchburg route which equals 216.3 miles or 8.3 miles fewer than the route included in the DRR network. Traffic which NS operates over the Charlottesville/Lynchburg route, which does not originate or terminate on that route is rerouted over the DRR between Riverton and Altavista.

iii. Roanoke, VA to Abilene Cross, VA – NS has two routes between Roanoke and Abilene Cross, VA. The route included in the DRR network extends east through Altavista, VA and Vabrook, VA then to Petersburg, VA a distance of 99.8 miles. NS' alternative route extends northeast through Lynchburg, VA then through Appomattox, VA a distance of 104.1 miles. Traffic which operates over the Lynchburg/Appomattox route which does not

originate or terminate on that route is rerouted between Roanoke and Petersburg over the DRR through Altavista.

iv. Green, GA to Bremen, GA – NS has two routes between Green, GA and Bremen, GA. The route included in the DRR network extends from Green south through Austell, GA (just west of Atlanta), then west to Bremen, a distance of 76.8 miles. NS' alternate route also extends south from Green and turns southwesterly then through Cedartown, GA to Bremen, a distance of 38.7 miles or 38.1 miles less than the route included in the DRR. DuPont did not include this duplicate route in the DRR network as it added an unnecessary 38.1 miles of track infrastructure to the system and because the route included in the system is the most direct route to Atlanta and points east and south of Atlanta. Traffic which NS actually moves over the Green/Cedartown route to Bremen does not originate or terminate on this line and moves beyond Bremen. This traffic has been rerouted via the DRR Austell route. {

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In conclusion, the DRR is more efficient than NS in that elimination of the duplicate routes reduces the DRR network by a total of 682.4 route miles or approximately $2.242 billion

in road property assets, without any substantial change in service to the DRR's customers from that currently provided by NS.

b. Train Control and Communications

The DRR network employs a Positive Train Control ("PTC") system for all train control and communications. The Rail Safety Improvement Act of 2008 (RSIA) (signed by the President on October 16, 2008, as Public Law 110-432) has mandated the widespread installation of PTC systems by December 2015.

As stated by the Federal Railroad Administration, "PTC systems are integrated command, control, communications, and information systems for controlling train movements with safety, security, precision, and efficiency. PTC systems will improve railroad safety by significantly reducing the probability of collisions between trains, casualties to roadway workers and damage to their equipment, and over speed accidents.... PTC systems are comprised of digital data link communications networks, continuous and accurate positioning systems such as NDGPS, on-board computers with digitized maps on locomotives and maintenance-of-way equipment, in-cab displays, throttle-brake interfaces on locomotives, wayside interface units at switches and wayside detectors, and control center computers and displays.... PTC systems issue movement authorities to train and maintenance-of-way crews, track the location of the trains and maintenance-of-way vehicles, have the ability to automatically enforce movement authorities, and continually update operating data systems with information on the location of trains, locomotives, cars, and crews. The remote intervention capability of PTC will permit the control center to stop a train should the locomotive crew be incapacitated. In addition to providing a greater level of safety and security, PTC systems also enable a railroad to run scheduled operations and provide improved running time, greater running time reliability, higher asset

utilization, and greater track capacity. They will assist railroads in measuring and managing costs and in improving energy efficiency."[18]

As discussed in Section III-F, unlike existing Class I carriers, the DRR is installing a PTC system from the outset of its construction and investment, rather than converting an existing train communications and control system to a PTC system. As a result, the investment expenditures by the DRR are less than what an existing Class I carrier will incur to achieve the same level of infrastructure.

Moreover, based on discussions with the designer and developer of the RTC simulation model, the dispatch logic of the RTC most closely simulates the communications of a PTC system where there are no active signals within the model. Therefore, in all locations where PTC will be present on the DRR, DuPont has disabled any signal logic.[19]

c. Miscellaneous Aspects of the Operating Plan

As discussed in Part III-A, the DRR includes cross-over traffic in its traffic group. Cross-over traffic as has been included in stand-alone traffic groups in nearly every proceeding since *Nevada Power II*, as is evidenced by the Board's following statement in *PSCo/Xcel*:

> "The use of cross-over traffic to simplify the SAC presentation is well established practice....It enables the SAC analysis to take into account the economies of scale, scope and density that the defendant carrier enjoys over the routes replicated."[20]

Historically, cross-over traffic has been included in situations where the SARR has built rail lines of the incumbent railroad and moves traffic to or from a created interchange with the incumbent. As with other SARR networks, not all of the incumbent rail lines are required to move the issue traffic which results in cross-over traffic. In the instant proceeding some trains

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[18] *See* http://www.fra.dot.gov/pages/784.shtml.

[19] The developer of the RTC model has indicated that operating the model with the signal logic turned off closely mimics the expected operations assuming PTC system communications are employed.

[20] *See PSCo/Xcel* at 13-14.

are moved by the SARR on more than one segment between origin and destination, thus creating two "cross-over" interchanges for a single move.

For example, a train moving from Atlanta, GA to Kansas City, MO, currently moves north from Atlanta to Chattanooga, TN, then to Danville, KY and then west through Louisville, KY to East St Louis, IL, then to Moberly, MO and finally onto Kansas City. The line segment between East St. Louis and Moberly is not included in the DRR Network and rather than rerouting this train over the DRR from East St. Louis northeast to Decatur, IL, then southwest to Moberly, MO, the DRR is assumed to interchange forward these trains to NS at East St Louis and then interchange receive these trains from NS at Moberly, for furtherance to Kansas City. These trains continue to be routed in the same manner that NS currently routes them and therefore do not represent "re-routed" traffic, but rather cross-over traffic with two cross-over interchanges.

In addition to the above example, similar operations occur at the following location pairs on the DRR where trains are interchange forwarded to NS, then received in interchange from NS:

1. Chillicothe, OH and PD Junction, WV;
2. Abrams Yard, PA and Reading, PA;
3. Cincinnati, OH and Ft Wayne, IN;
4. Cincinnati, OH and Goshen, IN;
5. Knoxville, TN and Emory Gap, TN;
6. Salisbury, NC and Asheville, NC;
7. Ft Mill, SC and Augusta, GA; and
8. Buffalo, NY and Cleveland, OH.

Trains subject to these operations do not carry issue traffic and are identified in the RTC train lists as trains with the same train identification numbers and start dates, but with "A" and "B" designations, which represent the two different handlings of this train by the DRR.

Other elements of the DRR operating plan are described in Part III-D. These include locomotive maintenance facilities and procedures, equipment maintenance facilities and procedures, and operating personnel requirements – including Train & Engine ("T&E") crews and non-train operating personnel involved in field supervision, yard operations, dispatching, and mechanical functions. As described in Part III-D-5, the DRR's maintenance-of-way plan has been carefully coordinated with its operating plan and is fully consistent with the operating plan.

Part III-D

III. D. OPERATING EXPENSES

This Part of DuPont's Opening Narrative explains the DRR's annual operating expenses for equipment, personnel, general & administrative, information technology and maintenance-of-way requirements and the development of the related service units and costs. The expert witnesses responsible for the evidence in this Part include Richard H. McDonald (locomotive requirements and operating and general and administrative personnel and equipment); Joseph A. Kruzich (information technology costs); Philip H. Burris (operating statistics, crew requirements, locomotive and freight car requirements, fuel costs, personnel compensation, equipment lease/maintenance costs and operating units cost); and Harvey A. Crouch, P.E. (maintenance-of-way costs). Their detailed qualifications are included in Part IV.

DuPont witness Fapp and Humphrey developed train transit/cycle times from the RTC Model simulation of the DRR's operations. The RTC Model output was directly used to calculate the DRR's locomotive hours and car hours for the peak week of the June 1, 2018 to May 31, 2019 peak year. Mr. Burris, using the peak week transit times and locomotive requirement outputs from the RTC model, calculated locomotive hours and car hours for trains moving from June 1, 2009 through May 31, 2010 ("Base Year"). In addition, locomotive unit miles and car miles were calculated for trains moving in the Base Year.[1] The resulting statistics were utilized to determine overall locomotive requirements and car ownership requirements, as shown in the accompanying workpapers.[2] T&E (train crew) personnel requirements were also developed for trains moving in the Base Year.[3]

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[1] Development of the locomotive miles, car miles, locomotive hours, car hours and train and enginemen ("T&E") requirements is shown in e-workpaper "Base Year Train List_Statistics_Open_Errata.xlsx."

[2] *See* e-workpapers "DRR Operating Statistics_Errata.xls" and "DRR Car Costs_Errata.xls."

[3] Details are provided in e-workpaper "Base Year Train List_Statistics_Open_Errata.xlsx."

The actual locomotive and car hours and associated expenses derived from train transit/cycle times for the year would be lower than those presented here because the average number of daily trains containing DRR traffic moved during the Base Year is less than the daily trains moved by the DRR during the peak one-week period of the peak year. Thus the DRR's transit/cycle times should be faster on a daily average basis for the entire year than as compared to the peak week.

The DRR's Base Year annual operating expenses are shown in Table III-D-1 below.[4]

Table III-D-1
DRR Base Year Operating Expenses

	Expense Component (1)	Cost (in Millions) (2)
1.	Locomotive Lease [Ownership]	$58.3
2.	Locomotive Maintenance	124.0
3.	Locomotive Operations	394.1
4.	Railcar Lease	307.5
5.	Materials & Supply Operating	3.8
6.	Train and Engine Personnel	314.0
7.	Operating Managers	53.7
8.	General & Administrative	57.6
9.	Loss & Damage	14.1
10.	Ad Valorem Tax	56.7
11.	Maintenance-of-Way	156.6
12.	Trackage Rights	42.3
13.	Intermodal Lift and Ramp	97.7
14.	Insurance	35.1
15.	Startup and Training	112.4
16.	**Total**[1/]	**$1,827.9**

1/ Total may differ slightly from the sum of the individual items due to rounding.

[4] The DRR's first year of operations is June 1, 2009 through May 31, 2010. Operating expenses are calculated for this first year of operations at 2Q2009 wage and price levels. The DCF model uses these expenses and indexes them to the appropriate time periods.

1. Locomotives

The DRR's Base Year locomotive requirements are summarized in Table III-C-4 in Part III-C. The DRR uses three types of locomotives – GE ES44AC locomotives for road service (including helper service), GP38 locomotives for local train service and work trains and EMD SW1500 locomotives for yard switching. The DRR needs a total of 483 ES44AC locomotives and 101 GP38 locomotives to transport its peak year trains (including spares), and a total of 80 SW1500 locomotives for switch service.

a. Acquisition

NS did not provide any current locomotive capital leases in response to DuPont's discovery requests. As a result, DuPont developed 2009 locomotive lease costs for ES44AC locomotives from information contained in the STB's decision in *AEPCO*[5] and the public version of defendants' reply statement in that proceeding. The annual lease expense developed from *AEPCO* equals ${ } per unit.[6] This amount is also supported by the public version of UP's Reply evidence in *IPA*[7] which shows that UP's 2011 annual cost to lease ES44AC locomotives equals ${ }.[8] The total DRR lease cost in 2009 for ES44ASC locomotives equals ${ }.[9]

The DRR also leases its GP38 locomotives at an annual lease price of $82,699 per unit. This lease price is developed from an article in the June 2008 issue of *Railway Age*, titled "2008

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[5] *See AEPCO* at 40-41.

[6] The STB's decision in *AEPCO* provides total investment in locomotives at page 40, and the number of units by type of unit at page 41. Defendants' Reply statement (public version) provides the lease price for switch locomotives at page III.D-3, thereby providing the information necessary to determine UP's average annual lease price for ES44-AC locomotive in 2009. See e-workpaper "III-D-1 Loco Cost.pdf."

[7] STB Docket No. 42127, *Intermountain Power Agency v. Union Pacific Railroad Company,* UP Reply at III-D-2 and III-D-8 (Public Version).

[8] *See* e-workpaper "Loco Cost.pdf."

[9] In addition, to these locomotive lease amounts, capital costs to install required PTC equipment on all ES44AC and GP38 locomotives are included with the signals & communications investment expense in the DCF model. The amount included per locomotive is developed from information provided by NS in discovery.

Guide to Equipment Leasing."[10] The total DRR lease cost in 2009 for GP38 locomotives equals $8.4 million.

The DRR also leases its SW1500 locomotives at an annual lease price of $36,755 per unit. This lease price is also developed from the June 2008 issue of *Railway Age*, titled "2008 Guide to Equipment Leasing."[11] Application of this annual lease payment to the 80 SW1500 locomotives results in an annual lease payment of $2.9 million in 2009.

As explained in Part III-C-1, DuPont's experts used a road locomotive spare margin of { } percent and { } percent for ES44AC and GP38 locomotives, respectively, based on NS's actual experience as shown in materials it produced in discovery. DuPont's experts also applied a peaking factor, as mandated by the Board in *WFA/Basin*, to arrive at the DRR's total annual road locomotive requirements. The peaking factor equals 5.4 percent and is equal to the average number of train starts per day in the peak week of the Peak Year divided by the average number of train starts per day in the Peak Year. This is the same procedure as that used by the STB to calculate the peaking factor in *PSCo/Xcel II*.[12]

b. Maintenance

The DRR's locomotives undergo FRA-required 92-day inspections and minor repairs at each designated DRR yard. The locomotives are maintained primarily at Elkhart, Conway, Chattanooga and Roanoke yards, where the DRR has provided a locomotive maintenance facility to be used by its locomotive maintenance contractor. Locomotives used for trains that do not operate through one of these locations or any other locomotive inspection/maintenance point on

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[10] The lease price for GP38-2 and GP38-3 locomotives range from $200 to $250 per day, indexed to 2Q2009 using the AAR equipment rents index produces an annual lease rate of $82,700.

[11] *See* e-workpaper "III-D-1 Loco Cost.pdf." The lease price for SW1500 locomotives ranges from $75 to $125 per day. Using the average price of $100 per day, indexed to 2009 using the AAR equipment rents index, produces an annual lease payment of $36,755 per unit.

[12] *See PSCo/Xcel II* at 13.

NS (in the case of cross-over traffic) are routed on trains that do operate through one of the yards with a locomotive maintenance facility, as necessary, to enable them to receive required maintenance, including periodic overhauls.

NS' 2009 average locomotive maintenance cost per locomotive unit mile is used for ES44AC, GP38 and SW1500 locomotives. The NS cost per locomotive unit mile of $1.1795 was developed from its 2009 R-1 Annual Report to the STB and indexed to 2Q09.[13] The NS system average cost includes both routine maintenance and locomotive overhauls. The system average cost was used as NS failed to provide information requested in discovery that is specific to various types of locomotives it utilizes including ES44AC and GP38 locomotives. The total locomotive maintenance cost for the DRR equals $124.0 million in 2009.[14]

The DRR provides an End-of-Train Device ("EOTD") for each of its locomotives.[15]

c. Servicing (Fuel, Sand and Lubrication)

Contractors based at the DRR's yards fuel, sand and lubricate locomotives. Locomotives are fueled and serviced using two different procedures. First, inspections of through trains moving more than 750 miles on the DRR occur at Elkhart, Conway, Roanoke, Chattanooga, Atlanta and Bellevue. Fixed fueling platforms are located at each of these locations for fueling and servicing locomotives. Locomotives on through trains that are being inspected are removed and replaced with freshly fueled and serviced locomotives. Further, locomotives on trains originating at these locations are also fueled and serviced at the fueling platforms. Second, locomotives originating at locations other than those listed above are fueled by contractors using tanker trucks (known in the railroad industry as direct-to-locomotive or "DTL" fueling).

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[13] *See* e-workpaper "Loco Servicing and Maintenance Cost.xlsx."

[14] *See* e-workpapers "DRR Operating Expense_Errata.xls"

[15] *See* e-workpaper "DRR Materials and Supplies.xls."

The DRR's fuel cost is based on the average consumption per per locomotive unit mile calculated from NS' 2009 R-1 Annual Report for road and yard locomotives and the actual price of fuel paid by NS for 2Q2009 as reported by NS in its Quarterly Review. The components of the DRR's fuel costs are discussed below.

i. Fuel Cost

The DRR's fuel cost is based on the price NS paid for fuel in 2Q2009 of $1.545 per gallon as reported in NS' Quarterly Financial Review, Second Quarter 2009.[16]

ii. Fuel Consumption

The average fuel consumption rate for the DRR was developed from NS' 2009 R-1 Annual Report. For road and switch locomotives this equals to 2.28 and 2.67 gallons per locomotive unit mile respectively.[17]

iii. Locomotive Servicing

Other DRR locomotive servicing costs (primarily sand and lubrication) are based on a cost of $0.2198 per diesel unit-mile for ES44AC and GP38 locomotives and $0.0602 for SW1500 locomotives. These amounts are calculated using NS's 2009 R-1.[18]

2. Railcars

a. Acquisition

The DRR uses a mixture of railroad-provided cars and private cars. For railroad-provided cars, DuPont developed car costs using three different approaches. First, for non-coal traffic moving in cars owned by foreign roads, car costs are based on time and mileage by car type developed from NS's 2009 R-1.

Second, for non-coal traffic moving in NS equipment, an annual full service lease cost

[16] *See* www.nscorp.com/nscorpjtml/pdf/financial-q2-09.pdf and e-workpaper "Loco Cost.pdf."

[17] *See* e-workpaper "Loco Cost.pdf."

[18] *See* e-workpaper "Loco Servicing and Maintenance Cost.xls."

was developed for each car type from information provided by NS in discovery or from publicly available sources.[19] A weighted annual car cost for all car types was then developed based on the percentage each car type moves on the DRR system. The weighted average annual car cost was then converted to a cost per hour and cost per mile and applied to the car hours and car miles for the Base Year trains. The car hour requirements for these cars are based on RTC transit times, plus free time at shipper origin and destination. The free time included is based on review of NS Tariff NS 6004-C, *Demurrage Rules and Charges,* effective February 1, 2009.[20] This tariff specifies NS demurrage charges equal to $100 per car per day, or fraction thereof and provides for a one day credit for loading and a two day credit for unloading. These credit days are included in the calculation of car days for the purpose of determining DRR system car requirements. Time beyond the credit days at origin and destination are not included as NS collects $100 per car per day for that time. Given that the typical car leases for between $8.00 and $15.00 per day,[21] the $100 charge received by NS, and which would be received by DRR, more than offsets any additional car costs the DRR would incur for system cars at origin or destination. Third, for DRR-provided coal cars, car lease payments are based on annual full service lease costs developed from an article in the June 2008 issue of *Railway* Age, titled "2008 Guide to Equipment Leasing." The annual full service lease for coal cars is $5,232.[22]

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[19] *See* e-workpapers "III-D-2 Car Cost.pdf" and "DRR Car Costs_Errata.xls."

[20] A copy of NS Tariff 6004 – C is included, *See* e-workpaper "III-D-2 Car Cost.pdf"

[21] Annual lease cost of $3,024 and $5,340 divided by 365 days, respectively.

[22] *See* e-workpaper "III-D-2 Car Lease Cost.pdf." and DRR Car Costs_Errata.xls."

The cars provided by the DRR for non-coal traffic include boxcars, covered hoppers, gondolas, open-top hoppers and flat cars. The annual full service lease cost per car for each car type is as follows:

Boxcars	$3,024
Covered Hoppers	$3,576
Open-top Hoppers	$5,232
Flat Cars	$5,340

The lease costs for these car types are based on *Railway Age's* "2008 Guide to Equipment Leasing".[23]

The DRR's freight car requirements include a spare margin of { } percent. This spare margin is based on a review of transportation contracts provided by NS in discovery which show spare margins that range from { } percent to { } percent. This spare margin is similar to the 5.0 percent spare margin used by both parties and accepted by the Board in *AEPCO* at 46. A 5.0 percent margin was also accepted by the Board in *Otter Tail.*[24]

b. Maintenance

As described above, the DRR uses full service car leases for the railcars it provides. As full service lease payments include maintenance costs, no other maintenance costs are included.

Shippers who supply railcars for their DRR movements make their own separate arrangements for maintenance of their cars at existing car repair facilities on or near the route of movement.

c. Private Car Allowances

For DRR coal movements that occur in private cars, the cars are provided per diem and mileage free under the terms of the relevant NS transportation contracts and other pricing authorities (that is, the cars are provided free of charge to NS and the freight rates reflect the fact

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[23] *Id.*

[24] *Otter Tail* at C-5.

that NS is not incurring car costs). Because the DRR is replacing NS with respect to its coal traffic, the DRR also pays no per diem or mileage allowances with respect to coal movements in private cars.

With respect to private cars used for non-coal traffic, DuPont's experts have included a private car charge per car-mile by car type which is applied to all private car-miles on the DRR. The private car mileage charge by car type was developed from data contained in NS's 2009 R-1.[25]

3. Operating Personnel

The DRR has a traffic group that moves primarily in trainload quantities. Consistent with the stand-alone concept of identifying the least-cost, most-efficient, feasible hypothetical alternative to the incumbent, the DRR is a non-union railroad that is built from the ground-up to handle a defined traffic group.[26]

DuPont's experts have developed a staffing plan and associated personnel for the DRR to handle its projected peak traffic volume safely and efficiently by taking full advantage of modern technology. This staffing plan also permits the railroad to maintain its facilities in good condition while minimizing cost.

The DRR's operating personnel include train crew, line supervisory and field employees in Transportation, Engineering/Maintenance-of-Way and Mechanical departments. The senior Operations staff (headquartered at Roanoke, VA) report directly to the Vice Presidents of Transportation, Engineering and Mechanical, in turn each of these Vice Presidents reports to the Vice President -- Operations. The DRR's operating personnel requirements are summarized below and fully discussed in Exhibit III-D-1.

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[25] *See* e-workpaper "DRR Car Costs_Errata.xls."

[26] The Board has accepted the concept of a non-unionized SARR. *See TMPA* at 687; *PSCo/Xcel* at 68, 69.

a. Train/Switch Crew Personnel

The DRR requires a total of 3,166 Train & Engine ("T&E") crew members to transport its Base Year trains. This count, which includes helper crews and switch crews based at the DRR's yards, is based on the number of trains moving over the various parts of the DRR system during the Base Year; the crew assignments developed by Mr. McDonald (as described in Part III-C-1-d), and the switch assignments at the DRR's yards. The RTC Model simulation performed by Mr. Fapp was used to confirm that train crews operating in these crew districts generally could complete each tour of duty within 12 hours and otherwise comply with the federal Hours of Service law, as amended.[27]

Consistent with Board precedent, T&E crews were developed using the total number of crew starts as determined by the actual train counts over an entire year.[28] In this instance, crews were determined for all trains moving in the Base Year. The total crew starts from each crew base were then adjusted upward to reflect the 0.38 percent re-crewing requirements based on the results of the RTC simulation indicating the number of crews whose on-duty time expired under the Hours of Service law. The adjusted crew count was then used to determine the total number of T&E crews required using the standard formula employed by the Board to determine how many crews are required to cover the number of crew starts assuming that each crew member is available 270 days a year. *Id.*[29]

b. Non-Train Operating Personnel

The DRR's staffing requirements for operating personnel other than train and switch crews and maintenance-of-way ("MOW") personnel are organized into three departments all reporting to the Vice President – Operations. The 591 non-train operating DRR personnel are

[27] *See* e-workpaper "Base Year Train List_Statistics_Open_Errata.xlsx."

[28] *See PSCo/Xcel* at 62.

[29] This number is not affected by the hours-of-service provisions of RSIA.

summarized by department in Table III-D-2 below and fully discussed in Exhibit III-D-1. MOW personnel are discussed separately in Part III-D-5.

Table III-D-2
DRR Non-Train Operating Personnel

Operations Department Position (1)	No. of Employees (2)
Vice President Operations Office	20
1. Transportation Department	281
2. Mechanical Department	286
3. Engineering Department	4
4. Total Non-Train Operating Personnel	591

c. Compensation

Compensation for the T&E personnel and other non-train operating personnel is derived from NS's 2009 Wage Forms A&B and is established at the same levels as those paid by NS for comparable positions. The T&E wages include all constructive allowances paid by NS to its train and enginemen. The total compensation for T&E personnel equals ${ }. Total compensation for DRR's non-train operating personnel equals $39.0 million. Salaries and total compensation for the DRR's T&E personnel and for the non-train operating personnel are shown in detail in Exhibit III-D-1.

Fringe benefits for all DRR employees are based on 37.5 percent of wages. This number is based on the average ratio of fringe benefits to total wages paid in 2009 to all railroad operating employees in the states in which the DRR operates, as reported by the Association of American Railroads.[30] This method of determining the fringe benefit ratio has been approved by

[30] Historically, the AAR reported fringe benefit information on a state by state basis for operating employees, it now reports fringe benefit information only for the US as a whole.

the Board.[31] In addition, it is the same method used by Complainants and accepted by both Defendants and the Board in *AEPCO*.[32]

d. Taxi and Hotel Expense

The DRR also incurs taxi and overnight expenses for train crews. The number of taxi trips required, the cost per trip, the number of overnight stays and the cost per stay were identified for each crew.[33]

Consistent with Board precedent, taxi trips and overnight stays were developed using the actual train counts (and the crews' related taxi and hotel requirements) over an entire year.[34]

The DRR's unit cost for taxi trips is estimated based on current rates for taxi service at each location. The cost per overnight stay ranges from $29.99 to $89.95 and is based on hotel room rates throughout the DRR system.[35]

e. Materials, Supplies and Equipment

Materials, supplies and equipment for operating personnel (other than maintenance-of-way personnel) include office furniture and equipment, office supplies, safety equipment, EOTDs, motor vehicles including railcar inspection vehicles, and tools and supplies. The total annual operating expense for these items equals $3.8 million in the base year.[36]

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[31] *See WFA/Basin* at 66.

[32] The Public Version of AEPCO's Opening Evidence shows the derivation of the fringe benefit ratio in that proceeding, see AEPCO's January 25, 2010 Opening Evidence, Public Version, page III-D-25. Review of Defendants Reply evidence shows that they did not object to this fringe benefit ratio. *see* Defendants Reply Evidence dated May 7, 2010, pp. III.D-29 to 30. Moreover the STB accepted this evidence without comment in *AEPCO*.

[33] *See* e-workpaper "DRR_Overnight Hotel and Taxi Costs.xlsx."

[34] *See WFA/Basin* at 48 and *PSCo/Xcel* at 69.

[35] *See* e-workpaper "DRR Overnight and Taxi Cost.xlsx."

[36] *See* e-workpaper "DRR Materials and Supplies.xls."

4. General and Administrative Expense

The DRR's personnel have all been designated as operating personnel or as General & Administrative ("G&A") personnel. The maintenance-of-way employees, while considered operating personnel, are discussed separately in Exhibit III-D-3. Those employees who might be considered non-operating personnel on a Class I railroad are all included in the G&A staff discussed below.

The G&A expenses for the DRR include its headquarters (corporate) management and administrative staff, buildings and equipment, and other expenses, including information technology ("IT") requirements. These expenses have been developed on the basis of the experience of DuPont's Witnesses McDonald, Burris and Kruzich. Mr. McDonald in particular has held a number of senior management positions at a Class I railroads. Mr. Burris developed G&A personnel salaries based on salaries paid to comparable NS or (where appropriate) other railroad personnel. DuPont's IT expert, Joseph Kruzich, developed the DRR's IT requirements and costs including computer hardware, systems, software, and support personnel as well as out-sourcing needs.

The DRR's engineering staff was developed by DuPont's engineering witness, Harvey Crouch, in consultation with Mr. McDonald. As the engineering function principally involves maintenance-of-way, the DRR's engineering personnel are discussed below in Part III-D-5.

a. Staffing Requirements

The DRR's G&A staff is consistent with the G&A staffing for the SARRs approved by the Board in recent SAC cases, including *PSCo/Xcel*, *AEP Texas*, *WFA/Basin* and *AEPCO*, taking into account the DRR's larger geographic scope, traffic volumes and train flows, and the diversity of commodities handled. It should be noted, however, that many G&A functions do not vary with the number of route-miles or the traffic volume. The nature of most G&A functions

means that a railroad the size of the DRR can achieve greater staffing economies of scale than a small railroad.

The G&A staff is based at Roanoke, VA, where the DRR's corporate headquarters building is located. This staff covers all executive and administrative functions including marketing, legal services, accounting and bookkeeping, budgeting, financial reporting, payroll, information systems, human resources, secretarial and clerical services, and supervising contractors in the performance of some out-sourced functions.

The DRR's G&A staff is summarized in Table III-D-3 below by department. This table does not include the operating and MOW employees located at the Roanoke, VA headquarters, who are discussed elsewhere in this Part. The G&A personnel requirements by department are fully discussed in Exhibit III-D-2.

Table III-D-3
DRR General & Administrative Personnel Requirements

Position (1)	Personnel (2)
1. Executive Dept. Total	9
2. Marketing Dept. Total	50
3. Finance & Accounting Dept. Total	66
4. Legal & Administration Total	42
5. IT Total	46
6. Total General & Administrative	213

Source: Exhibit III-D-2

i. Executive Department

The DRR's Executive department consists of the President's Office, as well as the DRR's Board of Directors. The President's office consists of nine (9) people: the President, two Directors of Corporate Relations, an Administrative Assistant and five (5) outside directors. The DRR has a ten-person Board of Directors, with five inside and five outside directors.

ii. Traffic and Marketing Department

The DRR Traffic and Marketing Department consists of 50 people and is headed by the Vice President – Traffic, who is assisted by the Director of Marketing and Sales and the Director of Customer Service. The Traffic and Marketing Department is responsible for the DRR's marketing functions, including communications with the railroad's customers and monitoring train locations and maintaining contact with customers regarding their shipments.

iii. Finance and Accounting Department

The Finance and Accounting Department is responsible for the DRR's basic financial and accounting functions, including treasury, taxation, revenue collection, disbursements for accounts payable, financial reporting, and budgeting and analysis. It consists of 66 employees and is headed by the Vice President – Finance & Accounting who (like the other vice presidents) has an Administrative Assistant/Secretary. The department has a Treasurer, a Controller, a Director of Budgets and Purchasing, a Director of Cost Analysis and a Director of Internal Auditing with various support positions reporting to these sub-department heads. The Vice President – Finance & Accounting is also the DRR's Chief Financial Officer.

iv. Law and Administration Department

The Law and Administration Department consists of 42 employees. It is headed by the Vice President – Law and Administration (with assistance from an Administrative Assistant) who is responsible for the DRR's legal affairs including litigation control, risk management and claims, and regulatory compliance. This Vice President is also responsible for other administrative functions including, real estate, claims, security and human resources and training.

v. Information Technology Department

The DRR's IT systems and associated personnel were developed by DuPont Witness Kruzich, who has considerable experience with the IT function at Class I and other railroads. The IT system (described in section 4.d) is administered by a staff consisting of a Vice President Information Technology, three Directors of Information Technology and 42 IT Specialists. As discussed in more detail in Exhibit III-D-2, the DRR does not have a main-frame environment, but rather a NT/PC-based system. This means far less IT effort is required than a typical Class I railroad due to the relative simplicity of a NT/PC-based system and the fact that much of the IT requirements is outsourced to RMI (i.e., Transportation, Revenue, Intermodal and Car Hire functions).

b. Compensation

The salaries and benefits for the DRR's G&A personnel described above are based on comparable and competitive compensation packages presently available in the railroad industry (and in other service industries).

Specifically, annual salaries for the G&A personnel are based on data contained in NS's Wage Forms A and B, with several exceptions. Salaries for the President and the Vice Presidents included in the G&A staff are based on the salaries, including bonuses, paid for similar positions by the Kansas City Southern Lines ("KCS") a holding company which owns and operates the Kansas City Southern Railway, the Kansas City Southern de Mexico and the Texas Mexican Railway Company. According to the KCS' website, the three major lines comprising the KCS operate 7,075 route miles of railroad, which is nearly the same as the 8,023 route miles operated by the DRR. This is far smaller than NS which operates 20,623 miles and substantially smaller than the other Class I railroads.

As stated previously, fringe benefits for all employees are based on 37.5 percent of wages based on information available from the AAR for railroads operating in the states where the DRR is located. The fringe benefit ratio includes expenses related to health and welfare benefits, railroad retirement, supplemental annuities, unemployment insurance and other programs.

The total compensation for the DRR G&A employees equals $19.1 million. This compensation by employee is addressed in Exhibit III-D-2.

c. Materials, Supplies and Equipment

Consistent with the stand-alone principles of unlimited resources and barrier-free entry, the ready availability of materials and equipment is assumed.

The DRR owns or leases various types of vehicles and equipment used by its Operating and G&A staffs. As fully discussed in Exhibit III-D-2 costs for this equipment are included in the calculation of the DRR's annual operating expenses.[37]

The DRR also needs miscellaneous office equipment and supplies including desks and janitorial supplies.[38]

d. Other G&A Expense

i. IT Systems

The DRR's information technology systems have been developed by DuPont Witness Joseph Kruzich, its experienced railroad IT expert. Mr. Kruzich has worked for Class I railroads reviewing various work procedures and providing recommendations on how the work processes could be improved to achieve a high degree of efficiency. This position provided him an opportunity to become very familiar with various work processes involved in running a railroad. Mr. Kruzich also served as IT Vice President of the Kansas City Southern Railroad and was

[37] *See* e-workpapers "DRR Operating Expense_Errata.xls" and "DRR Materials and Supplies.xls".

[38] *See* e-workpaper "DRR Materials and Supplies.xls."

instrumental in directing the development of KCS new computer systems in the late 1990's. A more detailed description of Mr. Kruzich's qualifications is contained in Part IV of this opening evidence.

Mr. Kruzich reviewed the DRR's operating plan and G&A requirements to determine the railroad's basic computer and communications needs and the kind of support needed by its staff. The IT systems described below enable the DRR to operate safely and efficiently and to perform all administrative functions.

The DRR has an average of 758 train movements per day in the peak week, as well as a limited number of local customers and interchange points. It also handles primarily trainload movements, with multiple-car billing (using the RMI Revenue System to allocate revenues), rather than billing for individual railcars. This reduces the complexity of the computer and communication systems required to support operations, and renders unnecessary the colossally expensive mainframe systems that large carriers such as NS use. Based on the DRR operating plan and G&A staff departments, the capital requirements for IT and communications systems equal $10.7 million.[39] The annual operating cost for IT and related communications equals $25.6 million at 2009 price levels.[40] Table III-D-4 below shows the capital and annual operating expenses separately for information technology and related communications systems.

[39] *See* e-workpaper "DRR-Capital Budget.xls."

[40] *See* e-workpaper "DRR-Operating Budget.xls."

Table III-D-4
Capital And Operating Costs For
DRR IT And Communications Systems

Item	Capital Cost	Operating Expense
(1)	(2)	(3)
1. Information Technology	$10,624,960	$24,883,951
2. Communications	$67,168	$760,338
3. Total	**$10,692,128**	**$25,644,290**

Source: *See* e-workpapers "DRR-Capital Budget.xls" and "DRR-Operating Budget.xls"

The DRR's computer and IT communications systems are fully described in Exhibit III-D-2. They have been designed to meet the company's mission-critical technology needs to achieve operating efficiencies, customer satisfaction, optimum staffing,[41] maximum productivity, and safe train operations. The costs shown in the workpapers are based on the DRR's highest daily train counts and number of annual carload transactions.

In addition to the amounts shown above for IT capital, costs for IT hardware and software are included in the signals and communications investment account that are required for the DRR's PTC signaling system. The amount included is based on values provided by NS in discovery for additional IT systems and prorated to the DRR based on a route mile basis. The amount provided was reduced to eliminated duplication of the dispatching system already provided for in the IT capital cost reflected above.

ii. Other Out-Sourced Functions

As described earlier, several functions customarily provided in-house by large Class I railroads can be efficiently out-sourced by the DRR. Consistent with the stand-alone concept of

[41] The DRR's IT personnel requirements are described above in the discussion of G&A personnel. The IT staff size is largely a function of the systems described in this section.

an efficient, least-cost railroad, out-sourcing is used wherever the economics so justify without sacrificing the SARR's feasibility or service quality.

Out-sourced functions, in addition to those described in the preceding section, include initial training of operating employees (discussed in more detail below), several finance and accounting functions, including preparation of income, property and payroll tax returns and financial/account auditing, legal services, including claims administration and investigation, and administration of the company's retirement plan.[42]

A number of independent accounting, payroll service and other firms have the experience and systems to perform these functions. For example, the payroll service firm Paychex has experience in complying with Railroad Retirement and other railroad-specific tax and regulatory reporting requirements. In the human resources area, regional and industry employers' associations are available as a resource for the DRR's internal human resources staff.

Estimated annual costs of $2.1 million have been developed for outsourcing all of the functions described above.[43]

iii. Start-Up and Training Costs

The DRR's start-up and training costs have been calculated using the procedures approved by the Board in *WFA/Basin* at 51-54. A total amount of $112.4 million has been provided for initial DRR training and recruiting costs.[44] Consistent with *WFA/Basin*, start-up training and recruitment costs are treated as operating expense in the DRR's first year of operations. Training and recruiting costs are fully discussed by position in Exhibit III-D-2.

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[42] *See* e-workpaper "DRR GA Outsourcing.xls."

[43] Id.

[44] *See* e-workpaper "DRR Operating Expense_Errata.xls," tab "Training."

iv. Travel Expense

Travel expenses have been included for all DRR employees at the Manager level and higher (except for the Customer Service Managers and the Assistant Controllers, as these positions do not require travel) and for the five (5) outside members of the Board of Directors. Annual travel expenses of $9,751 per employee are included. This amount is based on the 2009 annual survey of corporate travel managers performed by Runzheimer International, which estimates the annual cost of corporate business travel.[45] The DRR's other start-up costs, road property investment costs including construction of fixed facilities, which are included in the DRR's capital costs, and equipment acquisition are discussed in other sections of Part III.

5. Maintenance-of-Way

The MOW plan for the DRR was developed by DuPont's expert railroad engineering witness, Harvey Crouch.[46] It was also reviewed and approved by Richard McDonald, DuPont's rail operations expert, who has engineering and operating experience with NS's predecessors.

Mr. Crouch served in the Southern Railway's and then NS's Engineering Department from 1977 to 1987, including service as a Project Engineer and Track Supervisor in the Maintenance of Way & Structures Department. His duties in these positions are detailed in his Statement of Qualifications in Part IV. As Track Supervisor, Mr. Crouch was responsible for the inspection and maintenance of a portion of NS's mainline trackage in Virginia, including track inspection, day-to-day supervision of work gangs, ordering material, budgeting and planning, as well as management of rehabilitation and maintenance of track and inspection of bridges. As Project Engineer, Mr. Crouch was responsible for engineering design and plan review, and the

[45] *See* e-workpapers "DRR Operating Expense_Errata.xls" and "III-D-3 Material and Supplies.pdf."

[46] Mr. Crouch is also sponsoring DuPont's evidence on the DRR's construction costs in Part III-F below. The staffing for the DRR's MOW Communications & Signals Department is also sponsored by DuPont's communications and signals expert, Victor Grappone, PE.

bid and construction engineering phases for major capital track and bridge construction and rehabilitation projects in the geographic areas served by the DRR.

Mr. Crouch considered the kinds of terrain and climate in which the various portions of the DRR are located in developing the DRR's MOW plan and incorporated the significant aspects of the variations in terrain and climate into the MOW plan and staffing.

Consistent with *WFA/Basin*, Mr. Crouch's MOW plan has a substantial field staff to perform day-to-day inspection and maintenance activities, supported by a managerial/office engineering and support staff that reports to the DRR's Vice President-Engineering & Mechanical. Capital maintenance programs are also required during the 10-year DCF period to renew/replace the fixed facilities and in particular the principal elements of the track structure. The DRR's MOW staff has been structured to include planning, budgeting and contracting related to annual capital programs.

Also consistent with *WFA/Basin*, all of the DRR's program work (including rail grinding and crossing paving) is performed by contractors. It is more efficient to contract out program work, rather than hiring large seasonal gangs to perform most of this work as most Class I railroads have done until recently.[47] Using contractors is more efficient, in part, because contractors are not subject to internal railroad union craft work-rules (which can be exacerbated for large railroads like NS that are the product of numerous mergers and consolidations among predecessor railroads) or the Railroad Retirement program, which makes internal railroad labor very expensive. In addition, it is not cost-effective to hire and equip large mechanized gangs consisting of DRR employees because most program work is performed on an as-needed basis

[47] Consistent with the treatment of program renewal work in other rate cases such as *AEP Texas* and *WFA/Basin*, the cost of capital programs is accounted for in the DCF model. In addition, CSX uses Hulcher for ballast train supply and unloading; all the Class 1's use contractors for vegetation control, rail defect testing, geometry car testing, and to some extent, inspection using hy-rail truck mounted equipment. Regional and Short Line Railroads routinely use contract services for all capital work.

each year, and gangs simply are not needed throughout the entire year. In addition, winter work is not feasible on parts of the DRR due to roadbed freezing and ballast delivered in ballast cars freezing en route to construction areas.[48]

In developing the DRR's MOW plan, Mr. Crouch started by considering the maintenance functions that need to be performed, and then developed an appropriate field organization and supervisory/support staff for each function, given the railroad's geographic scope, terrain, number of trains and gross tonnages. The basic functions include track inspection and routine maintenance, communication and signal inspections, testing and maintenance, bridge inspection and minor building maintenance, and budgeting and administrative support. Mr. Crouch also considered the equipment needs for each function, as well as the maintenance work (other than capital program maintenance) that appropriately could be contracted out. The total MOW expense in the Base Year equals $156.6 million.

Each of the categories of MOW expense is discussed at length in Exhibit III-D-3. This Exhibit also addresses program maintenance and maintenance scheduling. The detailed calculations are provided in Mr. Crouch's supporting e-workpapers.

6. Leased Facilities

The DRR 32 joint facility agreements cover 818 route miles throughout its system. The development of the annual payments to NS and other carriers for use of these trackage rights is shown in the workpapers included with this opening evidence.[49]

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[48] Because the DRR starts operations with a newly-constructed physical plant, there should be no need for significant program work (and thus large mechanized forces) during the first 10 years of its operations – notwithstanding the way program maintenance is treated under the DCF model, in which a portion of the DRR's fixed assets are assumed to be renewed each year.

[49] *See* e-workpaper "DuPont Joint facility charges.xlsx."

7. Loss and Damage

The DRR's annual loss and damage cost equals $14.1 million. This cost was developed based on NS's actual 2010 loss and damage per ton for the commodities moving on the DRR multiplied by the number of tons of each commodity moved on the DRR in 2010.[50] This is the same methodology used to calculate loss and damage costs in other SAC proceedings by both Complainant and Defendant and accepted by the Board. Review of the public record shows that most recently, Complaintant used this method in the AEPCO proceeding, it was accepted by Defendants in that proceeding and without comment by the Board in *AEPCO*.

8. Insurance

The standard practice of large railroads is to self-insure against potential liability except for catastrophic risks. The DRR also self-insures for most types of claims, and obtains insurance at competitive rates to cover catastrophic loss and Federal Employers Liability Act exposure.

Insurance expenses for the DRR were calculated using NS's 2009 insurance ratio of 1.96 percent of operating expenses.[51]

9. Ad Valorem Taxes

The DRR operates in the states of Alabama, Delaware, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia and West Virginia. To develop ad valorem taxes, the amount of tax that NS paid per route mile was calculated for NS's route miles in each state. These amounts were then applied to the DRR's route miles in each state and summed to arrive at DRR's total Ad Valorem Tax burden.

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[50] For cross-over traffic, the DRR's share of the loss and damage payments was calculated on the percentage of the DRR's car-miles to NS's total car-miles by two-digit STCC code. *See* e-workpaper "DRR Loss and Damage.xls."

[51] *See* e-workpaper "NS Insurance Rate.xls."

10. Other

a. Intermodal Lift and Ramp Cost

In addition to the line haul costs associated with intermodal traffic related to locomotives, fuel, crews and maintenance-of-way, the DRR incurs lift and ramp costs. These costs have been included for all containers and trailers originating or terminating on the DRR based on information provided by NS in discovery. A lift and ramp cost is included based on the amount NS incurs for providing lift and ramp services at intermodal terminals located on the NS lines included in the DRR network.[52] The costs were calculated at each NS facility and applied on a facility by facility basis to the containers and trailers handled at each facility by the DRR.

The lift and ramp services include costs for {

}. The DRR provides dray services for very few intermodal units. For these units a cost per dray of $994 is included based on the amount per dray as developed from NS' R-1 Annual Report. The total intermodal lift, ramp and dray expenses incurred by the DRR equal $90.8 million in the base year.[53]

b. Automotive Handling Cost

Automotive handling costs are included for loading and unloading automobiles to and from railcars. The handling cost per unit equals ${ } and is developed from information provided by NS in discovery. The total cost of automobile handling for the DRR equals ${ }.[54]

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[52] *See* e-workpaper "NS Intermodal Terminal Cost.xlsx."

[53] *See* e-workpaper "DRR Operating Expense_Errata.xlsx."

[54] *See* e-workpaper "AUTO DISTRIBUTION DETAIL - -2008-2010.xlsx" and "DRR Operating Expense_Errata.xlsx."

c. Costs related to Rerouted Traffic

As discussed in Part III-C, all rerouted traffic on the DRR is in the form of internal reroutes and in all instances except one the rerouted traffic moves a shorter distance or nearly the same distance as NS' actual route. As these moves are internally rerouted, NS does not incur any additional costs as a result of the rerouted traffic.

d. Calculation of Annual Operating Expenses

As noted at the beginning of this Part, the statistical inputs used to develop the DRR's annual operating expenses (equipment and operating personnel needs, locomotive unit miles, crew starts, *etc.*) were developed by DuPont's expert operating, IT and engineering/MOW witnesses, with assistance from DuPont's witness Burris. Mr. Burris also developed the annual salaries, equipment and operating unit costs. Mr. Burris used all of these inputs to develop the DRR's Base Year operating expenses.[55]

The procedures used to develop the DRR's annual operating expenses for the Base Year were approved by the Board in *WFA/Basin*, i.e., applying transit times calculated for the peak period of the peak year to a full year of train data to calculate operating statistics, rather than calculate statistics for the peak week and expanding those statistics to reflect a full year of data.[56]

The resulting operating statistics determined for Base Year trains were used to develop first-year operating expenses. The Base Year operating expenses were then provided to DuPont

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[55] *See* e-workpaper "DRR Operating Expense_Errata.xls."

[56] The DRR moves a total of 185,568 trains in the Base Year moving between 2,965 on-SARR/off- SARR pairs. Operating statistics and crew requirements were developed specifically for 178,471 trains moving between 797 DRR on-SARR/off-SARR pairs and representing 96.2 percent of all Base Year trains. The resulting operating statistics and crew starts were expanded to reflect 100 percent of all trains, the remaining 7,097 trains move between 2,168 on-SARR/off-SARR pairs. The level of effort required to develop specific operating statistics for these remaining trains was determined to not be practical.

Part III-E

III. E NON-ROAD PROPERTY INVESTMENT

The testimony in this Part is being sponsored by Philip H. Burris of L.E. Peabody & Associates, Inc. His credentials are detailed Part IV.

1. Locomotives

As previously described, the DRR leases ES44AC and GP38 road locomotives and SW1500 switching/work train locomotives. The annual lease cost is included as an operating expense. The acquisition of all locomotives is described in Part III-D.

2. Railcars

The DRR also leases all of the railcars needed to serve the traffic group which are not supplied by the shippers or foreign railroads. The annual lease cost is included as an operating expense, as described in Part III-D.

3. Other

As explained in Part III-D most of the DRR's other equipment, including company vehicles, maintenance-of-way equipment such as hi-rail trucks, radios and telephones will be leased or purchased. The annual lease cost for this equipment is included as an operating expense. To the extent any of this equipment is purchased, the purchase price is annuitized and included with operating expenses.

Some items of equipment will be purchased, in particular, computers and related hardware. The DRR's computer system needs, and the associated capital investment, are described in Part III-D.

The DRR operates over 818.87 miles of track through trackage rights or joint facilities agreements in the same capacity as NS does today. These agreements and their locations are discussed in Part III-C. This track is owned by NS, CSXT, CN, BNSF, Conrail and others. Payments to these carriers for the operating rights are on a usage basis and are included in the DRR's operating expenses.

Part III-F

III. F. ROAD PROPERTY INVESTMENT

The DRR replicates approximately 7,276.94 route miles of existing NS track in 20 states (Alabama, Delaware, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia and West Virginia). The areas through which the track runs include rural undeveloped areas as well as major metropolitan areas.

The DRR's road property investment costs are summarized in Table III-F-1 below and Exhibit III-F-1.

Table III-F-1
DRR Road Property Investment Costs
(in millions)

Item (1)	Investment (3)
1. Land	$3,374
2. Roadbed Preparation	3,969
3. Track Construction	8,242
4. Tunnels	444
5. Bridges	1,928
6. Signals & Communications	1,247
7. Buildings & Facilities	229
8. Public Improvements	122
9. Subtotal	**$19,555**
10. Mobilization	437
11. Engineering	1,618
12. Contingencies	1,824
13. Total Road Property Investment Costs	**$23,434**

Source: Exhibit III-F-1.

This testimony is being sponsored by Richard R. Harps, MAI, CRE, John G. Pinto, CRE, Elizabeth W. Vandermause, MAI and Daniel C. Vandermause (land acquisition costs), Philip H. Burris (easements), Harvey A. Crouch (construction costs and bridge designs and costs), Charles

A. Stedman (roadbed preparation costs excluding culverts), and Victor F. Grappone (signals and communications system costs). These Witnesses' qualifications are included in Part IV.

1. Land

Land acquisition costs for the DRR were developed by Richard R. Harps, MAI, CRE, John G. Pinto CRE, Elizabeth W. Vandermause, MAI, Daniel C. Vandermause and their project team. Mr. Harps has over 35 years of experience as an appraiser and consultant. He holds the Member of the Appraisal Institute ("MAI") designation from the Counselors of Real Estate. In addition, he was President of the Washington, D.C. Association of Realtors in 1985. The team he has put together for this assignment brings an extensive background in real estate appraisal and experience in appraisal of transportation rights of way including valuation of rail properties throughout the United States and Canada.

In this appraisal, the "Across the Fence" methodology was used. This method estimates the value of the right of way by establishing the value of adjacent lands and parcels of land in proximity to the ROW with the same zoning as lands abutting the ROW.

A summary of the results of Mr. Harps' analysis is shown in Table III-F-2 below.

Table III-F-2
DRR Land Acquisition Acreage And Costs

Property Type	Acreage	Cost (in millions)
(1)	(2)	(3)
1. ROW		
a. Fee-Simple	77,353	$2,811.9
b. Easement	9,103	0.5
2. Yard	3,725	539.2
3. Other		
a. Microwave Towers	604	22.8
4. Total	90,785	$3,374.4

Source: *See* e-workpapers "DuPont SAR Land Valuation – April 24 2012.pdf" and "DuPont SAR-Changes in Land Valuation-May 2012.pdf".

Detailed discussions of each of these property types follow.

a. Right-of-Way Acreage

The majority of the right-of-way is based upon an average width of 100 feet.[1] In urban locations an average width of 75 feet was used.[2] And, in each location where additional trackage or space is required, acreage has been added.

The DRR will acquire 86,456 acres, 77,353 acres in fee simple and 9,103 acres via easement, for its right-of-way.[3]

b. Yard Acreage

The DRR has six major yards and several lesser yards whose locations are fully discussed in Parts III-B and III-C. The DRR headquarters building is located at the Roanoke yard. Locomotive shops are located at Elkhart, Conway, Roanoke and Chattanooga. Yards throughout the DRR system are primarily used for interchange, classification, car and locomotive inspections and fueling. DRR will acquire 3,725 acres for its yards.[4]

c. Other Acreage

The DRR will place 302 microwave towers along its right-of-way. The DRR will acquire two (2) acres per microwave tower site for a total of 604 acres for microwave towers.[5]

d. Property Values

Based on the inspections and analyses undertaken by Mr. Harps and his team, and the easement costs developed by Mr. Burris, DuPont has determined that the total cost for the ROW needed for the DRR's lines as of June 1, 2009, is $3,374.4 million as summarized in Table III-F-

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[1] The 100 foot right-of-way has been utilized consistently by both parties in prior SAC cases and accepted by the Board. *PSCO/Xcel* at 86.

[2] *See Duke/CSXT* at 72-73; *Wisconsin P&L* at 1018; *West Texas Utilities* at 702.

[3] *See* e-workpapers "DuPont SAR Land Valuation – April 24 2012.pdf" and "DuPont SAR-Changes in Land Valuation-May 2012.pdf".

[4] *See* e-workpaper "DuPont SAR Land Valuation – April 24 2012.pdf."

[5] *Id.*

2 above. A detailed description of Mr. Harps approach to developing these land acquisition costs is included in DuPont's workpapers.[6]

Property values were determined by evaluating the value of land adjacent to or in the proximity of the ROW consistent with recent Board decisions.[7] The acquisition price for land is assumed to be equal to the market value of the Across-The-Fence ("ATF") properties.

Mr. Harps and his team utilized aerial imagery from Google Earth Pro to trace the path of the DRR. Adjacent land uses were noted along the way and used to define the land use type on both sides of the ROW. The ROW is split down the centerline with the adjacent land use defined for half of the ROW width on each side of the centerline. A new segment was defined when the ATF land use changed on either side of the ROW. Using this approach, 6,893 line segments were created.

Following the review of the aerial imagery, Mr. Harps and his team performed physical inspections of the ROW in 18 urban areas, covering 373 miles of ROW. These inspections took place during September 2011 and October 2011 and were used to verify the land use determined using aerial imagery as well as to provide additional information.

This process identified six types of land use along the ROW that were used to determine comparable sales. Table III-F-3 below summarizes the percent of each type of land use along the DRR ROW.

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[6] *See* e-workpaper "DuPont SAR Land Valuation – April 24 2012.pdf."

[7] *Duke/CSXT* at 74 "The land along the ROW is a prime indicator of a ROW's value and has been used in all prior SAC cases."

Table III-F-3
DRR Distribution Of Land Use

Land Use Type (1)	Percent of Total (2)
1. Agriculture	61%
2. Residential	11%
3. Industrial	13%
4. Restricted	3%
5. Rural Town	8%
6. Commercial	5%
7. Total Acreage	100%

Source: "DuPont SAR Land Valuation – April 24 2012.pdf"

The most appropriate method of estimating the value of the land for this purpose is the sales comparison approach. Land is valued as if vacant and unimproved regardless of its current state. Because there were only a limited number of sales in the recent past from which to determine values, Mr. Harps expanded the timeframe for comparable sales and broadened the area of proximity to encompass a greater number of sales. Mr. Harps details his valuation approach in his Report.[8] Finally, and consistent with the principal that a SARR is not required to purchase a greater interest than the incumbent railroad possesses,[9] DuPont's Witness Burris conducted an extensive review of NS valuation maps and easement documents provided in discovery. This review identified many easements and other transfers of property ownership along the DRR ROW.

The DRR easement acreage was developed by multiplying the length of the easement along the ROW times the width of the ROW at each location. The average cost per easement

[8] *See* e-workpaper "DuPont SAR Land Valuation – April 24 2012.pdf."

[9] *See CP&L* at 76 and *Duke/CSXT* at 74.

acre for each state was then applied to the acreage for each easement in the individual state. The total costs for DRR acreage acquired through easements is $535,000.[10]

The total land acquisition costs for the DRR are $ 3,374.4 million- comprised of $3,373.9 million for fee simple acquisitions and $535,000 for easements.

2. Roadbed Preparation

DuPont's roadbed preparation testimony is sponsored by witnesses Harvey Crouch and Charles Stedman. Their qualifications are detailed in Part IV. Mr. Crouch has over 30 years of freight railroad engineering experience, including service with Southern Railway and Norfolk Southern between 1977 and 1987 as a project engineer and track supervisor with the NS. His experience with NS included supervision of the construction of numerous grading and track construction projects, and railroad facilities and buildings.

Mr. Stedman has over 30 years of experience with L. E. Peabody & Associates, Inc. He has developed and presented evidence pertaining to roadbed preparation in numerous proceedings before the ICC and the Board. Mr. Stedman has also researched ICC records including the ICC's Engineering Reports.[11]

In this testimony, the ICC Engineering Reports were used to develop the DRR quantities for clearing, grubbing, earthwork, rip rap, retaining walls and lateral drainage. As noted below, the information extracted from the ICC Engineering Reports was adjusted to reflect current engineering and design specifications.

The roadbed preparation unit costs utilized herein are a combination of actual costs and Means Handbook[12] costs. The Means Handbook costs are very conservative for this application

[10] *See* e-workpapers "DRR Easement_Open.xlsx" and "Easement Fees_Open.xlsx."

[11] ICC Bureau of Valuation B.V. Form No. 561.

[12] RS Means 2009 Site Work & Landscape Cost Data ("Means Handbook").

because the prices are based on an average of costs for projects of all sizes from around the country and assume a unionized workforce. There is no way to reflect the economies of scale inherent in a project the size of the DRR or to accurately estimate the impact of using union labor.

A summary of the DRR's roadbed preparation costs are summarized in Table III-F-4 below.

Table III-F-4
DRR Roadbed Preparation Costs[1/]

Item (1)	Cost (000) (2)
1. Clearing and Grubbing	$81,191
2. Earthwork	
a. Common	666,288
b. Loose Rock	507,986
c. Solid Rock	1,265,234
d. Borrow	674,182
e. Land for Waste Excavation	206,860
3. Drainage[2/]	
a. Lateral Drainage	49,919
4. Culverts[3/]	131,919
5. Retaining Walls	346,129
6. Rip Rap	36,908
7. Relocation of Utilities	147
8. Topsoil Placement / Seeding	1,439
9. Surfacing for Detour Roads	524
10. Environmental Compliance	177
11. **Total**	**$3,968,903**

[1/] *See* e-workpaper "DRR Open Grading errata.xls"
[2/] Yard drainage is included in building site development costs.
[3/] *See* e-workpaper "Culvert Construction Costs errata.xls"

a. Clearing and Grubbing

DuPont reviewed the valuation section index maps accompanying the ICC Engineering Reports for the railroads traversed by the DRR[13] and identified the valuation sections applicable to the DRR. A listing of the valuation sections used in the development of the roadbed preparation construction costs for the DRR are included in DuPont's workpapers.[14]

Based on this selection of valuation sections, the clearing and grubbing quantities required for the original construction of the DRR lines were taken from the ICC Engineering Reports. These quantities were then modified to reflect current construction specifications.[15]

Historically, clearing and grubbing costs have been developed and applied separately depending on the acreage requiring the grubbing of tree stumps. In this case, however, DuPont's engineers based the clearing and grubbing costs on a recent railroad realignment project in Tennessee, the Trestle Hollow Project, and applied this cost to all DRR acreage to be cleared. The project took place in 2007 and involved re-routing and building a new rail line near Centerville, TN. The cost for clearing and grubbing was $2,000 per acre and included "clearing and grubbing of all trees, stumps, undergrowth, brush, trash, grass, weeds, roots, debris, or other deleterious or objectionable materials...."[16] Stumps, roots and other debris were to be removed to a minimum depth of 18 inches below the surface and/or subgrade, whichever was lower and also included removal and stockpile of topsoil. DuPont indexed the 2007 unit costs to June

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[13] The ICC Engineering Reports were compiled in the first quarter of the 20th century. At that time, the current lines of NS were owned by many different railroads.

[14] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Eng Rep Input."

[15] The clearing and grubbing quantities (acres per track mile) were increased by the ratio of the current roadbed specifications to the original roadbed specifications and applied to the track miles (including yards and sidings) of the DRR's line segments to develop current clearing and grubbing quantities. *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Other Items".

[16] *See* e-workpapers "Trestle Hollow Project Cost Sheet.pdf," and "Trestle Hollow Project Specs.doc."

2009, the start date of the DRR. The indexed unit cost for clearing and grubbing is $ 2,111 per acre.

Applying this combined unit cost to the total acres requiring clearing conservatively overstates the total costs as not all acres have trees or require grubbing. 38,461 acres will be cleared and grubbed for the construction of the DRR at a total cost of $81.2 million at 2Q09 levels.[17]

DuPont has not included any additional costs for stripping or undercutting as these are included in the Trestle Hollow unit costs.[18]

b. Earthwork

The ICC Engineering Reports were utilized to develop the earthwork quantities for each valuation section covering the line segments of the DRR. These quantities were adjusted to reflect current roadbed specifications. The adjusted earthwork quantities were then used to develop the earthwork requirements and costs for the DRR. A combination of actual unit costs from the Trestle Hollow Project (indexed to 2Q09) and the Means Handbook average costs were used to develop the earthwork costs.

Table III-F-5 summarizes the earthwork quantities and costs associated with construction of the DRR.

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[17] DuPont notes that in recent stand-alone cost proceedings, complainants have used two different costs for clearing and one cost for grubbing, all from the Means Handbook. For the acres that were grubbed (according to the ICC Engineering Reports), complainants assumed that trees were also cleared and applied both the cost per acre for clearing and the cost per acre for grubbing from the Means Handbook. For the remaining acres of clearing (i.e., those acres not requiring grubbing), complainants applied a cost for brush clearing. This approach has been accepted by the STB. See *AEP Texas* at 78-79, *AEPCO* at 83-84. While DuPont believes the use of actual clearing costs is superior to the costs from the Means Handbook, DuPont has included these alternate calculations in its workpapers. *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Other Items."

[18] Additionally, prior decisions from the Board support exclusion of these costs. *PSCo/Xcel* at 90, *WFA/Basin* at 83, *AEP Texas* at 74, *Duke/CSXT* at 80, *AEPCO* at 84-84.

Table III-F-5
DRR Earthwork Quantities And Costs

Item	Cubic Yards (000)	Cost (000)
(1)	(2)	(3)
1. Common Excavation	373,698	$666,288
2. Loose Rock Excavation	49,245	507,986
3. Solid Rock Excavation	92,078	1,265,234
4. Borrow	43,245	674,182
5. Total	558,266	$3,113,690

Source: *See* e-workpaper "DRR Open Grading errata.xlsx," tab "EW Cost."

i. ROW Quantities

DuPont engineers pulled the main-line, other main track, and all other track from the applicable ICC Engineering Reports. They also extracted the cubic yards ("CY") of excavation and embankment material by type – common, loose rock, solid rock and embankment (borrow).[19] The grading quantities from the ICC Engineering Reports were then used to develop distribution percentages for the four categories.[20] Based on a review of railroad construction literature prevailing at the time the ICC Engineering Reports were compiled, DuPont's engineers estimated that the ICC Engineering Report quantities for the rail lines comprising the DRR reflect average roadbed widths of 19 feet for fills and 23 feet for cuts (including ditches).[21] The earthwork quantities obtained from the ICC Engineering Reports were adjusted to reflect the requirements of today's heavier trains. Table III-F-6 shows the more modern roadbed widths utilized in the construction of the DRR.

[19] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Eng Rep Input."

[20] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Distribution."

[21] *See* William C. Willard, *Maintenance of Way & Structures*, McGraw-Hill Book Company, 1915, pp. 29-31 included in e-workpaper "Original Roadbed Widths.pdf."

Table III-F-6
Roadbed Widths For Construction Of The DRR

Track Type	Roadbed Width[1/] Fills	Cuts
(1)	(2)	(3)
1. Single Track	24 feet	40 feet
2. Double Track	39 feet	55 feet

[1/] Based upon 15 foot track centers and a side slope of 1.5 to 1.

The adjusted earthwork quantities for the construction of the DRR based on the above specifications are contained in the accompanying workpapers.[22]

The calculation of the earthwork quantities for the DRR's line segments are detailed in our workpapers.[23] First, the DRR line segments were matched with the applicable valuation section. Next, the track miles for each segment were categorized as first main (route miles), other main (multiple track and passing sidings) and other track (such as set out tracks) based on the DRR's track configuration shown in the DRR stick diagrams. Finally, the number of track miles was multiplied by the applicable cubic yards per mile for the appropriate valuation section.

ii. Yard Quantities

As discussed in Part III-B, the DRR has six major yards and numerous lesser yards (including interchange yards).[24] For each yard, DuPont calculated the grading requirements based on an assumed average fill height of one foot and 25-foot track centers.[25]

[22] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Earthwork by val sec."

[23] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "CY Grad by seg."

[24] *See* e-workpaper "DRR Yard Matrix Open Grading errata.xlsx."

[25] The one-foot fill height was used for the yards because an assumed fill height of one foot is used to allocate earthwork quantities to the yard tracks involved in the original construction and reflected in the ICC Engineering Reports. This methodology has been applied repeatedly, and accepted by the STB, to develop SARR yard earthwork quantities. *See Wisconsin P&L,* 5 S.T.B at 1022, *PSCo/Xcel, 7 S.T.B.* at 675, *AEP Texas* at 81, *Otter Tail* at D-10, *Duke/NS*, 7 S.T.B. at 172, *CP&L*, 7 S.T.B. at 310-311, *Duke/CSXT,* 7 S.T.B. at 477 and *AEPCO* at 90. *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Yards."

Yard earthwork is classified as excavation because the estimated yard track quantities removed from the ICC Engineering Report total quantities were removed from the excavation quantities for each valuation section.

iii. Earthwork Unit Costs

Harvey Crouch and his associates are familiar with much of the territory traversed by the DRR and knowledgeable about the appropriate equipment required for excavation. Rail lines, including the lines comprising the DRR, are generally laid out to follow the natural ground as much as possible, minimize grade changes and avoid difficult terrain whenever possible. The DRR relies upon the same least-cost-but-feasible grading approach previously accepted by the STB.[26]

(a). Common Earthwork

In most previous stand-alone proceedings, earthwork excavation unit costs have been based on the Means Handbook.[27] The costs in the Means Handbook are conservative because they are based on an average of costs for projects of all sizes from around the country, without specific consideration for the economies of scale that would benefit the DRR due to the much larger project size involved. Using the Means Handbook, DuPont's engineers have calculated a common excavation unit cost.[28]

The DRR traverses some areas that DuPont classified as adverse, i.e., the territory is more difficult and access is limited due to the terrain. Based on a review of topographical maps, these areas are: (1) the line between Pittsburgh, PA and Harrisburg, PA; (2) the line between Alloy,

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[26] *FMC at 800* "UP has not shown that it would be infeasible to use the equipment selected by FMC… FMC is entitled to have the equipment that results in the overall lowest cost used. Therefore, we use FMC's unit costs for grading to determine earthwork costs." *See also Duke/CSXT* at 78-80; *PSCo/Xcel* at 95-98.

[27] *See PSCo/Xcel* at 95-97, *AEP Texas* at 81-82, *Otter Tail* at D-11-12, *Duke/CSXT* at 78-79, *Duke/NS* at 93-95 and *CP&L* at 80-82.

[28] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Unit Costs."

WV and Walton, VA; (3) portions of the line between Harrisburg, PA and Perryville, MD; (4) portions of the line between Roanoke, VA and Bristol, TN; (5) portions of the line between Somerset, KY and Chattanooga, TN; (6) the Celco Branch; (7) the Waynesville Branch; and (8) portions of the Asheville Branch.[29] Using the Means Handbook, DuPont's engineers calculated the cost for common excavation in adverse areas.[30]

Beginning with *WFA/Basin*, complainants used costs from actual railroad construction projects. The common excavation cost per CY based on an actual BNSF track construction project was accepted by BNSF and the STB.[31] This trend continued in *AEPCO*, where complainant relied on costs from five BNSF railroad projects and this was accepted by the Board.[32]

In this proceeding, NS provided a limited number of documents containing earthwork cost information in response to DuPont's discovery requests. Virtually all of the documents were { } estimates with CY quantities ranging from { }. These projects reflected { } construction. None of these projects are remotely akin to new rail construction like the DRR.

Moreover, projects undertaken by the { } are generally projects involving additions or modifications to existing track and right-of-way, many times requiring construction under traffic, or adjacent to active tracks. This drives the cost up since site access is limited, work has to be conducted in limited work windows, and work has to

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[29] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "EW Cost."

[30] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Unit Costs."

[31] *See WFA/Basin* at 86 (the parties agreed on the unit costs for common excavation), WFA/Basin April 19, 2005 Opening (Public Version) at III-F-36-37 (describing the source of the common excavation unit cost) and WFA/Basin September 30, 2005 Rebuttal (Public Version) at III-F-56 (stating that BNSF accepted WFA/Basin's common excavation unit cost).

[32] *See AEPCO* at 86-88.

be performed in a manner that is safe with respect to the railroad and its contractor and the contractor's activities.

In the two most recent stand-alone decisions, complainants have proposed, and the STB has accepted, common earthwork unit costs based on actual projects instead of the Means Handbook. DuPont has continued that trend. As discussed in the previous section on clearing and grubbing, DuPont's Witness Crouch was involved with the Trestle Hollow Project, a railroad realignment project in Tennessee which required the construction of a new railroad line. While this project is short in length, it differs from the projects provided by NS in discovery in at least two ways. First, it is an actual project with actual quantities and costs as opposed to an estimate of quantities and costs. Second, it reflects new rail line construction and there were considerable amounts of earthwork moved.[33]

The Trestle Hollow project involved constructing a complicated, new alignment for the South Central Tennessee Railroad west of Nashville. This project was challenging for several reasons. The purpose of the project was to bypass several large timber bridges approximately 100 years old. The alignment was designed to improve the vertical grade and reduce curvature. The new design was difficult due to the hilly terrain and included several tall embankments and deep cuts all on an average 2.4 percent grade. Clearing was difficult due to the hilly nature of the land and the size of the trees. The material excavated was a combination of common earth and loose rock. DuPont's engineers are being conservative by using the Trestle Hollow cost for only common excavation.

Common earthwork excavation costs for the DRR are based on the actual unit cost from the 2007 Trestle Hollow project of $1.65 per CY indexed to 2Q09. This unit cost includes all

[33] *See* e-workpapers "Trestle Hollow Project Specs.doc" and "Trestle Hollow Project Cost Sheet.pdf." *See also,* the directory "Trestle Hollow Pictures" included with DuPont's opening workpapers.

necessary work to prepare the roadbed for the placement of subballast, the handling of waste and hauling it to off-site locations as needed, as well as costs associated with any water for compaction that might be necessary.[34]

For the DRR line segments that were designated as adverse, the ratio between Means Handbook costs under ideal conditions and costs under adverse conditions was used to adjust the Trestle Hollow Project unit cost.

The cost for common excavation is $1.74 per CY with $2.15 per CY used in areas with adverse conditions.

(b). Loose Rock Excavation

Loose rock excavation is a category on the ICC Engineering Reports that does not have a counterpart in today's railroad construction environment. Railroads today use the categories of common (or unclassified) and solid rock. Thus, DuPont is being extremely conservative by applying a separate loose rock cost to such excavation rather than including it with the common excavation quantities. Loose rock excavation costs are based on the use of two 300 HP dozers for ripping the loose rock and pushing it into piles, a 3CY power shovel for placing the ripped and dozed rock into the truck (including the Means 15% additive), a 42 CY off highway truck to haul the material to the fill or disposal site, and a dozer to spread the material after it is dumped. Each of the 300 HP dozers is equipped with rock rippers at the rear and large push blades in front. The 42 CY off highway truck was selected because it is capable of turning in a 27' 11" radius and thus suitable for work in a railroad right-of-way.[35]

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[34] *See* the construction specifications contained in e-workpaper "Trestle Hollow Project Specs.doc" at 152-153.

[35] *See* e-workpaper "42 CY Truck.pdf."

The cost for loose rock excavation is $10.25 per CY with $10.52 per CY used in areas with adverse conditions.[36]

(c). Solid Rock Excavation

The unit cost for solid rock blasting is based on an average of the Means Handbook cost for blasting rock over 1,500 cubic yards and the cost for bulk drilling and blasting. DuPont has added the costs to excavate the blasted rock, load it into trucks, haul it away, and dump it. In addition, the cost to spread the material, and the average compaction cost for embankment that was used for the other earthwork categories was also applied.[37]

DuPont's engineers used a 50/50 combination unit cost made up of the solid rock unit cost ($17.11 per cubic yard in all conditions) and the loose rock unit cost ($10.25 per CY and $10.52 per CY in adverse conditions) based on their expert opinion that at least half of the quantities classified by the ICC as solid rock would be rippable (and therefore classified as loose rock or common excavation) using modern equipment.[38] This 50/50 combination results in a cost per CY of $13.68 for solid rock excavation with $13.82 per CY used in areas with adverse conditions.

(d). Embankment/Borrow

The Means Handbook-based unit costs for borrow utilized by the DuPont engineers are based on a five cubic yard wheel-mounted front end loader, 20 CY capacity dump trucks to haul material to the construction site, a dozer to spread the material, and the average compaction cost

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[36] The unit costs from the 2009 Means Handbook are indexed to 2Q09 levels and adjusted by the Means Handbook location factors. *See* e-workpaper "DRR Open Grading errata.xlsx," tabs "Unit Costs" and "Loc Factor."

[37] DuPont's solid rock excavation unit cost development is consistent with recent Board decisions. *See WFA/Basin* at 86-87, *AEP Texas* at 82-83, *PSCo/Xcel* at 96-97 and *AEPCO* at 89-90.

[38] This 50/50 combination has been repeatedly accepted by the Board. *See WFA/Basin* (parties agreed, not mentioned or altered in decision); *AEP Texas* (parties agreed, not mentioned or altered in decision); *Otter Tail* at D-12; *PSCo/Xcel* at 96 (where BNSF also agreed on this split); *Duke/NS* at 93-94; *CP&L* at 80; *Duke/CSXT* at 78; *AEPCO* at 90.

for embankment that was used for the other earthwork categories.[39] Borrow unit costs equal $15.59 per CY at 2Q09 levels.

(e). Land for Waste Excavation

Not all of the excavated material for the DRR is re-used as fill. Consistent with the procedures used in other SAC cases, DuPont's earthwork calculations assume a 30 percent waste ratio. As this waste material needs to be placed somewhere, the DRR is acquiring additional land along the right-of-way to accommodate the dumping of the waste material. DuPont's engineers have assumed an average 15-foot depth for wasted materials. DuPont has included an additional 7,662 acres of rural land for this purpose at an estimated $27,000 per acre for a total cost of $206.9 million.

(f). Total Earthwork Cost

The total earthwork cost associated with constructing the DRR including the cost of land for waste excavation is $3,320.6 million.

c. Drainage

i. Lateral Drainage

The linear feet of pipe per route mile for lateral drainage was obtained from the ICC Engineering Reports and applied to the DRR's line segments. The cost per linear foot for installed drainage pipe, including backfill and compaction, was taken from the 2009 Means Handbook indexed to 2Q09 and adjusted by the Means Handbook location factors. Based on the ICC Engineering Reports, the DRR requires 2,055,116 linear feet of lateral drainage pipe. The DRR's total investment in lateral drainage equals $49.9 million at 2Q09.[40]

[39] This is consistent with prior SAC proceedings. *See AEP Texas* at 81 and *Otter Tail* at D-13.

[40] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Other Items."

ii. Yard Drainage

DuPont's engineering experts have included minimal yard drainage facilities in the way of catch basins and drainage pipe for each of the DRR's six (6) major yards. Prior to the installation of any drainage facilities, the roadbed for yard track construction will be constructed to slope away from the main line. Storm water runoff will drain freely through the ballast and be collected by ditch lines along the perimeter of the yards. These ditches will then convey the storm water runoff offsite. Low areas can occur near facilities and between tracks separated by non-typical spacing. In those instances, catch basins are used to collect the water in the low areas. This water is then conveyed under the track to the perimeter ditch.

Yard drainage for the DRR will cost $6.4 million for catch basins and $22.3 million for drainage pipe and is included in the yard building site development costs.

d. Culverts

Culverts are devices placed in the roadbed to facilitate the movement of water from one side of the track to the other where large drainage areas, typical of bridges, are not required. The culverts specified by DuPont's engineers are corrugated aluminized metal pipe ("cmp"). All culverts used by the DRR are adequate to withstand railroad loadings to a gross weight on rail of 286,000 pounds per car (Cooper E-80 standards).

Culverts on the DRR also replace any bridges less than 20 feet in length, assuming that the bridge crosses a waterway.[41]

i. Culvert Unit Costs

Unit costs were developed from costs provided in quotes from multiple metal pipe manufacturers and the Means Handbook. Unit costs for corrugated metal pipe ("cmp") are driven by the linear feet (lf) of length of each culvert required in a particular location as well as

[41] *See, e.g., AEP Texas* at 93.

the diameter of the pipe.[42] Additional unit costs were developed for excavation, furnishing and placing crushed stone for bedding material, and backfill.[43]

ii. Culvert Installation Plans

All culverts are installed during the early stages of preparation of the subgrade for the railroad. The sites are easily accessible, in part through the ongoing preparation of the roadbed and in part because much of the DRR's ROW is near public roads. Moreover, the culverts can be installed with a minimum of excavation using the open trench method of installation.

Specifically, once the base layer of the roadbed is in place, the trench for the cmp is excavated one foot wider on each side than the culvert width. The bottom of the excavation is covered with an average depth of 12" of crushed stone bedding material to act as a foundation and cushion for the culvert, providing a means for transferring the load into the ground below the culvert as well as a level surface. The first culvert section is placed on the prepared bedding material. The next section is placed adjacent to the first and a connecting band is installed to connect the two sections. This continues until all sections have been set in place. The culvert is then backfilled. After the subbase has been prepared, most culverts can be installed in less than one day.

Work production of the crews is consistent with DuPont's proposed construction schedule because there are no deep trenches to excavate or work in, and by installing the culverts at this stage of the project, no waterway diversions are required. Moreover, in the few instances where water is flowing immediately adjacent to the culvert, the culvert can be installed while the water is flowing.

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[42] *See* e-workpaper "Culvert Construction Costs errata.xls."

[43] The price of bedding material is from the Trestle Hollow Project. All other unit costs are from the Means Handbook. *See* e-workpaper "Culvert Construction Costs errata.xls."

iii. Culvert Quantities

DuPont's engineers used the culvert inventories provided by NS in discovery to form an initial culvert list. To develop a cost for the culverts on the DRR, all culverts less than 20' in length were removed from the list, because they did not go through the full width of the roadbed, so that only culverts that provided drainage under the DRR line were included. The list was then converted to equivalent circular pipe sizes of 24", 36", 48", 60", 72", 84", 96", 108", or 120".

Second, in many instances, the culvert inventories provided by NS did not include any culvert length data. DuPont's engineers have, therefore, assumed that the culvert length will be set in accordance with the standard roadbed widths for cut and fill sections. Further, in many cases, NS's culvert inventory list did not indicate the size of the culvert being used; in those cases a size of 24" was assumed. In order to ensure that the DRR's culverts could meet the loading requirements of the DRR, DuPont's engineers elected to use aluminized cmp for all culvert installations.

iv. Total Culvert Costs

The total cost of the DRR's culverts is $131.9 million.[44]

e. Other

i. Ditches

The DRR has side ditches in cuts that are two feet wide and two feet deep and that are trapezoidal in section. Two-foot ditches have repeatedly been accepted by the Board.[45]

ii. Retaining Walls

Retaining wall quantities for the DRR are also extracted from the ICC Engineering Reports. The Engineering Report data includes cubic yards of masonry, timber walls, and walls

[44] *See* e-workpaper "Culvert Construction Costs errata.xls."

[45] *See Duke/NS* at 90, *CP&L* at 78, *Duke/CSXT* at 76, *TMPA* at 701, n.183, *Wisconsin P&L* at 1023.

made from timber ties and pilings under the category "Protection of Roadway" included in Account 3, Grading. Rather than construct masonry or timber retaining walls, the DRR uses gabions (galvanized steel mesh boxes filled with rock) for all of its retaining walls. Gabions are suitable because they can be assembled on site and bent to fit the existing terrain.

DuPont has used the cost for retaining wall gabions (including the rock) and the cost for timber pilings from the 2009 Means Handbook. Total retaining wall investment for the DRR equals $346 million at 2Q09 levels.[46]

iii. Rip Rap

DuPont's engineers developed rip rap quantities from the ICC Engineering Reports, and applied the unit cost from the Means Handbook to machine-place the rip rap. The material portion (rock) of the unit cost is included because the material is not readily available from the excavated rock that is wasted. DuPont has included $36.9 million for rip rap investment at 2Q09 levels.[47]

iv. Relocating and Protecting Utilities

Virtually all of the lines being replicated by the DRR were constructed by NS's predecessors in the 19th and early 20th centuries. Few, if any, utility lines existed at that time and would have had to be relocated. These costs were not incurred by the incumbent and thus, under the *Coal Rate Guidelines*, would constitute a barrier to entry if imposed on the DRR.[48]

However, DuPont's engineers identified 2 DRR branch lines, totaling 10.3 route miles, which could not be found on the ICC valuation maps accompanying the ICC Engineering

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[46] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Other Items."

[47] This rip rap investment does not include the rip rap used on culvert faces and for bridge pier and abutment protection. Those costs are included, where needed, in the appropriate investment category. Details on rip rap investment for roadbed preparation are provided in e-workpaper "DRR Open Grading errata.xlsx," tab "Other Items."

[48] *See AEP Texas* at 84; *PSCo/Xcel* at 100; *Duke/CSXT* at 83.

Reports. Therefore, DuPont's engineers assumed that these rail lines were constructed in the second half of the 20th century. Consistent with prior STB decisions, DuPont included $0.1 million, based on the cost per mile in *WFA/Basin*, for costs to relocate and protect utilities on these lines.[49]

v. Seeding/Topsoil Placement

Embankment protection quantities for all lines other than the recently-constructed branch lines were derived from the ICC Engineering Reports. Based on the ICC Engineering Report data, only 0.008 percent of the lines being replicated by the DRR had embankment protection quantities. For the recently-constructed branch lines, DuPont's engineers estimated the acres per mile for seeding/topsoil placement based on the average acres per mile for the 79-mile Orin Line, constructed by the BNSF Railway in Wyoming during the 1970's. The Orin Line is the last significant new rail line construction in the U. S.

For seeding and topsoil placement costs, DRR's engineers relied upon the unit cost of $1,600 per acre from the Trestle Hollow Project indexed to $1,688.78 per acre at 2Q09 levels.[50] Total DRR investment costs for seeding/placing topsoil equal $1.4 million.

vi. Water for Compaction

In the Eastern coal rate cases, the Board agreed with complainants that water for compaction was not necessary in the areas traversed by the stand-alone railroads because there is sufficient water content in the region to allow for proper compaction.[51] Consistent with the territory traversed by the stand-alone railroads in the Eastern coal rate cases, the DRR rail lines

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[49] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Other Costs."

[50] *See* e-workpapers "Trestle Hollow Project Cost Sheet.doc" and "DRR Open Grading errata.xlsx," tab "Other Costs."

[51] *See Duke/CSXT* at 83-84, *Duke/NS* at 99 and *CP&L* at 85.

traverse sub-humid, moist sub-humid and humid areas and not arid and semi-arid areas.[52] In any event, even if water for compaction was necessary in a certain area, the common earthwork unit costs relied on by DuPont include any incidental items such as water.[53]

vii. Surfacing for Detour Roads

DuPont's engineers did not include costs for any road detours for the DRR's lines that are covered by ICC Engineering Reports, as it is unlikely that NS incurred any costs for this item when the lines were originally built, and NS did not provide any information in discovery indicating that it incurred such costs. This is consistent with the approach approved by the Board in other SAC cases.[54]

For the DRR's recently-constructed branch lines, DuPont's engineers included an estimate of $0.5 million for the cost to provide road detours during construction.[55]

viii. Construction Site Access Roads

In general, the DRR's track subgrade is used for its site construction roads. In addition, most of the DRR right-of-way is accessible from public roads and highways, thereby permitting construction access without building separate access roads. Further, the initial construction activity includes clearing the DRR right-of-way and creating initial site access with the heavy construction equipment. As the site is leveled by either cutting or filling the right-of-way, access roads are created for moving earth, rock and other materials to and from the construction sites. In any event, no additional costs should be incurred for site construction access roads because the Trestle Hollow project, used for common excavation costs, required the contractor to provide its

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[52] *See* e-workpaper "DRR Route avg rainfall.pdf."

[53] *See* e-workpaper "Trestle Hollow Project Specs.doc."

[54] *See PSCo/Xcel* at 101; *Duke/NS* at 100; *CP&L* at 86; *Duke/CSXT* at 84; *TMPA* at 707-708; *Wisconsin P&L* at 1024-1025; *FMC* at 802.

[55] *See* e-workpaper "DRR Open Grading errata.xlsx," tab "Other Costs."

own, uncompensated, access to the site.[56] DuPont's position on this issue is consistent with several prior SAC decisions.[57]

ix. Environmental Compliance

DuPont included environmental compliance costs only for the two recently constructed branch lines. Inclusion of these costs on the lines originally constructed in the 19th and early 20th centuries by NS or its predecessors would constitute a barrier to entry.[58]

Total environmental compliance costs for the DRR equal $ 0.2 million.

3. Track Construction

DuPont's track construction testimony is sponsored by Witness Harvey Crouch. His qualifications are detailed in Part IV.

Track construction is the work required to lay track once the subgrade has been completed. This includes placing subballast, ballast, ties, rail, and other track components. The total costs required for construction of the DRR are summarized in Table III-F-7 below.

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[56] *See* e-workpaper "Trestle Hollow Project Specs.doc."

[57] *See Duke/CSXT* at 76; *Duke/NS* at 90-01; *CP&L* at 78; and *AEP Texas* at 80.

[58] *See Wisconsin P&L* at 1025 (the parties agreed that environmental mitigation was only required for the recently constructed segments); *PSCo/Xcel* at 101 (the parties agreed on the inapplicability of such costs); *AEP Texas* at 83. *See also* the public evidence (complainants' Rebuttal Evidence) in *WFA/Basin* where environmental compliance costs were applied only to recently-constructed lines - Docket No. 42088 (Public Version) filed Sept. 30, 2005, Narrative Vol. II at III-F-81-82. Details supporting environmental compliance costs for the DRR are provided in e-workpaper "DRR Open Grading errata.xlsx."

Table III-F-7
DRR Track Construction costs

Item (1)	Cost (000) (2)
1. Geotextile Fabric	$2,328
2. Ballast	1,152,318
3. Ties	1,635,780
4. Track (Rail)	
a. Main Line	1,711,271
b. Yard and Other Track	789,809
c. Field Welds	33,356
d. Switches (Turnouts)	503,563
5. Rail Lubricators	2,167
6. Plates, Spikes and Anchors	852,751
7. Derails and Wheel Stops	1,289
8. Track Labor and Equipment	1,557,178
9. Total	$8,241,810

Source: *See* e-workpaper "Track Construction Costs errata.xls."

a. Geotextile Fabric

DuPont has placed geotextile fabric under turnouts and at at-grade crossings.[59] The cost for at-grade crossings already includes the cost for the fabric so the quantities and costs in this part are only for the amount required under the DRR turnouts. DRR requires a total of 1,939,944 SY of geotextile fabric under turnouts at a cost of $2.3 million. The total DRR geotextile quantity calculations are included in the costs of turnout and grade crossings.[60]

b. Ballast

DuPont's engineers have used 18" of ballast and subballast, consisting of a 6-inch subballast layer and a 12-inch layer of clean rock ballast for all main tracks. Diagrams of the

[59] As done and accepted in prior SAC cases – *See WFA/Basin* decision at 94-95.

[60] *See* e-workpaper "Track Construction Costs errata.xls."

standard DRR main track cross sections (single and double) are included in the accompanying workpapers.[61] This roadbed section conforms to NS's standard roadbed section.

DuPont's engineers used 4" of subballast and 6" of ballast under yard tracks and set-out tracks because of the lighter traffic and slower speeds. This is consistent with NS' standard roadbed section. Ballast for the DRR would be locally obtained limestone or granite, crushed to meet AREMA No. 4 size requirements and meeting Los Angeles and Mill Abrasion requirements.[62] Subballast consists of similar parent materials crushed to provide a well-graded, dense layer of crushed rock similar to road base material.[63]

Ballast and subballast quantities were developed for all sections of track based on the lengths of single and multiple track sections, and the roadbed section referenced above. As noted above, the DuPont engineers have included cross-sections of the DRR track designs. The workpapers include the volume per foot of track for all items, including the volume per foot for ballast and subballast.[64] The quantities were calculated by multiplying the sectional area in square feet by one foot in length and then dividing by 27 to obtain cubic yards. The volume of rock displaced by the volume of the ties being used in particular locations was removed from the total volume calculation.

Ballast and subballast quantities for yards were calculated assuming each track in the yard is a single track and using the 4" subballast and 6" ballast depth. DuPont's experts also used the standard conversion factor of 1.5 tons/CY in determining quantities, which is

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[61] See e-workpaper "Typical Track Sections.pdf."

[62] *See* e-workpaper "Track Construction Costs errata.xls."

[63] *See* e-workpaper "Trestle Hollow Specs.pdf."

[64] *See* e-workpapers "Typical Sub-Ballast.pdf" and "Ballast Sections.pdf."

conservative versus the conversion factor of 1.325 tons/CY used by the "Track Data Handbook."[65]

DuPont's engineers used prices for ballast from direct quotes obtained from suppliers and historical pricing data obtained from NS in discovery.[66] DuPont's engineers used prices for subballast from unit costs obtained for the Trestle Hollow Project, which included delivery costs as well as placement of the subballast on the roadbed. Delivered costs for ballast are based on shipping distances from the sources to the railheads throughout the DRR system, which were then multiplied by $0.035 per mile based on a transportation charge from *AEPCO*.[67] The supply and shipping costs were then totaled and averaged to develop an average cost per CY delivered for ballast. The total cost of ballast and sub-ballast for the DRR is $1,152 million.

c. Ties

DuPont's engineers selected wood ties with a tie spacing of 20.5 inches for all main track, passing sidings, and branch lines consistent with railroad industry standards for mainline track. The Board has also repeatedly accepted wood tie spacing of 20.5".[68] Because of the lighter traffic and slower speeds, DuPont's engineers used wood ties with 24" spacing in yards and set-out tracks.[69]

DuPont's engineers selected standard Grade 5 treated hardwood railroad ties, whose dimensions are 7" x 9" x 8'6", for all track. Unit costs for Grade 5 ties were based on quotes received from Tangent Rail. Transportation costs were added based on average distance to rail head at $0.035 per ton-mile.

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[65] *See* e-workpapers "Track Construction Costs errata.xls" and "Typical Sub-Ballast.pdf."

[66] *See* e-workpapers "Track Construction Costs errata.xls" and "Ballast Purchases.xls."

[67] *See AEPCO* at 100.

[68] *See WFA/Basin* at 96; *West Texas Utilities* at 707.

[69] *See WFA/Basin* at 96 (accepting this spacing in yards).

The DRR is constructing its bridges with ballast decks, thereby obviating the need for transition ties. In addition, the Board has rejected transition ties at turnouts.[70] The total cost of ties for the DRR is $1,636 million.

d. Track (Rail)

i. Main Line

As discussed in Part III-B, the DRR will use 136-pound CWR for most of the DRR's main tracks and passing sidings (20 MGT/year or greater), with premium rail used in curves 3 degrees and greater. For the lighter density portions of the DRR (less than 20 MGT/year, new 115-pound rail will be used.[71] The delivered cost used for the DRR's mainline rail is $872 per ton.[72]

The rail is welded together into approximately 1,440-foot lengths and then loaded onto a rail train. The rail is distributed by the rail installation contractor and the rail distribution costs are included in labor charges.[73] The total cost of mainline rail for the DRR is $1,711 million.

ii. Yard and Other Tracks

As discussed in Part III-B, the DRR is using new 115-pound CWR rail for yard, helper pocket tracks and set-out tracks. As with the 136-pound rail, the price includes delivery to various railheads and the materials will be distributed by the rail installation contractor. The total cost of rail for yards and other tracks for the DRR is $790 million.

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[70] *Id* at 97.

[71] *See* e-workpaper "Track Construction Costs errata.xls."

[72] This is the cost per ton incurred by NS in 2009 for 136-pound rail. *See* e-workpaper "Norfolk Southern Combined Railroad Subsidiaries 2009 R-1.pdf," Schedule 724.

[73] *See* e-workpaper "Track Construction Costs errata.xls."

iii. Field Welds

The cost of labor for field welds is derived from direct quotes and historical prices from projects overseen by Crouch Engineering.[74] The cost of field weld materials is included in the costs for field welding labor. *Id.* Field welds are required to connect the 1,440-foot strings of welded rail produced by the manufacturer as well as to insert insulated joints, make connections to turnouts and span grade crossings. The calculations for the number of field welds as well as the number of compromise welds (where 115-pound and 136-pound rail are joined together) are included in the workpapers accompanying this opening evidence.[75] The total cost for field welds is $33 million.

iv. Insulated Joints

Insulated joint requirements are addressed in the signals and communications costs discussed in Section III-F-6 below.

v. Switches (Turnouts)

DuPont's engineers included the number and size of turnouts specified in the DRR's stick diagrams (as discussed in Section III-B). Turnouts were also included for the DRR's yards and connections to customers served by the DRR.[76] Unit costs for turnouts were obtained from quotes from vendors.[77] The turnout quotations include all materials necessary for construction of complete No. 20 power turnouts, No. 14 power turnouts, and No. 10 hand-thrown turnouts, including, but not limited to rail, switch ties, rail, frogs, guard rails, switch points, base plates and tie plates, switch plates, switch point heel blocks, adjustable wedge brace plates for the switch point section, insulated tie bar rods, connecting rods, the switch machine, and all other

[74] Id.

[75] Id.

[76] *See* e-workpapers "DRR Yard Matrix errata.xlsx" and "DRR_2010_TRAFFIC_ATC_OT_v2.xlsx."

[77] *See* e-workpaper "Track Construction Costs errata.xls."

items incidental to turnout construction. The total cost to the DRR for turnouts (excluding geotextiles and including switch heaters) is $504 million.[78]

e. Other

i. Rail Lubrication

Rail lubricators are used by the DRR to distribute grease to the wheel/flangeway interface. Spacing of lubricators is based on the coverage of the grease as defined by the supplier, and as warranted by track conditions. The unit cost for rail lubricators is based on quotes from vendors.[79] The DRR's total cost for rail lubricators is $2 million.[80]

ii. Plates, Spikes and Anchors

The DRR is using wood ties with cut spikes that will be used to hold the rail to the tie plate and the tie plate to the ties, and to provide lateral restraint to hold the rail to gauge (4 feet 8.5 inches inside dimension between the railheads). Two spikes per tie plate (four spikes per tie) are used on all track with timber ties and less than 3-degree curves. This spiking pattern is standard practice for U.S. railroads, and is used by NS. AREMA standards also support two spikes per plate.[81]

For curves between 3 and 6 degrees, 4 spikes per plate are used. This pattern is consistent with industry practice and AREMA.[82] For curves greater than 6 degrees, five spikes per plate are used.[83]

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[78] *Id.*

[79] Id.

[80] Id.

[81] *See* e-workpaper "Spiking Pattern.pdf."

[82] Id.

[83] Id.

Rail anchors are drive-on or spring clip-on devices that clamp under the base of the rail and bear against the sides of the timber ties. Anchorage of the rail prevents the rail from running, or moving in a longitudinal direction down the track, due to thermal expansion or train acceleration/braking loads. The anchors transmit the longitudinal stress forces in the rail to the ties, which then transmit the forces to the ballast thereby restraining movement of the track structure. Anchors are used on both sides of every other tie on main track, branch lines, yard tracks, set-out tracks and interchange tracks where the curvature does not exceed 3 degrees. Anchors are used on both sides of every tie for curves 3 degrees or greater and for 200' on each end of grade crossings (those costs are included in the grade crossing and turnout costs). The anchoring pattern being used on the DRR is consistent with AREMA and NS standards.[84]

The total costs for plates, spikes, and anchors are $853 million.[85]

iii. Derails and Wheel Stops

Derails are used to keep cars from rolling from a spur track or side track through a turnout and onto the main track. Derails are included at all Failed Equipment Detectors ("FED"), set-out track turnouts and at yard turnouts at the yard locations where cars are set out from trains and stored. Wheel stops are used at the end of single ended tracks to keep the cars from rolling off the end of the track. The cost for derails and wheels stops were developed from vendor price catalogues. The total costs for derails and wheel stops for the DRR is $1 million.[86]

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[84] *See* e-workpaper "Rail Anchor Pattern.pdf."

[85] *See* e-workpaper "Track Construction Costs errata.xls."

[86] Id.

iv. Materials Transportation

As described above, specific transportation costs associated with a given item are included in the total costs for that item. Therefore, no additional transportation costs have been added.

v. Track Labor and Equipment

The DRR's track laying and related costs are derived from direct quotes and bids obtained from contractors on projects where Crouch Engineering bid and oversaw rail construction, and from recent quotes solicited from contractors for similar projects. Labor quotes for track construction were obtained from Queen City Railroad Construction and RailWorks. Bid prices were also obtained from several NS track construction projects. The lowest quote/bid has been used for track construction and includes the following:

- Provide labor to unload and distribute all track material including 136 RE CWR or 115 RE CWR from rail train, timber crossties, tie plates, rail anchors, spikes, and ballast
- Construct track complete using CWR, crossties on 21" centers, box anchoring every other tie, box anchor every tie within 200' of grade crossings
- Distribute ballast from hoppers or ballast cars
- Surface and line track, regulate ballast, 12" of ballast under center of ties

The total cost of track labor for the DRR is $1,557 million.[87]

The total cost of track construction for the DRR is $8,242 million.

4. Tunnels

The tunnel inventory and tunnel lengths were derived from materials provided by NS in discovery.[88] Consistent with Board precedent, DRR's engineers utilized the base unit cost of

[87] *See* e-workpaper "Track Construction Costs errata.xls."

$2,561 per linear foot ("LF")[89] indexed to 2Q09 levels. This procedure yields a unit cost of $7,280 per LF. The unit cost was multiplied by the total feet of tunnels (60,962.5 LF) to yield a final tunnel cost of $444 million.[90]

5. Bridges

DuPont's bridge testimony is also sponsored by witness Harvey Crouch. DuPont's engineers have observed bridges on many of the lines being replicated by the DRR and reviewed the specific information contained in NS's bridge inventory. Bridge quantities for the DRR were developed from NS bridge inventory information provided in discovery. Bridge designs were developed by DuPont's engineers and unit costs are derived from various real world sources as described below.

a. Bridge Inventory

Mr. Crouch prepared the bridge inventory for the DRR based on a review of the bridge information provided by NS in discovery. The bridge inventory utilized by DuPont's engineers includes milepost, feature crossed, number of spans, structure type, and total length.[91] Bridges spanning 20 feet or less and crossing natural barriers have been built as culverts.[92]

b. Bridge Design and Cost Overview

When the NS lines replicated by the DRR were constructed, a variety of bridge types and lengths were used. This was due to the different technologies that were available at the time of original bridge construction, the proclivities of the particular railroad company that constructed

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[88] *See* e-workpaper "DRR Tunnels.xlsx."

[89] *See Coal Trading Corp.* at 422.

[90] *See* e-workpaper "DRR Tunnels.xlsx."

[91] *See* e-workpaper "Bridge Construction Costs errata.xls."

[92] *See* e-workpaper "Culvert Construction Costs errata.xls."

the bridge, the desired load rating, and the available materials. As technology has become more sophisticated, so has bridge design and implementation.

The DRR's bridges have the same lengths as those being replicated, but DuPont's engineers have designed those bridges using more efficient spans where possible using several standard bridge designs (*e.g.,* Type I, II, III bridges) based on the diverse bridge lengths and heights that are required.[93] However, the bridge inventory provided by NS did not include complete and detailed bridge height data, only the maximum height. Therefore, to determine the necessary heights of the bridge being replicated, the following methodology was used based on the feature the bridge is crossing:

1. Highway/Interstate — 16.5' (AASHTO-Interstate Requirement)
2. Other roads — 14.5' (AASHTO-Other Highways)
3. Navigable waterways — USCG clearance requirements[94]
4. Other waterways — 11'

These standard heights were adopted by DuPont's engineers in order to develop costs for the bridges required for the DRR. Bridge height is an essential aspect of the cost of a bridge. The higher the bridge, the more bracing will be required for stability, the more materials will be used, and the higher the construction cost will be due to the difficulty in forming concrete, driving longer steel piles, and lap-splicing rebar.

No information was provided in discovery on the hydraulic area of the bridges. Therefore, water flow increase/decrease was not taken into consideration in the engineer's methodology as this is negligible due to the fact that each bridge either kept the same number of spans, or had a decrease in span number, while keeping the length the same as the existing bridge.

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[93] This is standard practice in prior SAC rate cases. *See Duke/NS* at 109-110, *CP&L* at 95, *Duke/CSXT* at 95 and *WFA/Basin* at 108-112.

[94] *See* e-workpaper "USCG_Clearance_Guide.doc."

DuPont's engineers then developed a cost formula for each of the four bridge types using a composite of costs from Crouch Engineering's historical data of successful bidders on similar scale railroad bridge construction. The historical data includes the cost quotes from successful bidders for bridges built in rural Tennessee and rural Alabama with terrain very similar to that of the lines being replicated by the DRR. This project data focused on bridges that were not being built under traffic conditions or limited work windows, i.e., working conditions similar to those assumed to exist when building the DRR. Once they developed a standard cost formula, they then applied it to every bridge within the relevant category in the inventory. Each bridge is costed separately. The primary formula applied for each bridge, but separately by Type as needed is: Bridge Cost = [(Abutment cost X number of Abutments) + (Pier Cost X number of Piers) + (Per Linear Foot Cost x Length of Bridge)]. Other components such as piling, handrail, elastomeric pads, base plates, and PVC deck drains are also reflected in the costs.[95]

From a design standpoint, using Crouch Engineering's historical costs for building bridges ensures that all items necessary for building the bridges are included, especially since these historical costs are actual costs from real world applications thereby demonstrating the feasibility of the methodology. These bridges are adequate in design, and have a minimum rating of 286,000 pounds and a life cycle of 100 years (meaning that no major repairs will be required for 100 years).

The total investment cost for the DRR's bridges is $1,928 million and for highway overpasses is $9 million for a total of $1,937 million.[96]

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[95] *See* e-workpaper "Bridge Construction Costs errata.xls."

[96] *See* e-workapers "Bridge Construction Costs errata.xls," and "Over Head Bridge Construction Costs.xls."

i. Type I Bridges

Type I bridges have varying spans of 20'-0" to 32'-0". These bridges are typically one span unless they are incorporated in the configuration of a much longer bridge requiring multiple bridge types and/or multiple span configurations. The same precast deck, column caps, abutment caps, and wing-walls are used for all of these bridges. The typical column uses 8-HP14x73 piles as the foundation and each abutment uses 6-HP14x73 piles as the foundation. Type I bridges less than 32' in length are single span structures; structures that are 32-55' are two spans. In addition, Type I spans were often used when approach spans were necessary due to the inconsistent span lengths on the bridge inventory list.[97]

ii. Type II Bridges

Type II bridges have spans of 32'-0" to 45'-0". These bridges are typically one span unless they are incorporated into the configuration of a much longer bridge requiring multiple bridge types and/or multiple span configurations. These intermediate spans are achieved by placing rolled beam sections next to each other. The same columns, abutments, caps, and wing-walls are used for all of these bridges. The typical column uses 8-HP14x73 piles as the foundation and each abutment uses 6-HP14x73 piles as the foundation.[98] The Type II Bridge classification on the DRR is reserved for single-span bridges between 32'-0" and 45'=0" in length, and on an occasional multi-span bridge requiring a shorter span.

iii. Type III Bridges

Type III bridges have spans of 60'-0" to 92'-6". These bridges are typically one span unless they are incorporated in the configuration of a much longer bridge requiring multiple

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[97] Examples of the designs are included in e-workpaper "Type I Photos and Plans.pdf."

[98] Examples of the designs are included in e-workpapers "Type II_Photos and Plans.pdf," "BR01-Pier Typical.pdf," "BR02-Pier Typical Sections.pdf," "BR05-Type II-1.pdf," "BR05-Type II-2.pdf," "BR05-Type II-3.pdf," "BR05-Type II-4.pdf," "BR05-Type II-5.pdf" and "BR05-Type II-6.pdf."

bridge types and/or multiple span configurations. These intermediate spans are achieved by placing four 60' pre-stressed concrete Bulb-T beams side-by-side. A cast-in-place deck is installed over the pre-stressed Bulb-T beams. The same columns, abutments, caps, and wing-walls are used for all of these bridges. The typical column uses 8-HP14x73 piles as the foundation and each abutment uses 6-HP14x73 piles as the foundation.[99] The Type III Bridge classification on the DRR is reserved for single-span bridges between 60'-0"- 92'-6" in length, and on an occasional multi-span bridge requiring a longer span.[100] Type III Bridges are the most economical span, and, therefore, this is the span that was chosen for single-span bridges between 60'-0" and 92'-6" in length, and for multi-span bridges longer than 92'-6" (unless USCG restrictions are in-place).

iv. Type IV Bridges

Type IV bridges have spans of 150'-0", consist of a Steel Through Plate Girder, and can be comprised of multiple bridge types in order to achieve long multiple span structures. Type IV bridges were selected to cross over large rivers needing to comply with USCG clearance requirements. Along with the 150' spans, the vertical clearance of the bridge was set to 60' through the length of the river only.[101] Through Plate Girders were only chosen when USCG requirements were present and the structure consisted of the minimum of eighteen (18) 150' spans (totaling 2,700') or the length of the structure based on NS information provided in discovery. If eighteen 150' spans were used, it was necessary in some instances to have

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[99] Examples of the designs are included in e-workpapers "BR01-Pier Typical.pdf," "BR02-Pier Typical Sections.pdf," "BR06-Type III-1.pdf," "BR06-Type III-2.pdf," "BR06-Type III-3.pdf," "BR06-Type III-4.pdf," "BR06-Type III-5.pdf," "BR06-Type III-6.pdf" and "BR06-Type III-7.pdf."

[100] Examples of the designs are included in e-workpaper "Type III_Photos and Plans.pdf."

[101] Examples of the designs are included in e-workpapers "Type IV_Plans and Photos.pdf," "BR03-Pier USCG.pdf," "BR04-Pier USCG Sections.pdf," "BR07-Type IV-1.pdf," and "BR07-Type IV-2.pdf."

additional bridge types to extend the structure so as to keep it out of the floodplain. This is consistent with the information provided by NS in discovery.

v. Highway Overpasses

Grade separated crossings are included in the DRR bridge calculations. The DRR is constructing 151 such overpasses. As noted previously, the NS lines being replicated predate the roads in this territory. As such, DuPont has included 10 percent of the costs for such bridges consistent with Board precedent.[102]

The unit costs for highway overpass construction were derived from a composite list of costs that is tracked by various state Departments of Transportation.[103] Each bridge is costed separately based on the number of tracks being crossed and the state in which it is located. The DRR highway overpass bridges will be constructed with the required clearances as specified in AREMA Figure 28-1-6. A sketch and photo of the typical highway overpass is shown in DuPont's workpapers.[104] The total cost for highway overpasses on the DRR is $ 9 million.

6. Signals and Communications

The DRR will rely on a standard CTC-based vital signal system with components added to provide Positive Train Control ("PTC"). It will rely on a microwave system for communications. The signal system, including PTC, and communication system costs are sponsored by witness Victor Grappone, PE.

a. PTC Signal System

The Rail Safety Improvement Act of 2008 (RSIA) (signed by the President on October 16, 2008, as Public Law 110-432) has mandated the widespread installation of PTC systems by

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[102] *See AEP Texas* at 102-103.

[103] *See* e-workpaper "Over Head Bridge Construction Costs.xls".

[104] *See* e-workpapers "BR09-Single Track Overpass.pdf" and "BR09-Double Track Overpass.pdf."

December 2015. The DRR network employs a PTC system for all train control and communications on the entirety of its constructed track network (i.e., the DRR does not include investment cost for signaling and communications system on trackage rights and joint facility tracks owned by other carriers).

Unlike existing Class I carriers, the DRR is installing a PTC system from the outset of its construction and investment, rather than converting an existing train communications and control system to a PTC system. As a result the investment expenditures by the DRR are less than what an existing Class I carrier will incur to achieve the same level of infrastructure. To develop the cost of the PTC system, DuPont's experts relied on information provided by NS in discovery related to its estimates of the costs of the various components of the PTC system. The costs were adjusted, where appropriate, to reflect the cost of a PTC system as an initial installation rather than conversion from an existing CTC or other signaling system.

PTC investment costs are included for three basic components, which include track (wayside), information technology systems and locomotive communications. Signal system costs, including the costs for the wayside and information technology portions of PTC, are contained in DuPont's workpapers.[105] This file contains a description of the components that comprise the system plus a count of the components and assigns unit costs for material and labor. The number and type of components associated with typical installations along the right of way are defined. The number of each type of installation was identified based on the layout of the DRR as manifested in the DRR stick diagrams and the track charts provided by NS in discovery.

DuPont counted interlocking components for huts ("IH"), signals ("IG"), switches ("IW") and track circuit ends ("IT"). For interlocking huts, a standard end-of-siding layout was taken as a baseline. To account for the additional costs associated with larger interlocking, a scaling

[105] *See* e-workpaper "DuPont C&S estimate errata.xlsx."

factor was included that takes into account the number of signals, switches and track circuit ends. For automatic signal locations, either single or double track installations ("AS1" or "AS2") were counted.

DuPont has also included costs to cover active highway crossing gates and flashers where needed. The count of crossings based on the numbers of track (one to four) and whether a given crossing had gates and flashers or just flashers ("X1G", "X1F", "X2G", "X2F", etc.) was based on information provided by NS in discovery.[106] Consistent with the Board's decision in *Duke/CSXT*, DuPont's engineers have included 10 percent of the costs for highway crossing protection signals.

b. Detectors

Automatic roll-by failed equipment detectors ("FEDs") are included along the DRR main lines as required by operations and consistent with the current industry standard.[107] These FEDs are located approximately every 35 miles along the main line (one for each main track in areas with two or more main tracks). Bad order setout tracks have been sited within two miles of the failed equipment detectors in each direction to provide for train stopping distances and allow removal of bad order cars to the setout tracks. All setout tracks near the detectors are single-ended tracks, 735 feet in length providing 600 feet in the clear past the switch. For interface to the signal and PTC system, each setout track is provided with either a single- or double-track ("EL1" or "EL2") electric lock manual switch installation. Costs for FED and electric lock locations are contained in DuPont's workpapers.[108]

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[106] *See* e-workpaper "DuPont C&S estimate errata.xlsx," tab "Crossings."

[107] *See* AREMA 2001 Standards, Chapter 16, Section 5.3.1, Items j & k.

[108] *See* e-workpaper "DuPont C&S estimate errata.xlsx."

The DRR has 108 AEI scanners. Details of the costs and components are shown in DuPont's workpapers.[109]

c. Communications System

The DRR's railroad radio system enables locomotive communications, two-way radio communications, general voice communications, general data communications, and FED alerts. Microwave radio technology is used for the radio system backbone and land mobile radio technology is used to facilitate communications between end user applications and the radio system backbone. Land Mobile Radio ("LMR") technologies provide communication access (via fixed, mobile and portable radios) to the radio system backbone for operating crews, supervisory and track maintenance personnel that need to communicate with the railroad's operating headquarters and central dispatching facility at Roanoke, VA. LMR technologies are co-located with microwave radio technologies at network (tower) sites if appropriate. LMR technologies operate in Very High Frequency ("VHF") mode to accommodate railroad operational frequencies assigned by the AAR.

The backbone of the DRR's railroad radio system includes microwave towers along the DRR route.[110] The use of microwave towers for railroad communications is widespread, although fiber optic communications are now also being used. On average, microwave towers are placed at 20 mile intervals along the DRR.

Each tower includes a full set of microwave equipment, including two microwave base stations enabling sending and receiving along a straight path, and four microwave antennas. End towers have only one microwave station and two antennas. Where necessary, a tower may have

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[109] *Id.*

[110] *See* e-workpaper "DuPont LMR cost development.xls."

three or four base stations and six or eight antennas. Each microwave tower also includes a LMR base station, with corresponding radio equipment. Finally, each tower includes the necessary communications shed.

The type of multiplexor deployed at each site network (tower) site is the Alcatel 1518 Integrated Access Device ("AD"). The 1518 AD is rack-mountable and will convert analog RF signals from/to digital signals. The 1518 AD also interconnects with the MTR2000 LMR base station by standard Plain Old Telephone System ("POTS") four wire. The 1518 AD will also interconnect with the Alcatel MDR-8606 microwave base station by standard DS1 cable and shall conform to Telcordia TR-TSY-000499 and ANSI T1.102 standards. The 1518 AD supports up to 24 PCM channels per digroup that are intermixed at random, providing voice frequency ("VF") trunking, special service interfaces, synchronous and asynchronous data channels, program/broadcast services and FCC registered channels in one assembly.

CTC infrastructure components that are radio-enabled (*e.g.*, AEIs and FEDs) are equipped with the Kenwood TK-762GK radio, KAP-1 switching unit and required cables. For technical descriptions of the Kenwood TK-762GK VHF radio see DuPont's workpapers.[111] This mobile radio is VHF capable and operates in the 148-174 Mhz frequency range.

In addition to the radios handling CTC infrastructure, DuPont's engineering experts have included 1,718 LMR repeating stations positioned along the right-of-way. These LMR repeaters allow for uninterrupted RF communications along the right-of-way because the LMR stations on the microwave tower may or not be accessible at all points. Many of the LMR repeaters include a 30-foot antenna to extend the range.

[111] *See* e-workpaper "Radios.pdf."

The costs for the locomotive communications component of PTC are also included in the DRR's communications system costs. Total investment cost for the DRR's communications system is $284 million.[112]

Total signals and communications system costs are shown in Table III-F-8 below.

Table III-F-8
Signals And Communications System Costs
($ millions)

Item (1)	Cost (2)
1. Signals System	$963
2. Communications	284
3. Total	**$1,247**

7. Buildings and Facilities

DuPont's buildings and facilities testimony is also sponsored by witness Harvey Crouch. The DRR's major system facilities are located at its six (6) major yards.[113] These facilities include the DRR's headquarters building, crew facilities, yard offices, locomotive repair shops, 1,000 and 1,500-mile inspection facilities, and car and locomotive storage. Additional, smaller yards are located throughout the DRR system.[114] The total building and facilities costs are summarized in Table III-F-9 below.

[112] *See* e-workpapers "DuPont C&S estimate errata.xlsx," and "PTC Locomotive Cost errata.xlsx."

[113] Elkhart, IN; Conway, PA; Roanoke, VA; Chattanooga, TN; Atlanta, GA; and Bellevue, OH.

[114] *See* e-workpaper "DRR Yard Matrix errata.xlsx."

Table III-F-9
Buildings And Facilities

Facility (1)	Cost (000) (2)
1. Headquarters Building	$3,074
2. Fueling Facilities	16,939
3. Locomotive Shops	12,380
4. Car Repair Shop	0
5. Crew Change Facilities	7,194
6. Yard Offices	1,533
7. Roadway Buildings (MOW)	3,818
8. Wastewater Treatment	5,706
9. Other Facilities/Site Costs	178,294
10. Total Buildings and Facilities	$228,938

Source: *See* e-workpaper "DRR Facilities Cost errata.xlsx."

a. Headquarters Building

The DRR headquarters is located at the DRR's Roanoke Yard. The DuPont engineers calculated the required square footage using the American Institute of Architects standards square footage per employee which includes additional space for work rooms, IT equipment, hallways, bathrooms and mechanical services. Executive employees were allotted additional space per those same standards. The resulting building is two stories with a total of 20,000 square feet.[115] The building's costs were based on RS Means online square foot cost calculator for building structures of this kind.[116] The total cost of the headquarters building is $3.1 million.

b. Fueling Facilities

i. Fueling Platforms and Fueling by Truck

Fueling platforms are located at all six major yards. Locomotive fueling at all other locations is performed by trucks (i.e., direct-to-locomotive or DTL fueling). All fueling by truck will be performed track-side. The yard tracks where locomotive fueling by truck will occur are

[115] *See* e-workpaper "DRR Facilities Cost errata.xlsx."

[116] *See* e-workpaper "DRR Facilities Cost errata.xlsx," tab "HQ Bldg."

built on 25-foot track centers, thereby providing sufficient space for the trucks to operate. The cost for fueling facilities on the DRR equals $16.9 million.[117]

ii. Lube Oil & Sanding

Locomotive servicing tracks designed for fueling locomotives by truck and including sanding and lube facilities are located in DRR yards in order to provide such services as needed.[118] These costs are included in each yard site based on the unit costs for the necessary facilities (including any needed storage tanks) derived from bid tabulations of projects with similar scope and size.

c. Locomotive Shop

At the Elkhart, Conway, Roanoke and Chattanooga yards, DuPont's engineers have included a locomotive shop designed to handle overhaul work as well as 92-day inspections and running repairs. Each shop includes a two-track facility designed to handle 92-day inspections and other minor running repairs as required and includes such necessities as a pit. Three additional tracks capable of holding up to ten (10) locomotives are included for the larger overhaul work. The heavier work-track design includes overhead and jib cranes, drop tables and other necessary heavy equipment as required based on the function of each track.[119] In addition, the shop is equipped with a wheel turning machine and other heavy equipment.[120]

Unit costs and designs are based on actual locomotive shop facilities designed and constructed by Crouch Engineering. Details of the shop fixtures and costs are included in DuPont's workpapers.[121] The total cost for locomotive shops for the DRR is $12.4 million.[122]

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[117] *See* e-workpaper "DRR Facilities Cost errata.xlsx."

[118] *See* e-workpaper "DRR Yard Matrix errata.xlsx" for the locations of these facilities.

[119] All items included in the design of the DRR locomotive shops are separately priced.

[120] *See* e-workpaper "DRR Facilities Cost errata.xlsx," tab "Major."

[121] *See* e-workpapers "DRR Facilities Cost errata.xlsx" and "Locomotive Shop.pdf."

d. Car Repair Shop

As noted in Section III-C, the DRR acquires its railcars via full service leases and therefore, the lessor, and not the DRR, is responsible for providing all necessary car repair shops.[123] Consequently, Dupont's experts have not included costs for any car repair facilities. However, they have provided the necessary space and tracks for such a facility at the DRR's Conway and Atlanta Yards.

e. Crew Change Facilities

There are 67 crew change locations on the DRR which require a crew change facility.[124] The buildings at the six major yards, which have the higher number of crew starts per day, are sized 35' by 64' for a total of 2,240 square feet per building. The buildings at the other locations are sized 25' by 56' for a total of 1,400 square feet per building. These buildings generally replicate the buildings used by NS for such purposes. Based on Mr. Crouch's experience, NS utilizes a variety of structures for crew change locations including old depots, metal buildings and concrete block buildings. Each building includes basic facilities such as locker rooms, a break area, a work room and other necessities. The unit costs and designs are based on actual buildings designed by Crouch Engineering. The total cost for crew change facilities on the DRR is $7.2 million.[125]

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[122] *See* e-workpaper "DRR Facilities Cost errata.xlsx."

[123] *See PSCo/Xcel* at 113, *CP&L* at 113; *Duke/NS* at 118.

[124] Some crew change locations do not require a facility as the crew is away from home and goes directly to a motel upon going off duty.

[125] *See* e-workpaper "DRR Facilities Cost errata.xlsx."

f. Yard Offices

There are 42 yard offices, one at each of the DRR's yards where there are car inspectors, yard crews or transportation department field personnel. These buildings are 25' by 56' and are pre-engineered metal buildings. The total cost for yard offices on the DRR is $1.5 million.[126]

g. Maintenance of Way Buildings (Roadway Buildings)

The DRR has 36 MOW buildings. Each building is similar in office space and design to the crew change facilities, but the interior is smaller as there are fewer employees using the space. Additional area is provided for garaging certain vehicles as necessary and storing MOW supplies. DuPont's engineers developed the space requirements based on the typical MOW crew located in each location as well as the need to house signal maintainers. The unit costs and specifications were derived from actual MOW buildings designed by Crouch Engineering. The total cost for MOW buildings on the DRR is $3.8 million.[127]

h. Wastewater Treatment

The DRR building facilities are located near existing towns and cities, and are able to be served by a local sewer connection or similar service. DuPont's engineers, therefore, included costs for sewer tie-ins. In addition, in order to handle runoff from various work by-products (*e.g.*, oil) before reaching the public sewer system, DuPont's engineers have included oil/water separators. The effluent is then sent to an oil/water vaporizer which produces a dry powder that can be easily disposed of. DuPont's engineers have utilized such facilities in projects for other railroads. The total cost for wastewater treatment on the DRR is $5.7 million.[128]

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[126] *Id.*

[127] *See* e-workpapers "DRR Facilities Cost errata.xlsx" and "MOW Building.pdf."

[128] *See* e-workpaper "DRR Facilities Cost errata.xlsx."

i. Other Facilities / Site Costs

DuPont has also included costs for other facilities and site preparation costs. These costs include costs for automobile handling facilities, locomotive servicing areas in certain DRR yards, yard lighting, yard drainage and other site preparation costs. DuPont has included $178 million for these items.[129]

8. Public Improvements

DuPont's public improvements testimony is also sponsored by witness Harvey Crouch. While public improvements are discussed in detail below, the costs for some of items were included in other investment categories, such as buildings and facilities and signals.

a. Fences

NS did not provide any data concerning the quantities or locations of fencing on any of the lines being replicated by the DRR. Consequently, DuPont has relied on its experts' experience and observations that the vast majority of the lines being replicated are not fenced. Moreover, the fencing that was observed tended to be for farm, industrial, or residential use, and given the variations in materials, such fencing appears to have been erected by the adjacent land owner. Therefore, DuPont has included fences only for its yards.[130]

b. Signs

DuPont's operating and engineering experts have included a standard package of railroad signs, including milepost, whistle post, yard limit, and cross-buck signs and posts. DuPont has included $8 million for railroad signs.[131]

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[129] Id.

[130] Id.

[131] *See* e-workpaper "Track Construction Costs errata.xls."

c. Highway Crossings and Road Crossing Devices

The DRR is building all at-grade crossings, and paying 100 percent of the cost for the crossing materials. DuPont has included $106 million for at-grade crossings.[132] Consistent with *Duke/CSXT* and *AEP Texas*, DuPont has included 10% of the costs associated with crossing protection, such as gates, flashers, and related signal elements such as crossing predictor huts.[133] These costs are included with the signals costs described in Part III-F-6 above.[134] For grade-separated crossings, the DRR is paying for 10 percent of the total investment costs in such structures[135] resulting in $9 million. These costs and designs are discussed in Part III-F-5 above.

9. Mobilization

DuPont's engineers have added a 2.7% mobilization factor for all items where mobilization is not already included in the contractor's bid.[136] The total cost for mobilization on the DRR is $437 million.

10. Engineering

The Board has used a 10 percent estimate for all engineering cost components.[137] Thus, DuPont's engineers have used a 10 percent additive here to cover all engineering, construction management, and resident inspection costs, as well as other items such as soil testing. The total cost for engineering on the DRR is $1,618 million.

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[132] *See AEP Texas* at 102 and *PSCo/Xcel* at 115-116. *See* e-workpaper "Track Construction Costs errata.xls".

[133] *See Duke/CSXT* at 105.

[134] *See* e-workpaper "DuPont C&S estimate errata.xlsx."

[135] *See WFA/Basin* at 130 and *Duke/CSXT* at 105.

[136] *See Duke/CSXT* at 106. The STB accepted 2.6% in *CP&L* (at 107) and 2.5% in *Duke/NS* (at 123). The STB also accepted 2.4% in *AEPCO* (at (132). DuPont is being conservative by using 2.7% for mobilization.

[137] *See PSCo/Xcel* at 118.

11. Contingencies

Consistent with prior Board decisions in other SAC rate cases,[138] DuPont's engineering experts have used a 10 percent contingency factor and applied it to the construction subtotal excluding land. Total contingency costs for the DRR are $1,824 million.[139]

12. Other

a. Construction Time Period

The construction time period for the DRR is controlled by the time it takes to construct the Lake Pontchartrain Bridge located near the city of New Orleans, LA.

The work will begin with the start of surveying and aerial mapping operations. A two month period will be allocated to obtain sufficient information to allow preliminary planning and engineering design to begin. Design of the railroad and appurtenances will require a fourteen month period including the two-month start up/surveying period.

Land acquisition will take approximately seven months to complete. It will commence five months after project initiation. Test borings will be timed to coincide with land acquisition so sufficient test borings can be made during the design process.

By the tenth month at about 70 percent completion of the design phase, the longest bridge, the Lake Pontchartrain Bridge, will be bid with construction to start by the thirteenth month. The remaining site work bid packages will be ready to bid in the eleventh month and work on all site work, bridges and tunnels will be started by the fifteenth month. In the twelfth month, the PTC, signal, communications and track packages will be bid.

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[138] *See WFA/Basin* at 132-133; *AEP Texas* at 104-105; *PSCo/Xcel* at 118 (parties agreed to 10 percent contingency); *TMPA* at 746-747; *West Texas Utilities* at 710; *APS* at 402.

[139] *See* e-workpaper "III-F Total errata.xls."

Construction of all bridges and structures other than the Lake Pontchartrain Bridge is anticipated to take a maximum period of twelve months. It is expected that the Lake Pontchartrain Bridge can be constructed in fourteen months.

In general, the construction work has been planned by subdivision. The work has been structured so that all site work and bridges and tunnels can be completed prior to installation of track and signals. Total construction time for the N.O. & N.E. District, which will take the longest to construct, will be twenty months. Total design and construction time for this project is twenty-eight (28) months with six (6) months (of which four (4) months overlap construction) available at the end of construction for final operational testing. Thus a thirty (30) month overall construction period has been provided.

The DRR construction project would be divided into 102 track packages, 365 grading packages, 675 bridge packages, 62 tunnel packages and 11 building packages.[140]

Track gangs will lay track at an average of one-half mile per day, ballasted and anchored. With crews working six days per week, the rate of one half mile per day would enable the project to be completed within the established schedule.

Finally, material prices have been obtained for most track materials delivered to railheads, including, but not limited to, East St. Louis, IL, Atlanta, GA, Chattanooga, TN, Charlotte, NC, Roanoke, VA, Harrisburg, PA, Fort Wayne, IN, Birmingham, AL, New Orleans, LA, Columbus, OH and Pittsburgh, PA. Because of the numerous road access points along the lines, the uniform topography for most of the railroad, and interstate roads paralleling many line segments, materials that cannot be shipped by rail have been priced with shipping by truck to one or more of the road access points along the DRR's lines.

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[140] *See* e-workpaper "Complete Construction Schedule.xls."

Part III-G

III. G. DISCOUNTED CASH FLOW ANALYSIS

The expert witnesses responsible for this part are Thomas D. Crowley and Daniel L. Fapp of L. E. Peabody and Associates, Inc. Their credentials are detailed in Part IV.

The Board's SAC constraint rests on the premise that a captive shipper should pay no more than the minimum necessary to receive service from a least-cost, presumptively efficient replacement for the incumbent railroad, and that the shipper should not bear the cost of any facilities or services from which it derives no benefit.[1] The SAC constraint is derived from and constitutes an application of the theory of contestable markets.

In the Board's contestable market structure, the incumbent railroad's rates are deemed constrained by the threat of entry by the hypothetical stand-alone entity. If it is shown that the prospective cost of substitute service is less than the rate charged by the incumbent, there is an incentive for the new entity to enter. The presence of that incentive, in turn, is evidence that under the incumbent's rates the shipper is contributing to (subsidizing) the cost of services that it does not use, and/or is contributing monopoly profits to the incumbent.

SAC provides a regulatory ceiling on rates under conditions of rail market dominance; if the incumbent's rates are higher than those that would be charged by the stand-alone entity (the DRR in this case), then the incumbent's rates are unreasonable. As the Board summarized in *CP&L*:

> A SAC analysis seeks to determine the lowest cost at which a hypothetical, optimally efficient carrier could provide the service at issue free from any costs associated with inefficiencies or cross-subsidization of other traffic. A stand-alone railroad is hypothesized that could serve the traffic if the rail industry were free of barriers to entry or exit. (It is such barriers that can make it possible for railroads to engage in monopoly pricing absent regulatory constraint.) Under the SAC constraint, the rate at issue cannot be higher than what the SARR would need to charge to

[1] *See Coal Rate Guidelines*, 1 I.C.C. 2d at 523-524; *AEPCO* at 3-4.

> serve the complaining shipper while fully covering all of its costs, including a reasonable return on investment.[2]

Since the function of a SAC analysis is to identify the cost associated with providing the most-efficient, least-cost service to the captive shipper, it follows that application of the SAC standard should be premised on rational economic behavior by the stand-alone entrant. In particular, the stand-alone entrant should pay no more than is necessary for its inputs. While the DRR is considered to be a substitute for NS to the extent of the scope of the DRR's planned services, SAC does not require that the DRR replicate the NS system in all respects. As the Board's predecessor confirmed in *Coal Rate Guidelines*, the design of the stand-alone system and the traffic it carries are chosen to achieve the goals of maximizing revenues and minimizing service costs to the shipper, regardless of the actual circumstances of the incumbent railroad.[3] This means that the DRR must be considered a replacement for the relevant portions of the NS system, not a rival, and must be afforded the flexibility to configure its system and service scope in a manner that maximizes efficiency and cost effectiveness.[4]

These core principles guide the traffic group, design, configuration, and planned operation of the DRR as detailed in the previous Parts of this Testimony. They also inform the proper treatment of capital cost recovery, inflation and taxes.

1. Cost of Capital

Calculation of the capital recovery charge for the DRR necessarily depends on the DRR's assumed cost of capital. While the Board has expressed a willingness to consider alternative approaches to estimate this assumed cost, the Board has consistently only accepted the general railroad industry's average costs of common equity, debt and preferred equity (if any), and their

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[2] *See CP&L* at 11.

[3] *See Coal Rate Guidelines* at 543-544.

[4] *See, e.g., Nevada Power II,* at 280-281 (Chairman McDonald, commenting).

percentage mix within the industry's capital structure,[5] in forming a capital structure for the SARR over the relevant construction period (December 1, 2006 through May 31, 2009 in this case) and operating period (June 1, 2009 through May 31, 2019).[6]

The DRR's cost of debt and preferred equity[7] capital during the 10-year DCF period is assumed to equal the weighted average railroad industry cost of debt or preferred equity over the DRR's construction period, weighted upon the DRR's investment by construction year. The cost of common equity capital is assumed to equal the then-current year railroad industry cost of equity as determined by the Board. If the Board has not calculated the cost of equity capital for such year, the simple average of all prior years' costs of equity capital beginning in the first year of the SARR's construction is used. To project capital costs forward and estimate the value of the DRR at the end of the DCF period (June 1, 2018 through May 31, 2019 is the last annual period in the DCF model), the Board relies on an average of available past years' industry capital costs, reaching back to the first construction year.[8]

DuPont has followed the Board's approved and preferred approach in developing capital costs for the DRR. For 2006, 2007, 2008, 2009, and 2010 DuPont employs the industry average costs determined by the Board in its annual cost of capital proceedings.[9] DuPont uses the railroad industry cost of capital to calculate the capital recovery charges for all road property investment.

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5 As determined by the Board in its annual railroad cost of capital proceedings.

6 *See WFA/Basin* at 135; *Duke/NS* at 37; *CP&L* at 28.

7 The STB's annual cost of capital findings since calendar year 2002 have not included preferred equity.

8 *See AEP Texas* at 108-109.

9 *See STB Ex Parte No. 558 (Sub-No. 10) Railroad Cost of Capital – 2006,* decided April 14, 2008, *STB Ex Parte No. 558 (Sub-No. 11) Railroad Cost of Capital – 2007,* decided September 24, 2008, *STB Ex Parte No. 558 (Sub-No. 12) Railroad Cost of Capital – 2008,* decided September 24, 2009, *Ex Parte No. 558 (Sub-No. 13), Railroad Cost of Capital – 2009,* decided October 28, 2010, and *Ex Parte No. 558 (Sub-No. 14), Railroad Cost of Capital – 2010,* decided September 30, 2011. The railroad industry had no preferred equity capital outstanding. Therefore, the DRR incurs no cost of preferred equity for these years.

2. Inflation Indices

The prices of goods and services used by the DRR undoubtedly will change over the 10-year DCF period. It therefore is necessary to forecast rates of inflation for application to the capital assets and operating expenses over the timeline covered by the SAC analysis; *i.e.* June 2009 through May 2019. The time path of capital recovery charges for the DRR likewise must maintain the real purchasing power of those charges. A summary of the indexes applied to the DRR's capital assets and operating expenses is shown in Table III-G-1 below.

Table III-G-1
Index Values Utilized In The DRR DCF Model

		Index Value			
Year	Land	Materials and Supplies	Wage Rates and Supplements	Materials, Supplies, Wage Rates and Supplements (Excluding Fuel)	Operating Expenses
(1)	(2)	(3)	(4)	(5)	(6)
2006	100.0	100.0	100.0	100.0	---
2007	107.2	104.8	103.4	103.4	---
2008	113.7	116.0	108.0	109.0	---
2009	106.7	123.5	112.2	113.6	100.0
2010	106.6	123.8	120.3	120.7	114.9
2011	112.3	128.0	122.4	123.1	125.8
2012	119.2	136.7	127.7	128.8	129.2
2013	127.0	141.0	135.3	136.1	134.9
2014	135.3	144.3	139.8	140.3	136.7
2015	144.2	148.3	145.7	146.0	139.3
2016	153.7	151.5	151.3	151.4	141.7
2017	163.9	153.9	156.9	156.7	143.3
2018	174.8	156.3	162.8	162.1	145.1
2019	183.5	158.2	167.3	166.2	146.4

Sources: Opening e-workpapers "DRR Land Appreciation Errata.xls," "Hybrid RCAF.xls," and "Exhibit III-H-1 Errata.xls."

The annual inflation forecast that is used to calculate the value of the DRR's road property assets is based on actual railroad chargeout prices and wage rate indexes calculated by the AAR for materials and supplies, wage rates and supplements, and materials prices, wage rates, and supplements combined (excluding fuel) ("MWSExFuel") for eastern railroads, and the

current Global Insight's March 2012 Rail Cost Adjustment Factor Forecast for rail labor and rail materials and supplies.[10]

For land assets, the annual forecast inflation rate is based on a weighted combination of indices that reflect rural and urban land prices in proportion to the mix of the land values on the DRR system routes.[11]

Rural land indexes were developed from historic rural land values reported by the U.S. Department of Agriculture ("USDA"). The STB determined in *AEPCO* that it is preferable to use a longer rather than a shorter period of historic data when forecasting future economic trends, such as an inflation rate for land values.[12] The STB cited its use of historical averages of more than 80-years in developing railroad costs of equity estimates.[13] Given the STB's clear preference for longer historical averages, and the use of averages from the late 1920's to 1930 to calculate the DRR's cost of equity, we developed the historic average annual and quarterly percentage change in rural land values between 1930 and 2011 for the DRR states, and used these historic averages to forecast future changes in rural land values.[14]

Urban land values, which are assumed to consist of a mix of investment, residential and commercial properties, were indexed using a commercial land index prepared by the National

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[10] Global Insight does not develop a forecast of the AAR's MWSExFuel index. DuPont therefore uses a proxy that weights Global Insight's materials and supplies and labor rate index forecasts, which the Board has relied upon for purposes of execution of the DCF model. *See AEP Texas* at 109; *Duke/NS* at 37; *CP&L* at 28.

[11] Historically, parties in SAC cases weighted the different urban and rural land indexes based upon the percentage of SARR acres which were urban and rural. In *AEPCO*, the STB changed its approach to weight the indexes based on the value of the rural and urban land acquired by the SARR. DuPont has applied the STB's revised approach in its opening DCF model. *See AEPCO* at 139.

[12] *See AEPCO* at 139.

[13] *See* AEPCO at 139 "In measuring the terminal growth rate (from year 11 out) in the cost of equity, the Morningstar/Ibbotson model uses, in part 'the average annual percentage change in real GDP from 1930 to the year being analyzed." Similarly, in developing the Capital Asset Pricing Model ("CAPM") cost of equity, the STB relies upon the historic average equity risk premium calculated from the year 1926 to the present. See STB Ex Parte No. 558 (Sub-No. 10), *Railroad Cost of Capital -- 2006*, served January 17, 2008.

[14] For the years 2006 through 2011, DuPont relied upon the actual change in rural land values instead of the historic average.

Council of Real Estate Investment Fiduciaries ("NCREIF").[15] In *AEPCO,* the parties used the change in historical commercial property indexes developed by the Massachusetts Institute of Technology Center for Real Estate ("MIT") to forecast expected urban land inflation. However, MIT only produces the historic indexes on a national level, and for the South, East and West Regions, but not the Midwest Region.[16] Since a significant portion of the DRR lies in Midwestern states as defined by MIT and NCREIF, including Ohio, Michigan, Indiana, Illinois, and Missouri, we sought to use a series of indexes that would cover all of the DRR states. The NCREIF Property Index ("NPI") met this criterion. The NPI is a quarterly time series composite index, which like the MIT index used in *AEPCO*, measures total rate of return of investment performance of a very large pool of individual commercial real estate properties acquired in the private market.[17] Unlike the MIT indexes, though, the NPI measures changes in commercial property for four (4) regions of the U.S., including the Midwest Region.

DuPont applied the NPI to urban land values in developing its land inflation index. For the years 2006 through 2011, DuPont used the actual change in NPI by region to index urban land values. For the years 2012 to 2019, DuPont calculated the long-term historic change in the NPI from 1978 (the first year reported) to 2011, and used this longer-term average as a proxy for future urban land value growth. This collection of forecasts and their application is shown on Exhibit III-H-1.

In *Major Issues*, the Board adopted a convention for the indexing of operating expenses for a SARR under which expenses for the first year would adjust based on 100 percent of the change in the RCAF-U; expenses for the second year would adjust based on 95 percent of the

[15] Details are provided in e-workpaper "DRR Land Appreciation Errata.xls."

[16] *See* "A Set of Indexes for Trading Commercial Real Estate Based on the Real Capital Analytics Transaction Prices Database," *MIT Center for Real Estate, Commercial Real Estate Laboratory – CREDL*, Release 2, September 26, 2007 ("MIT Real Estate White Paper").

[17] A complete description of the NPI can be found on the NCREIF website at http://www.ncreif.org/property-index-returns.aspx.

change in the RCAF-U and 5 percent of the change in the RCAF-A; and each succeeding year of the DCF period would use a mix reflecting increasing shares of the RCAF-A in 5 percent increments.[18] DuPont applies this method to the indexing of operating expenses for the DRR.[19] DuPont's model uses actual RCAF-U and RCAF-A indexes through 2Q12, the latest quarter available, and applies Global Insight's March 2012 RCAF-U and RCAF-A forecasted indexes thereafter.

3. Tax Liability

Federal taxes for the DRR are calculated on the assumption that it pays taxes at the 35 percent corporate rate, with all payments for debt interest, state income taxes and depreciation expenses treated as reductions in taxable income.[20] Interest expense is calculated on a 20-year period, pursuant to Board precedent. As explained in greater detail in Section III-H-1-d, DRR interest expense is calculated based on the real practice of railroads issuing primarily coupon bonds, which pay periodic, even interest payments. Depreciation expenses for tax purposes use accounting lives from the Modified Accelerated Cost Recovery System ("MACRS") with investments placed in service in the second quarter using a mid-quarter convention. In addition, as described in Part III-H-1-f, the DRR calculated bonus depreciation available under current tax laws.

The DRR also must account for any income tax liability accruing to the twenty (20) states in which it operates. Following Board-approved procedures for developing a weighted-average state income tax rate, the taxes applicable to railroads in each of these jurisdictions were

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[18] Under the Board's hybrid approach, operating expenses for the tenth and final year of the DCF period would be determined using an index comprised of 55 percent of the change in the RCAF-U, and 45 percent of the change in the RCAF-A. *Id.* at 40.

[19] *See* e-workpaper "Hybrid RCAF.xlsx."

[20] *See FMC* at 847-848.

weighted together based on the DRR route-miles located within each jurisdiction.[21] As summarized in Table III-G-2 below and detailed in Exhibit III-H-1, the weighted average rates for each state produce an effective state tax rate of 6.54 percent for the DRR.

Table III-G-2
State Tax Rates And Constructed Miles For The DRR

	State	Tax Rate	Route Miles
	(1)	(2)	(3)
1.	Alabama	6.5%	779.5
2.	Delaware	8.7%	30.1
3.	Georgia	6.0%	715.2
4.	Illinois	9.5%	736.7
5.	Indiana	8.5%	593.9
6.	Kentucky	6.0%	285.2
7.	Louisiana	8.0%	68.6
8.	Maryland	8.25%	92.8
9.	Michigan	4.95%	58.0
10.	Mississippi	5.0%	204.8
11.	Missouri	6.25%	201.6
12.	New Jersey	9.0%	91.2
13.	New York	7.1%	554.1
14.	North Carolina	6.9%	278.4
15.	Ohio	0.3%	887.1
16.	Pennsylvania	9.99%	786.9
17.	South Carolina	5.0%	312.2
18.	Tennessee	6.5%	544.7
19.	Virginia	6.0%	654.5
20.	West Virginia	8.5%	224.7
21.	Weighted Average	6.54%	

Source: Exhibit III-H-1

4. Capital Cost Recovery

Under the Board's DCF methodology, economic depreciation is used to calculate the capital recovery cost of the DRR's property. Economic depreciation effectively represents an asset's loss of earning power as it approaches the end of its life and/or its replacement date. The changes adopted in *Major Issues* dictate the use of a 10-year analysis period to benchmark the DRR's asset value. However, the DRR's investments would not be retired at the end of the 10-

[21] *See*, e.g., *Coal Trading Corp.* at 527.

year DCF period; rather, it is assumed that continuing investments will be made in the DRR, and that it would operate, hypothetically, in perpetuity. DuPont's calculation of SAC, in Exhibit III-H-1, therefore accounts for the costs associated with the renewed investments in and continued operation of the DRR after May 31, 2019, using the approach approved by the Board in previous cases.[22]

Beginning with *FMC* and continuing through subsequent decisions, the Board has utilized a real capital carrying charge that is equal in each year of the DCF period, regardless of changes in volume. Under this assumption, the relationship between stand-alone revenues and SAC (and, thus, the measure of potential rate relief and the maximum reasonable rate) fluctuates with annual changes in volume and associated revenue.[23] DuPont's computations of the pattern of capital recovery apply this approach.[24]

[22] *See, e.g.*, *AEP Texas* at 105-106.

[23] *See WFA/Basin* at 134-135.

[24] *See* Exhibit III-H-1.

Part III-H

III. H. RESULTS OF SAC ANALYSIS

The expert witnesses responsible for this Part are Thomas D. Crowley and Daniel L. Fapp of L.E. Peabody & Associates, Inc. Their credentials are detailed in Part IV.

1. Results of SAC DCF Analysis

The results of the SAC DCF analysis conducted by DuPont are shown in Exhibit III-H-1. The calculations shown in each table of that Exhibit are summarized below.[1]

a. Cost of Capital

The cost of capital (Table A) for the DRR reflects the Board's annual cost of capital determinations for 2006 through 2010. The DRR's cost of debt for years 2006 to 2009, the DRR's construction period, is assumed to equal the railroad industry average cost of debt for each specific year in the construction period. For years 2010 through 2019, the DRR's cost of debt equals 6.32 percent and reflects the weighted average of the construction years' debt costs used through the remaining years of the DCF model. The DRR's cost of common equity for the years 2006 through 2010 is assumed to equal the railroad industry cost of common equity for each specific year. For years 2011 through 2019, the DRR's cost of common equity equals 12.47 percent, which, consistent with prior SAC cases, is equal to the simple average of the prior year costs of common equity. The DRR has no preferred equity.

b. Road Property Investment Values

The calculation of road property investment costs is summarized in Table C of Exhibit III-H-1. The investment cost also incorporates one-time fees paid for land easements.

[1] The cost of capital (Table A) and inflation indices (Table B) are addressed in Part III-G.

c. Interest During Construction

Interest During Construction ("IDC") accrues on the road property assets of the DRR. Table D shows the total IDC amount, and the portion that is debt-related. IDC is calculated based on the investment values in Table C, the composite cost of capital by year from Table A, and the assumed length of the finance period for each account. The construction schedule described in Part III-F-12 is used as the basis for the length of the finance period. The portion of IDC that is debt-related is calculated by multiplying the investment by the length of the finance period, the DRR's debt percentage, and the annual cost of debt for the year of investment. Debt-related IDC is shown as an interest deduction for tax purposes during the construction period.

d. Interest Schedule of Assets Purchased With Debt Capital

Parties in prior SAC proceedings have assumed that the hypothetical SARR's debt capital would mirror the debt issued by the U.S. Class I railroads included in the Board's annual cost of capital determination.[2] While the parties had incorporated the cost of the railroad industry debt reflected in the Board's annual determination, they implicitly deviated from the type of debt the railroad industry utilized in its capital structure. Both shippers and railroads assumed that the SARR would issue debt structured similar to a typical home mortgage loan, e.g., the SARR would make quarterly payments that contained a principal repayment component and an interest component. Over time as the debt was amortized, the interest component portion of the payment declined as larger amounts of the principal were repaid until, after 20 years, the debt was assumed to be completely repaid.

While such a payment stream is consistent with a typical home mortgage, it is contradictory to the payment schemes of the vast majority of railroad industry debt. Railroad

[2] *See West Texas Utilities* at 712.

companies, like other large corporations, do not customarily make periodic payments that contain constantly changing principal and interest components, but rather make coupon payments on the debt consisting of fixed interest payments. The AAR's filing in the 2010 cost of capital determination shows that nearly 90 percent of railroad industry debt consists of corporate bonds, notes and debentures that incorporate such periodic coupon payments.[3] In fact, the vast majority of NS' own debt is held in the form of corporate notes and debentures. According to the NS's 2011 SEC Report 10-K, $7.464 billion of NS' $7.540 billion total debt (after discounts and premiums) is held in notes and debentures paying coupon payments.[4] In other words, nearly 99% of NS total long-term debt pays fixed payments.

If Board precedent assumes that the SARR's cost of debt should mirror the railroad industry cost of debt, the SARR debt should also mirror the composition of that debt and how the interest is paid to the debt holders. To that end, instead of amortizing the debt in a mortgage-style approach over a 20-year schedule, DuPont has developed the quarterly coupon payments associated with the SARR's debt as depicted in Table E of Exhibit III-H-1.[5] The quarterly interest payment is developed by multiplying the fourth-root of the appropriate Table A cost of debt by the sum of the total investment and IDC for the year.

Consistent with *Major Issues* and previous Board decisions, the debt for road property investment is assumed to be financed over 20 years. The Board's assumption about the SARR issuing 20-year debt obligations may not match the actual length of debt obligations issued by the railroads in the cost of capital determination group. However, this is not a concern and need

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[3] *See* the Verified Statement of John T. Gray in Ex Parte No. 558 (Sub No. 14), Railroad Cost of Capital – 2010, submitted April 29, 2011 at page 10 and Appendix A, which discuss the pricing of bonds based in part on their coupon payments and shows the coupon payments for the railroads' long-term notes and debentures. Mr. Gray submitted verified statements in the 2008 and 2009 Railroad Cost of Capital proceedings that show that the debt issued by the railroads in those years also primarily consisted of notes and debentures with coupon provisions.

[4] *See* NS SEC Form 10-K for the Fiscal Year Ended December 31, 2011 at page K56.

[5] Most railroad companies pay interest semi-annually, but to remain consistent with the structure of the Board's DCF model, DuPont has assumed the SARR will make coupon payments on a quarterly basis.

not impact the assumption of fixed interest payments. As explained more fully below, the railroads' level of debt has remained fairly level since the last round of mergers in the mid 1990's. This is because the railroads are issuing new debt as debt instruments mature, or as they redeem older debt issuance and replace them with newer issuances. In other words, the railroads are holding their levels of debt fairly constant, and as such, are consistently paying interest on this debt. Between 1998 and 2009, the four main railroads included in the STB's cost of capital calculation paid aggregate interest payments ranging in a narrow bank between $1.8 and $2.2 billion.

e. Present Value of Replacement Cost

Table F shows the additional investment (on a present value basis) that the DRR would have to make if each of its assets (excluding land) was replaced indefinitely at the end of its useful life. The 2006-2010 average cost of capital values are used to calculate replacement value for road property assets. This calculated investment is added to the initial investment in Table I prior to determining the quarterly cash flows.

f. Tax Depreciation Schedules

Table G displays the tax depreciation required under the Federal Tax Code as currently in effect.[6] Depreciation was calculated assuming a mid-quarter convention, with assets placed in service in the second quarter. Investments in communications (Account 26), signals and interlockers (Account 27), and the track accounts (Accounts 8-12) were depreciated over seven (7) years employing a 200 percent declining balance methodology, then switching to straight-line depreciation when the straight line percentage exceeds the declining balance percentage. Investments in bridges and culverts (Account 6), public improvements (Account 39), fences and

[6] The mandatory method for depreciating most tangible property placed in service after December 31, 1986 is MACRS. In addition, Engineering Costs have been amortized over a 60 month period, starting with the month in which the business begins.

roadway signs (Account 13), station and office buildings (Account 16), roadway buildings (Account 17), and shops and engine houses (Account 20) were depreciated over 15 years using a 150 percent declining balance method, and then switching to straight-line depreciation at the same point consistent with Board precedent. Investments in grading (Account 3) and tunnels (Account 5) were amortized over 50 years using straight-line amortization. Investments in engineering (Account 1) were amortized over five (5) years using straight-line amortization.

The DRR will take advantage of additional or "bonus" depreciation provisions enacted in 2008 and 2009. These provisions were part of the Economic Stimulus Act of 2008 ("Stimulus Act") and the American Reinvestment and Recovery Act ("ARRA") of 2009.[7] These acts provided bonus depreciation on capital investments with MACRS recovery periods of 20 years or less.[8] Qualifying investments are allowed a 50 percent depreciation bonus in the year that they are placed into service. Tax depreciation for the remaining 50 percent of the cost, or the remaining cost basis, is calculated using the standard MACRS schedules.[9] Because the DCF model assumes that all assets are placed into service in the first year of the 10-year DCF period, which in this case is 2009, the majority of the DRR's investment qualifies for the bonus

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[7] Congress also extended the 50 percent bonus depreciation available to businesses with the Small Business Jobs Act of 2010, which contained 50 percent depreciation bonus applicable to purchases made between January 1, 2010 through September 7, 2010. The Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010 increased the bonus depreciation to an 100 percent depreciation bonus for capital investments placed in service after September 8, 2010 through December 31, 2011. For equipment placed in service after December 31, 2011 and through December 31, 2012, the law provides for 50 percent depreciation bonus.

[8] NS took advantage of bonus depreciation provisions in the federal tax code in 2008 through 2011 to defer significant taxes to later years. *See* NS 2008 SEC Form 10-K at K30 ("The improvement in 2008 (liquidity) resulted from increased railway operating income and from bonus depreciation which reduced current tax payments.".) NS also took further advantage of bonus depreciation in its 2009, 2010 and 2011 tax calculations. See NS 2009 SEC Form 10-K at K29, NS 2010 SEC Form 10-K at K28 and NS 2011 SEC Form 10-K at page K27.

[9] For example, a $1 million asset with a five (5) year MACRS life would accrue $500,000 in bonus depreciation in year 1 ($1 million x 50 percent bonus factor), plus $100,000 in standard MACRS depreciation ($500,000 remaining cost basis x 20% Year 1 MACRS factor for a 5 year asset) for a total of $600,000 in first year depreciation. See http://www.depreciationbonus.org/ for a description and example of bonus depreciation under the Stimulus Act and ARRA.

depreciation.[10] Table G of Exhibit III-H-1 displays the amount of bonus depreciation available to the DRR in 2009.

The STB expressed some skepticism in *AEPCO* as to whether bonus depreciation allowed under the prior and current tax law should be allowed in SAC presentations. Not allowing a shipper to avail itself of the bonus depreciation provisions clearly taken and used by the railroad companies, however, would create a clear barrier to entry, and place the shipper at a distinct disadvantage relative to the incumbent railroad. The STB defines a barrier to entry as any type of cost that a new entrant would have to incur that was not actually incurred by the defendant carrier.[11] There is no denying that the NS reduced its tax costs by employing the tax shielding effects of the bonus depreciation. If the STB were to disallow shippers the same tax advantage enjoyed by the incumbent railroad, it would be creating a barrier to entry by forcing the SARR to pay higher taxes than those paid by the incumbent. In this instance, the incumbent carrier, the NS, was able to lower its tax expense and increase its cash flow by employing the bonus depreciation allowed under the law. Denying the DRR the same tax- shielding benefits as the NS would be a textbook example of a barrier to entry to the SARR.

The STB may also have been concerned about the bonus depreciation since it deemed the bonus depreciation as "temporary," and "now-expired."[12] However, the bonus depreciation allowances allowed by federal tax law have extended over at least five (5) tax years, with the clear possibility of further extensions. In other words, bonus depreciation is still current under federal tax law.[13] Moreover, the structure of the Board's DCF model limits the bonus

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[10] The DRR begins calculating depreciation on all assets in the first year of railroad operations. This is consistent with the fact that no depreciation charges are incurred during the 24-month construction and testing period.

[11] *See West Texas Utilities* at 670.

[12] *See AEPCO* at 142.

[13] Not only is the bonus depreciation still applicable under current tax law, it was expanded in 2010 to allow 100 percent bonus depreciation for capital investments placed in service after September 8, 2010 through December 31, 2011. For equipment placed in service after December 31, 2011 and through December 31, 2012, the bill

depreciation taken by DuPont to only the assets placed into service in 2008 and 2009. This is because the DCF model assumes assets are only replaced at the end of their useful lives, meaning replacement assets are ineligible for use of the bonus depreciation. While not yet a permanent part of the federal tax code, the bonus depreciation is a tax benefit available to the DRR under applicable tax laws. DuPont, and other shippers, should not be penalized by incurring a cost that the incumbent carrier has not incurred.

g. Average Annual Inflation in Asset Prices

Table H computes the average annual inflation rate by which the capital recovery charge in Table I is indexed. The weighted average inflation rate was used because Table H calculates the required capital recovery necessary to return the investment. All road property and equipment accounts are indexed at the quarterly rates shown in Table B. The weighted average inflation rates are based on the inflation indexes discussed in Part III-G.

h. Discounted Cash Flow

Table I shows the calculation of the capital carrying charge and associated flow of funds required to recover the total road property investment and equipment investment. Inputs to this spreadsheet were taken from the Tables described *supra.* Table I calculates the quarterly capital carrying charge required over the 40 quarters of the DCF period, after consideration of the applicable tax liability.

The total start-up investment is comprised of the road property and equipment investment shown in Table C, the road property IDC calculated in Table D and the present value of replacement investment calculated in Table F, and any capitalized maintenance of way expenses. The result equals the total investment to be recovered over the life of the DRR from the quarterly capital recovery stream. The quarterly capital recovery stream reflects the tax benefits associated

provides for 50 percent depreciation bonus. In other words, the NS is currently enjoying the 100 percent bonus depreciation available to real world companies.

with interest on the investment financed with debt from Table E and the asset tax depreciation from Table G.

The cash flow shown in Column (8) of Table I is the amount remaining each quarter after the payment of federal and state tax liabilities. This cash flow is used for payment of return on total investment in the DRR. For road property investment, this quarterly figure is then discounted by the fourth root of the composite annual cost of capital from Table A, adjusted to reflect the assets being placed in service on June 1, 2009. The present value cash flow is then summed for each quarter along with the future cash flow; the total equals the total cost that must be recovered. The future cash flow is the residual value of the DRR's unconsumed assets, future interest payments and remaining tax liabilities (remaining interest and depreciation), and serves to reflect the cash flow required to account for the value of the assets not consumed during the 10-year life of the DCF model. Prior to the STB's decision in *AEPCO*, unused depreciation was accounted for in the terminal value calculation on an undiscounted basis. However, the STB modified its approach in *AEPCO* to calculate the present value of unused depreciation in the terminal value calculation.[14]

DuPont has included the STB's modified terminal value approach in its DCF model, but in doing so, has identified an additional flaw in the STB's model. The STB's DCF model explicitly assumes that the SARR's capital structure will remain constant into perpetuity.[15] This means that the amounts of common equity and debt carried on the assumed SARR's financial statements will remain the same forever. However, the STB's DCF model assumes that after year 20, and until the first assets are replaced in the replacement level of the DCF model, the

[14] *See AEPCO* at 140 to 141.

[15] The cost of capital used to calculate the terminal value in the DCF model equals the simple average cost of capital from the first year of the SARR's construction to the most recent cost of capital issued by the STB. It also reflects the average railroad industry capital structure over the same period. Between 2006 and 2010, debt as a percentage of railroad industry capital ranged from 20.7 to 29.1 percent.

railroad has no debt and no tax shielding interest payments. Stated differently, the model assumes, from a tax payment perspective, that the railroad is 100 percent equity financed after year 20 and before its first replacement cycle. 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.

To correct for this flaw, DuPont adjusted the terminal value in the capital carrying charges to reflect the cost of capital assumption that the SARR's level of debt is held constant into perpetuity, and that interest tax shields consistent with this level of debt are accounted for in the cash flow calculation. Specifically, DuPont calculated an interest tax shield perpetuity by dividing the last full quarterly coupon payment by one plus the quarterly real cost of capital.[16] This calculation aligns the cost of capital assumption of a fixed level of debt forever, with the interest payable on this debt.[17]

This change not only corrects for a flaw in the STB's DCF model, but also aligns the SARR with how the real world railroads operate. As indicated above, the railroads are constantly issuing new debt as older debt issuances mature, or the railroads call the debt before its maturity. Since the last round of mergers in the mid-1990's the amount of railroad industry debt as measured by the four major railroads included in the STB's cost of capital calculations (UP, BNSF, CSXT and NS) has remained fairly consistent over time. As shown in Exhibit III-H-2, the amount of railroad industry debt between 1998 and 2009 has remained at around $30 billion in aggregate.[18] It is generally agreed in the financial community that borrowing can add

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[16] This is the same type of calculation used to develop the terminal capital carrying charge.

[17] As to not double count the impact of the interest tax shields, DuPont has adjusted the asset replacement calculations to remove the impact of the interest tax shields on replacement assets.

[18] The amount of debt carried by the railroads increased beginning in 1996 as the railroads took on debt to finance their last round of mergers.

value to a firm because of the tax shielding impact of interest payments.[19] Under the STB's current DCF model assumptions, the value this debt adds from the interest tax shields is unaccounted for in all periods in the cash flow projections, but is accounted for in the cost of capital. The change made by DuPont corrects this flaw.

The development of the quarterly levelized capital carrying charge requirement is a relatively simple calculation, *i.e.,* starting capital carrying charge requirement times the quarterly index factor from Table H, which will recover total investment during the 10-year DCF model period. The starting capital carrying charge requirement which recovers the total investment is developed through an iterative process. The DCF model begins with a specified amount and then runs through the calculation described above to develop the cumulative present value of the cash flow. If this cumulative number does not equal the total costs to be recovered from the quarterly revenue flow (start-up investment plus the present value of the replacement investment), the starting cost is adjusted upward or downward as necessary and the DCF model runs through the calculations again. The process is repeated until the starting quarterly charge yields a cumulative present value cash flow which equals the required investment to be recovered from the quarterly capital recovery flow.

i. Computation of Tax Liability -- Taxable Income

Table J, Part 1 of Exhibit III-H-1 displays the calculation of the DRR's federal tax liability on road property. The procedures followed to develop the federal tax liability are discussed in Part III-G. Table J, Part 2 shows the calculation of the DRR's state income tax liability for both asset groups, which also is discussed in Part III-G.

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[19] See, for example, Brealey, R. A., Myers, S. C., and Allen, F., "Principles of Corporate Finance, Eighth Edition," McGraw-Hill Irwin, 2006, at page 476 ("Brealey, Myers and Allen"), "... most financial managers believe that there is a moderate tax advantage to corporate borrowing, at least for companies that are reasonably sure they can use the corporate tax shields."

j. Operating Expenses

Table K displays the operating expenses incurred in each year of the DCF period based on the traffic levels described in Part III-A. Annual operating expenses that change with the level of traffic volumes are adjusted by the annual change in ton-miles to take into consideration the shifting nature of DRR's traffic.[20] In this case, DuPont has adjusted train and engine personnel expenses, locomotive related expenses, loss and damage expenses, trackage rights fees, and intermodal lift costs annually by the change in DRR net ton-miles. Table K states the annual operating costs on a quarterly basis, and indexes them to reflect inflation over the 10-year analysis period based on the inflation rates shown in Table B.

k. Summary of SAC

Total SAC for the DRR based on investment and operating costs is summarized in Table L of Exhibit III-H-1. The capital requirement from Table I and the annual operating expenses from Table K are presented and summed in Table L for each year of the DRR's operation.

2. Maximum Rate Calculations

The SAC analysis summarized in Parts III-A through III-G and the accompanying Exhibits, and displayed in Exhibit III-H-1 demonstrates that over the 10-year DCF period the revenues generated by the DRR exceed its total capital and operating costs. Table III-H-1 below shows the measure of excess revenue over SAC in each year of the DCF period for this case.

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[20] For example, assume that in Year 1 of the 10-year period Movement A transports 1,000 tons of product over 1,000 miles of the SARR, producing 1 million net ton-miles of traffic. In Year 2, Movement A is forecasted to be discontinued, but is replaced in the SARR traffic group by Movement B. Movement B also transports 1,000 tons of product, but only moves over 100 miles of the SARR, producing 100,000 net ton-miles. Movement B will be less expensive to move than Movement A, given the lower aggregate costs associated with a shorter movement and the 90 percent reduction in net ton-miles. Adjusting costs by the change in ton-miles instead of the change in tons reflects the shifting nature of the SARR's traffic mix and its actual impact on the SARR's operating costs.

Table III-H-1
Summary of DCF Results – June 2009 to May 2019
($ in millions)

Year (1)	Annual Stand-Alone Requirement (2)	Stand-Alone Revenues (3)	Overpayments or Shortfalls (4)	PV Difference (5)	Cumulative PV Difference (6)
1. 6/09 – 12/09	$2,400.5	$3,350.0	$949.5	$926.2	$926.2
2. 2010	4,678.7	6,642.8	1,964.1	1,714.0	2,640.2
3. 2011	5,109.2	7,250.9	2,141.7	1,689.8	4,330.1
4. 2012	5,378.3	8,092.6	2,714.3	1,927.5	6,257.6
5. 2013	5,716.2	8,683.1	2,966.9	1,896.3	8,153.9
6. 2014	5,938.5	9,511.5	3,573.0	2,055.4	10,209.3
7. 2015	6,179.0	10,287.5	4,108.4	2,127.2	12,336.5
8. 2016	6,496.2	11,264.7	4,768.6	2,222.2	14,558.7
9. 2017	6,807.4	12,407.6	5,600.2	2,348.8	16,907.5
10. 2018	7,138.8	13,496.9	6,358.6	2,400.1	19,307.7
11. 1/19 – 5/19	3,115.0	6,117.0	3,002.0	1,075.1	20,382.7

Source: Exhibit III-H-1

Where stand-alone revenues are shown to exceed costs, rates for the members of the DRR traffic group -- including DuPont in particular -- must be adjusted to bring revenues and SAC into equilibrium. In *Major Issues*, the Board adopted MMM as its rate prescription approach for use in proceedings under the *Coal Rate Guidelines*.[21]

Under MMM, maximum reasonable rates for each year of the DCF period are expressed as a ratio of each movement's stand-alone revenues to the variable cost of providing the subject service over the DRR route. Revenues are expressed as each movement's annual stand-alone revenue calculated using the ATC methodology detailed in Part III-A-3. Revenues are categorized based on traffic type (*i.e.,* coal, intermodal or general freight), NS origin and destination, and DRR origin and destination. Variable costs for each movement are calculated using NS's 2010 URCS costs for the portion of the movement replicated by the DRR, based on the nine (9) cost inputs identified in *Major Issues*.

[21] *See Major Issues* at 14-23.

The Board has determined that in calculating variable costs to implement a R/VC ratio rate standard, the Board's standard URCS indexing approach produces the most accurate results.[22] DuPont is relying on this determination, and uses the Board's URCS indexing procedure to forecast variable costs for the MMM calculation.

The STB's URCS index uses five (5) indexes: the AAR's Wage, Wage Supplements, Materials and Supplies and Fuel Indices, and the Producer Price Index – All Commodities ("PPI"), which are weighted by actual railroad costs reported in Annual Report Form R-1. Global Insight publishes forecasts for each of the first four (4) indices, and the Board already accepts Global Insight's forecasts of the first three (3) for use in the DCF model. The fuel forecast is included in the same documentation. Likewise, EIA -- whose coal production, transportation cost and GDP-IPD forecasts already are accepted by the Board -- publishes a PPI forecast.[23] To forecast NS URCS Phase III variable costs for MMM purposes, therefore, DuPont uses the STB's URCS index, with the March 2012 Global Insight and most recent EIA forecasts for its components. Weighting factors are taken from NS's Annual Report Form R-1 data.

Following the calculation of the specific annual variable costs for each movement, DuPont calculated each movement's maximum contribution toward SAC each year, expressed as a mark-up over the movement's variable costs. Under MMM, a movement cannot contribute more to SAC than the contribution reflected in the mark-up of its current, actual or forecasted rate over variable cost. For each year in the DCF period, the MMM model sets each movement's R/VC ratio at the lesser of the average R/VC ratio required to cover total SAC, or the movement's actual R/VC ratio. The average R/VC ratio required to cover SAC then is iteratively increased until no movement in the traffic group is assigned a share of SAC greater than its

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[22] *See OG&E* at 11.

[23] The EIA lists its PPI forecasts as its Wholesale Price Index forecasts in its Annual Energy Outlook.

actual contribution over variable costs as measured by its R/VC ratio, and the aggregate adjusted stand-alone revenues equal total SAC.[24]

Application of MMM yields the maximum R/VC ratios for each year of the DCF model summarized in Table III-H-2 below.

Table III-H-2
MMM Results

	Year (1)	Maximum R/VC (2)
1.	6/09 – 12/09	117.8%
2.	2010	118.1%
3.	2011	117.6%
4.	2012	114.3%
5.	2013	113.3%
6.	2014	109.8%
7.	2015	107.8%
8.	2016	104.4%
9.	2017	101.2%
10.	2018	98.4%
11.	1/19 – 5/19	95.7%

Source: Exhibit III-H-3.

As indicated in Table III-H-2, the maximum R/VC ranges from 95.7 percent to 118.1 percent over the 10-year DCF period.[25]

The maximum lawful transportation rates for DuPont traffic equal the greater of the jurisdictional threshold or the MMM maximum rates. Exhibit III-H-4 through Exhibit III-H-15 compare NS's rates at 2Q09 through 1Q12, respectively to the jurisdictional threshold and the MMM maximum rates. The issue NS rates are greater than both the jurisdictional threshold and the MMM rates for all movements and all time periods.

[24] According to the Board, this step reflects the assumption that the rates charged by NS on all non-issue traffic are profit-maximizing rates, such that the reapportionment represents "an appropriate application of demand-based differential pricing." *See Major Issues* at 14.

[25] Because of the large number of annual movements on the DRR (more than 6.1 million), the STB's standard MMM model, which uses an Excel spreadsheet, could not be used. Instead, DuPont developed an MMM model using Microsoft Access, which is better suited to handling large data sets. See DuPont Opening e-workpaper "MaximumMarkup.accdb."

Part IV

PART IV

WITNESS QUALIFICATIONS AND VERIFICATIONS

This Part contains the Statements of Qualifications of the witnesses who are responsible for the Narrative portions of DuPont's Opening Evidence (and the exhibits and workpapers referred to therein) identified with respect to each witness.

1. DUPONT WITNESSES

Travis Bond
Global Supply Chain Manager
E.I. du Pont de Nemours and Company

Travis Bond is cosponsoring factual evidence pertaining to Polyethylene (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

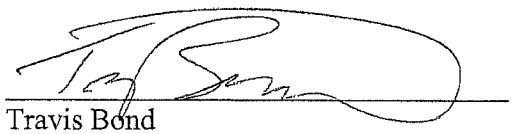
These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Bond is qualified and competent to provide testimony in this proceeding. Since May 2011, Mr. Bond has held the position of Global Supply Chain Manager. In this position, Mr. Bond's responsibilities include: (1) ensuring raw material supply is available for manufacturing facilities; (2) ensuring the Commodity is available for customer orders; (3) maintaining inventory of the Commodity at a level that is aligned with business strategy; (4) delivering the Commodity to customers; and (5) managing the Commodity's distribution costs. Prior to serving as a Global Supply Chain Manager, Mr. Bond held Regional Supply Chain Manager positions in both North America and Europe.

Mr. Bond holds the degree of Bachelor of Science in Chemical Engineering from Texas A&M University. In addition, he holds a Master of Business Administration from University of Florida. Mr. Bond is an APICS, The Association for Operations Management, Certified Supply Chain Professional.

VERIFICATION

I, Travis Bond, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.



Travis Bond
Global Supply Chain Manager

Executed on 12 Apr 2012

Michael Faciszewski
Contract Manufacturing Manager
E.I. du Pont de Nemours and Company

Michael Faciszewski is cosponsoring factual evidence pertaining to Lime (the "Commodity"). The sponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Faciszewski is qualified and competent to provide testimony in this proceeding. He has been a DuPont employee since 1999, and since July 1, 2008, Mr. Faciszewski has held the position of Contract Manufacturing Manager. In this position, Mr. Faciszewski's responsibilities include: benchmarking and optimizing the capability and performance of contracted resources, including Lime production; protecting DuPont manufacturing know-how from transfer to third parties; determining the business requirements for contract manufacturing, including Lime production; and ongoing contract administration of various contracts, including the DanChem Lime contract, to ensure contractor compliance. Prior to being in this role, Mr. Faciszewski held positions in Research and Development, Process Engineering, Quality Engineering, and Six Sigma.

Mr. Faciszewski holds Bachelor of Science degree in Chemical Engineering from the State University of New York at Buffalo.

VERIFICATION

I, Michael Faciszewski, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Michael Faciszewski
Contract Manufacturing Manager

Executed on 16 - April - 2012

Jeff Jirak
Global Business Manager Methylamines
E.I. du Pont de Nemours and Company

Jeff Jirak is cosponsoring factual evidence pertaining to Anhydrous Methylamines, Aqueous Methylamines, Dimethyl Formamide, Dimethyl Sulfate, and Monomethyl Formamide (the "Commodities").[1] The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodities.
- The characteristics of the Commodities.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodities.
- DuPont and its customers and suppliers' ability to handle the Commodities.
- Information concerning the market for the Commodities.
- Production and supply considerations regarding the Commodities.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Jirak is qualified and competent to provide testimony in this proceeding. Since January 2011, Mr. Jirak has held the position of Global Business Manager Methylamines. In this position, Mr. Jirak's responsibilities include: business strategy development, market and competitive assessments, product line management, and overall profitability of the Methylamines business. Mr. Jirak has worked for DuPont for 20 years and has held positions in engineering, operations, supply chain, sales/marketing, and business management.

[1] The cosponsored anhydrous methylamines evidence includes anhydrous mono-, di-, and tri-methylamines. The cosponsored aqueous methylamines evidence includes aqueous mono- and di-methlamines.

Mr. Jirak holds a Bachelor of Science degree in Mechanical Engineering from Michigan State University. In addition, he holds a Master's degree in Business Administration from Drexel University.

VERIFICATION

I, Jeff Jirak, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.



Jeff Jirak
Global Business Manager Methylamines

Executed on 4-12-2012

James Kanicky
Ore Products Business Manager
E.I. du Pont de Nemours and Company

James Kanicky is cosponsoring factual evidence pertaining to Sand Zircon and Titanium Tetrachloride (the "Commodities"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodities.
- The characteristics of the Commodities.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodities.
- DuPont and its customers and suppliers' ability to handle the Commodities.
- Information concerning the market for the Commodities.
- Production and supply considerations regarding the Commodities.

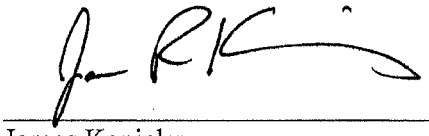
These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Kanicky is qualified and competent to provide testimony in this proceeding. Since November 2011, Mr. Kanicky has held the position of Ore Products Business Manager in the DuPont Titanium Technologies business. In this position, Mr. Kanicky's responsibilities include accountability for product stewardship and business performance metrics of the Commodities. Mr. Kanicky has also held multiple other positions in the DuPont Titanium Technologies business since 2002, including Research and Development Engineer and Technology Manager positions.

Mr. Kanicky has a Ph.D. in Chemical Engineering and has a combined ten years' experience as an engineering professional and manager.

VERIFICATION

I, James Kanicky, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.



James Kanicky
Ore Products Business Manager

Executed on April 16, 2012

Paul Kostrzewski
Senior Buyer—Petroleum Coke
E.I. du Pont de Nemours and Company

Paul Kostrzewski is cosponsoring factual evidence pertaining to Petroleum Coke (the "Commodity"). The sponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Kostrzewski is qualified and competent to provide testimony in this proceeding. Since May 2009, Mr. Kostrzewski has held the position of Senior Buyer—Petroleum Coke. In this position, Mr. Kostrzewski's responsibilities include: negotiation, preparation and execution of procurement agreements across five world-scale titanium dioxide production plants; and responsibility for $100 million of specialty chemical and commodity raw materials, including the Commodity. Mr. Kostrzewski is a certified black belt in six sigma.

Mr. Kostrzewski holds the degree of Bachelor of Science in Chemical Engineering from Lehigh University. In addition, Mr. Kostrzewski holds a Master of Business Administration degree from New York University.

VERIFICATION

I, Paul Kostrzewski, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Paul Kostrzewski
Senior Buyer—Petroleum Coke

Executed on 4/16/12

Brad Kulesza
Operations Business Leader
E.I. du Pont de Nemours and Company

Brad Kulesza is cosponsoring factual evidence pertaining to Hydrochloric Acid (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Kulesza is qualified and competent to provide testimony in this proceeding. Since April 2011, Mr. Kulesza has held the position of Operations Business Leader for multiple product lines, including the F22 produced at DuPont's Louisville facility. Hydrochloric acid is a co-product of F22 production. In this position, Mr. Kulesza's responsibilities include: developing overall supply chain strategy for the Commodity; asset management; driving key improvement programs; and insuring overall supply meets the business needs. Prior to his current position, Mr. Kulesza has supported other product lines as Asset Manager and has served as Hydrochloric Acid Product and Business Manager between 2000 and 2005.

Mr. Kulesza holds a Bachelor of Science degree in Chemical Engineering from the University of Akron.

VERIFICATION

I, Brad Kulesza, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Brad E Kulesza

Brad Kulesza
Operations Business Leader

Executed on 4/25/2012

John Leuszler
U.S. Account Manager
E.I. du Pont de Nemours and Company

John Leuszler is cosponsoring factual evidence pertaining to Difluoroethane and Dimethyl Ether (the "Commodities"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodities.
- The characteristics of the Commodities.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodities.
- DuPont and its customers and suppliers' ability to handle the Commodities.
- Information concerning the market for the Commodities.
- Production and supply considerations regarding the Commodities.

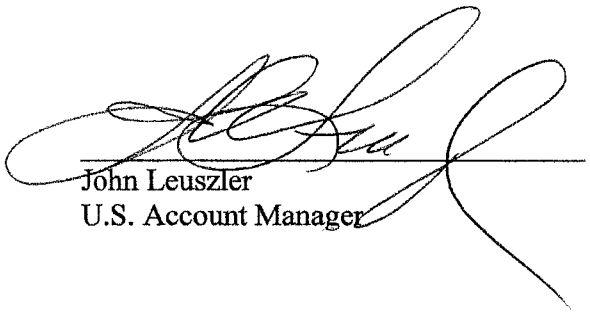
These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Leuszler is qualified and competent to provide testimony in this proceeding. Since November 1981, Mr. Leuszler has held the position of U.S. Account Manager. In this position, Mr. Leuszler's responsibilities include: attaining sales and profitability for the propellants business by maintaining customer relationships and reviewing customer pricing and the costs of delivering Difluoroethane and Dimethyl Ether to them; coordinating with others to ensure adequate supply and prompt delivery of these chemicals. Prior to his current position, Mr. Leuszler supervised maintenance in the bulk storage area of DuPont's Corpus Christi plant.

Mr. Leuszler holds a Bachelor of Science degree in Mechanical Engineering from Cornell University.

VERIFICATION

I, John Leuszler, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.



John Leuszler
U.S. Account Manager

Executed on 9/13/2012

Mark McLendon
Master Scheduler
E.I. du Pont de Nemours and Company

Mark McLendon is cosponsoring factual evidence pertaining to Waste Flammable Liquid (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. McLendon is qualified and competent to provide testimony in this proceeding. Mr. McLendon has worked at the DuPont Mobile site since 1978 in various roles involving site operation, environmental management, and distribution safety. Since January 2012, Mr. McLendon has been the Supply Chain Manager / Master Scheduler for DuPont's Mobile operations. In this role, Mr. McLendon is responsible for the alignment of the production scheduling at the Mobile site, including the scheduling of the Commodity. From 2001 through 2011, Mr. McLendon served as the Distribution Team Leader at DuPont's Mobile facility. In this position, Mr. McLendon's responsibilities included: identifying and authorizing shipping routes; specifying U.S. Department of Transportation ("DOT") approved containers; and serving

as the site resource on the DOT's hazardous materials regulations. While in this position, he also supported the Gulf Coast region of North America as a distribution resource from 2007 to 2010, providing DOT regulatory guidance, training, and support in the handling and movement of DOT regulated hazardous materials.

VERIFICATION

I, Mark McLendon, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Mark McLendon
Supply Chain Manager / Master Scheduler

Executed on 4/18/12

Gloria L. Taylor
Commission Expires 8/19/2013

Nicky Mills
Kinston Supply Chain Manager
E.I. du Pont de Nemours and Company

Nicky Mills is cosponsoring with Pamela Wilson factual evidence pertaining to Propanediol Bio (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Mills is qualified and competent to provide testimony in this proceeding. Since August 2001, Mr. Mills has held the position of Kinston Supply Chain Manager. In this position, Mr. Mills's responsibilities include: supervising daily operations in shipping warehouses, the chemical tank farm, terephthalic acid powder unloading silos, and finished product loading silos; and managing and procuring all raw material inventory used on site

Mr. Mills hold a Bachelor of Science degree in Industrial Technology.

VERIFICATION

I, Nicky Mills, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Nicky Mills
Kinston Supply Chain Manager

Executed on 4-16-2012

Edward L. Morris, Jr.
Operations Business Leader—Sulfur Products
E.I. du Pont de Nemours and Company

Edward L. Morris, Jr., is cosponsoring factual evidence pertaining to Fuming Sulfuric, Sulfuric Acid, Spent Sulfuric Acid, and Sulfur Trioxide (the "Commodities"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodities.
- The characteristics of the Commodities.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodities.
- DuPont and its customers and suppliers' ability to handle the Commodities.
- Information concerning the market for the Commodities.
- Production and supply considerations regarding the Commodities.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Morris is qualified and competent to provide testimony in this proceeding. Mr. Morris joined DuPont in June 1980. Since April 2011, Mr. Morris has held the position of Operations Business Leader—Sulfur Products. In this position, Mr. Morris's responsibilities include monitoring and managing supply chain performance and developing strategic supply chain plans for the sulfur products business.

Mr. Morris holds the degree of Bachelor of Science in Mechanical Engineering from Clarkson University and has also completed the APICS, The Association for Operations Management, Certified in Production and Inventory Management program.

VERIFICATION

I, Edward L. Morris, Jr., verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Edward L. Morris, Jr.
Operations Business Leader—Sulfur Products

Executed on 4/16/2012

Leslie Muir
North America Logistics Planner—DuPont Titanium Technologies
E.I. du Pont de Nemours and Company

Leslie Muir is cosponsoring factual evidence pertaining to Titanium Dioxide (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Ms. Muir is qualified and competent to provide testimony in this proceeding. Since June 2009, Ms. Muir has held the position of North America Logistics Planner—DuPont Titanium Technologies. In this position, Ms. Muir's responsibilities include ensuring the safe, timely, and cost effective distribution of Titanium Dioxide, Titanium Tetrachloride, and co-products to customers in North America and Mexico. Ms Muir is an APICS, The Association for Operations Management, Certified Supply Chain Professional. In addition, Ms Muir holds Six Sigma Green Belt and Black Belt certifications as well as the designation of Certified Process Master from Hammer and Company, the worldwide leader for process design, redesign, and education.

Ms. Muir holds a Bachelor of Arts degree in International Relations from the Pennsylvania State University.

VERIFICATION

I, Leslie Muir, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Leslie A. Muir

Leslie Muir
North America Logistics Planner—DuPont Titanium Technologies

Executed on 4-12-2012

Matthew Nowicki
Supply Chain Manager
E.I. du Pont de Nemours and Company

Matthew Nowicki is sponsoring factual evidence pertaining to Glycolic Acid (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

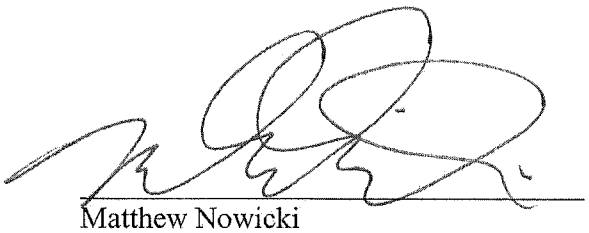
These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Nowicki is qualified and competent to provide testimony in this proceeding. Since May 2005, Mr. Nowicki has held the position of Supply Chain Manager. In this position, Mr. Nowicki's responsibilities include: overall coordination of forecasted global demand versus planned plant production; variable cost monitoring; and adherence to supply chain management best practices. Moreover, Mr. Nowicki is a certified Six Sigma Black Belt and Master Black Belt. He is also an APICS, The Association for Operations Management, Certified Supply Chain Professional.

Mr. Nowicki graduated from Tufts University with Bachelor of Science and Master of Science degrees in Electrical Engineering.

VERIFICATION

I, Matthew Nowicki, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.



Matthew Nowicki
Supply Chain Manager

Executed on 4-26-11

Mary L. Pileggi
Logistics Manager-North America Region
E.I. du Pont de Nemours and Company

Ms. Pileggi is cosponsoring factual evidence pertaining to the transportation and logistics of all commodities listed in the complaint. The sponsored evidence includes, but is not limited to:

- The identity of transportation providers engaged by E.I. du Pont de Nemours and Company ("DuPont") to transport the commodities.
- The contracts and agreements between DuPont and those transportation providers.
- DuPont's use and ability to use various modes of transportation to transport the commodities.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them; and
- Transportation costs that are or would be incurred by DuPont under various scenarios.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Ms. Pileggi is qualified and competent to provide testimony in this proceeding. She joined DuPont in December 1999. Since March 2003, Ms. Pileggi has held the position of Logistics Manager-North America Region. In this position, her responsibilities include: logistic operations, transportation equipment, and supervision of the procurement and administration of agreements between DuPont and its carriers. Prior to joining DuPont, Ms. Pileggi worked for Conrail for 19 years with her last position as Director Marketing-Petrochemicals, Minerals and Waste. Ms. Pileggi has also served on the Board of Directors for the Indiana Harbor Belt Railroad (IHB).

Ms. Pileggi is a Certified Supply Chain Professional (CSCP) as a member of APICS, The Association for Operations Management. She currently represents DuPont on the Distribution Committee for the American Chemistry Council. She also serves on the Board of Directors for National Freight Transportation Association (NFTA) and on the Executive Committee for the National Industrial Transportation League (NITL) as Third Vice Chairman.

Ms. Pileggi holds the degree of Bachelor of Science in Mathematics from St. Joseph's University. In addition, Ms. Pileggi holds an Executive MBA from Drexel University.

VERIFICATION

I, Mary L. Pileggi, verify under penalty of perjury that I have read the Opening Evidence of E.I. du Pont de Nemours and Company in this proceeding that I have cosponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Mary L. Pileggi
Logistics Manager-North America Region

Executed on 3/30/12

Suneet Ranganath
Sourcing Manager—Ag & Nutrition
E.I. du Pont de Nemours and Company

Suneet Ranganath is sponsoring factual evidence pertaining to Chlorine, Potassium Caustic, and Sodium Caustic (the "Commodities"). The sponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodities.
- The characteristics of the Commodities.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodities.
- DuPont and its customers and suppliers' ability to handle the Commodities.
- Information concerning the market for the Commodities.
- Production and supply considerations regarding the Commodities.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Ranganath is qualified and competent to provide testimony in this proceeding. Since November 2011, Mr. Ranganath has held the position of Sourcing Manager—Ag & Nutrition. Prior to holding this position, Mr. Ranganath held the position of Executive Buyer – Chloralkali from June 2010 to October 2011. In the executive buyer position, Mr. Ranganath's responsibilities were to develop strategic plans and buys for chloralkali chemicals including chlorine, sodium caustic, and potassium hydroxide. His specific responsibilities included identifying and driving continuous improvement in the contractual relationships with suppliers focused on material procurement and delivery as well as developing forecasts used in strategic

plans and price forecasts. Mr. Ranganath has 21 years of experience within DuPont, with approximately seven years in manufacturing and manufacturing management, seven years in marketing, and seven years in Sourcing.

Mr. Ranganath holds a Bachelors of Science degree in Chemical Engineering from the University of Cincinnati. In addition, he holds a Masters of Business Administration degree from the University of Delaware and a Juris Doctor degree from Widener University of Law.

VERIFICATION

I, Suneet Ranganath, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Suneet Ranganath
Sourcing Manager—Ag & Nutrition

Executed on 18-April-2012

Greg Rupert
Senior Process Engineer
E.I. du Pont de Nemours and Company

Greg Rupert is sponsoring factual evidence pertaining to Sodium Methylate (the "Commodity"). The sponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Mr. Rupert is qualified and competent to provide testimony in this proceeding. Since November 2004, Mr. Rupert has held the position of Senior Process Engineer. In this position, Mr. Rupert's responsibilities include: plant operational and design support to the Sodium Methylate unit at DuPont's LaPorte site; and consulting/startup/operational/design assistance to the DuPont Reactive Metals division in support of tolling operations of sodium methylate in North and South America. Prior to joining DuPont, Mr. Rupert spent fifteen years working in various operation and process design roles in the chemical process industries in North America and Europe.

Mr. Rupert holds a Bachelor of Science degree in Chemical Engineering from the University of Houston.

VERIFICATION

I, Greg Rupert, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.



Greg Rupert
Senior Process Engineer

Executed on 4/13/2012

Katie Snyder
Business Manager Aniline
E.I. du Pont de Nemours and Company

Katie Snyder is cosponsoring factual evidence pertaining to Oil Aniline (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Ms. Snyder is qualified and competent to provide testimony in this proceeding. Since September 2009, Ms. Snyder has held the position of Business Manager Aniline. In this position, Ms. Snyder's responsibilities include: achievement of business earnings and cash objectives, compliance with standardized processes and regulatory requirements for the business, and sustainable improvement of all aspects of the business. In addition, Ms. Snyder was the Global Sourcing Manager for DuPont Chemical Solutions Enterprise from 2002-2003.

Ms. Snyder holds a Bachelor of Science degree in Chemical Engineering, with honors, from Oklahoma State University.

VERIFICATION

I, Katie Snyder, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am cosponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Katie Snyder
Business Manager Aniline

Executed on 4-16-12

Pamela J. Wilson
Global Supply Chain Planner
E.I. du Pont de Nemours and Company

Pamela J. Wilson is cosponsoring with Nicky Mills factual evidence pertaining to Propanediol Bio (the "Commodity"). The cosponsored evidence includes, but is not limited to:

- E.I. du Pont de Nemours and Company's ("DuPont's") use and ability to use various modes of transportation to transport the Commodity.
- The characteristics of the Commodity.
- The transportation needs and requirements of DuPont, its customers, and its suppliers, including any contractual requirements between them, for the Commodity.
- DuPont and its customers and suppliers' ability to handle the Commodity.
- Information concerning the market for the Commodity.
- Production and supply considerations regarding the Commodity.

These issues are discussed in Part I ("Counsel's Argument and Summary of Evidence") and Part II-B ("Qualitative Market Dominance").

Ms. Wilson is qualified and competent to provide testimony in this proceeding. Since February 2008, Ms. Wilson has held the position of Global Supply Chain Planner. In this position, Ms. Wilson's responsibilities include: leading and managing activities in the Commodity's supply chain; evaluating the competitiveness of the Commodity's supply chain with respect to service, cost, and investment; leading improvement activities in all aspects of the Commodity's supply chain to simplify the supply chain where possible; planning, controlling, and scheduling all activities supporting Propanediol Bio products; and overseeing the finished product master plans that look ahead 3-24 months and the planned requirements for the

4/17/12

associated raw materials, purchased parts, and packaging supplies. In addition, Ms. Wilson has 28 years of experience at DuPont in various technical, operations, and supply chain roles.

Ms. Wilson holds Bachelor of Science degrees in Metallurgical Engineering and Materials Science from Carnegie Mellon University. She also holds a Master's Degree in Business Administration from Wilmington College. Ms. Wilson has received a Certified in Production and Inventory Management certification from APICS, The Association for Operations Management.

4/17/12

VERIFICATION

I, Pamela J. Wilson, verify under penalty of perjury that I have read the portions of E.I. du Pont de Nemours and Company's Opening Evidence that I am sponsoring, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct based on my knowledge, information, and belief. Further, I certify that I am qualified and authorized to file this statement.

Pamela J. Wilson
Global Supply Chain Planner

Executed on 4/17/12

2. RICHARD H. MCDONALD

Mr. McDonald is president of RHM Consulting, Inc., a transportation planning firm specializing in the railroad industry. RHM Consulting is located at 516 W. Shady Lane, Barrington, Illinois. Mr. McDonald's experience includes 42 years in varied and increasingly responsible positions with the New York Central ("NYC"), Penn-Central ("PC"), and Chicago and Northwestern ("CNW") Railroads. The specific evidence Mr. McDonald developed and is sponsoring is DuPont's evidence as it relates to the stand-alone railroad ("SARR") operating plan (Part III-C), the operating personnel and the General and Administrative personnel required to manage the DuPont SARR (Part III-D).

Mr. McDonald graduated from the University of Illinois, College of Engineering with a Bachelor of Science degree in Civil Engineering in 1957. He completed the following certificate programs: Railroad Engineering, University of Illinois, 1975; Management for Engineers, University of Iowa, 1976; Accounting for the Non-Accounting Executive, Wharton School, University of Pennsylvania, 1977; and Railroad Profit Strategy, Kellogg Center, Northwestern University, 1990. Mr. McDonald is a member of the American Railway Engineering Association and the Chicago Maintenance of Way Club. Mr. McDonald served on the Board of Directors of the Peoria & Pekin Union Railway and Minnesota Transfer Properties, Inc. from 1984 to 1994.

Mr. McDonald founded RHM Consulting in 1994 and since that time has successfully completed numerous assignments for railroads, shippers and public entities related to transportation issues, including; rail line construction projects, operational adjustments and analyses of railroad operations, such as restructuring the Ferrocarriles Nacionales de Mexico ("FNM") into an independent, modern terminal transportation company.

Prior to joining CNW, Mr. McDonald was an officer in the Operating Department on the NYC and PC railroads from 1960 to 1974. During this period, Mr. McDonald was assigned duties in Indianapolis, IN, Columbus, OH, Youngstown, OH and Rochester, NY.

Mr. McDonald's career with CNW included a number of high-level positions over a period of twenty years. These positions included: Vice President–Planning & Acquisitions, Vice President–Operations, Vice President–Engineering, Vice President–Transportation, Vice President–Operating Administration, Vice President–Western Railroad Properties, Inc., Assistant Vice President–Transportation, Assistant to Vice President & Division Manager–Transportation and Assistant to Vice President-Transportation. As Vice President–Western Rail Properties, Inc. ("WRPI"), Mr. McDonald was responsible for the successful planning, construction and operation of the CNW/WRPI rail line into the Powder River Basin ("PRB"). As Vice-President Operations, he was responsible for Transportation, Engineering and Mechanical departments and related functions for both freight and commuter service on the CNW, which incidentally, was similar in size and complexity to the DuPont Railroad. Mr. McDonald has testified before the Surface Transportation Board in numerous stand-alone cost proceedings, including STB Docket No. 42051, *Wisconsin Power & Light Company v. Union Pacific Railroad Company*, STB Docket No. 42054, *PPL Montana, LLC v. The Burlington Northern and Santa Fe Railway Company,* STB Docket No. 42051, *Public Service Company of Colorado d/b/a Xcel Energy v. The Burlington Northern and Santa Fe Railroad Company.*

VERIFICATION

I, Richard H. McDonald, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Richard H. McDonald

Executed on April 27, 2012

3. HARVEY A. CROUCH, P.E.

Mr. Crouch is President and CEO of Crouch Engineering, P.C. His business address is 428 Wilson Pike Circle, Brentwood, TN 37027. Crouch Engineering is a consulting firm providing high quality railway engineering and planning services to railroads, governmental agencies and private industry.

The specific portions of DuPont's Opening Evidence that Mr. Crouch is sponsoring are (1) Part III-D-5 relating to the SARR maintenance-of-way-plan and annual expenses, and (2) the portion of Part III-F relating to the SARR's construction costs.

Mr. Crouch has served as a Track Supervisor and Project Engineer in the Maintenance of Way & Structures ("MW&S") Department of Norfolk Southern Railway ("NS"). He founded Crouch Engineering in 1991 and since that time has provided railway engineering services to numerous railroads and government agencies. He has been responsible for many track and bridge construction and rehabilitation projects across the United States, predominantly in the Eastern United States, in the Central and Southern Appalachian regions and elsewhere. His clients have included NS (for which he has designed over 30 capital projects), and over 120 short line and regional railroads, including many of the RailAmerica and Genesee and Wyoming railroads, East Tennessee Railway, Eastern Alabama Railway, South Central Tennessee Railroad, Knoxville & Holston River Railroad, KTW Railway, Nashville & Eastern Railroad, New England Central Railroad, Tennessee Southern Railroad, TennKenn Railroad, Toledo, Peoria and Western Railroad, and the Kyle Railroad among others. He has conducted hundreds of on-site evaluations of railroad facilities to identify needed repairs or improvements; conducted engineering surveys and prepared plans, specifications and cost estimates for railroad capital construction projects, repairs and improvements; provided construction management and inspection services, including preparation and analysis of bid documents; and evaluated many

new railroad routes for proposed construction or proposed line changes. Mr. Crouch has also designed many railroad locomotive and car repair facilities, including shops on the Connecticut Southern Railroad, San Luis & Rio Grande Railroad, South Carolina Central Railroad, Tennessee Southern Railroad, Alabama Gulf Coast Railroad, Franklin Industries Railroad, KWT Railway, and Knoxville & Holston River Railroad.

From 1977 to 1987, Mr. Crouch worked for Southern Railway and NS (after the merger of the Southern and Norfolk & Western Railroads) in the MW&S Department. He started with Southern Railway as a Coop Engineer in 1977, and continued in that position through 1980. Mr. Crouch resumed service in 1982 with NS as a Management Trainee, and in 1983 was appointed Project Engineer in which position he was responsible for project management of railroad construction projects in Columbia, SC, and on NS's Appalachian Division which included mountainous areas in western Virginia and Tennessee. He was responsible for a variety of projects including construction of new connecting tracks, sidings, yards, lead tracks, and assisted on a tunnel bypass, conversions from dark territory to CTC, and other projects.

From 1986 to 1987, Mr. Crouch was a Track Supervisor and was responsible for the inspection and maintenance of the NS main line trackage from Danville to a point near Richmond, VA, including track inspection, day-to-day supervision of work gangs, safety program, ordering material, budgeting, planning, and construction management for rehabilitation and maintenance of track and bridges. Mr. Crouch was qualified by NS as an FRA-qualified track inspector, and continues to perform inspections based on FRA track safety standards.

From 1988 to 1991, Mr. Crouch worked as a Graduate Research Assistant for Tennessee Tech, as an Environmental Engineer for the Tennessee Valley Authority, and as Project Manager for McCoy Associates, Inc., an engineering firm involved in bridge inspection, design, planning and project management and new railroad facility design. He left McCoy Associates in 1991 to

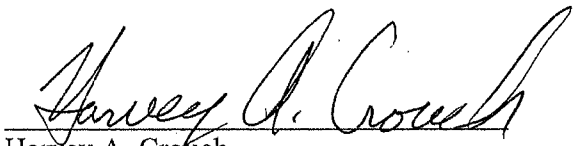
found Crouch Engineering. In addition to his U.S. consulting work, Mr. Crouch has worked on bridge evaluations in Canada, and on contractor requirements, bidding and negotiations for Freight Victoria's entire rail infrastructure (over 2,500 miles) in Australia. Mr. Crouch has also worked on a preliminary concept design of a 260-mile rail line in West Africa, including design for 286K for track and bridges, sidings, yards, and locomotive and car repair facilities.

Mr. Crouch received a Bachelor of Science in Civil Engineering from Tennessee Technological University in 1982 and a Master of Science in Civil Engineering from Tennessee Tech in 1989. Mr. Crouch is a registered Professional Engineer in more than 35 states. He is a member of the American Railway Engineering and Maintenance of Way Association (AREMA), the American Short Line and Regional Railroad Association, the American Society of Civil Engineers, and the National Society of Professional Engineers.

Mr. Crouch was assisted in preparing the SARR construction-cost evidence in Part III-F by various members of his firm, including in particular Richard Davis R.L.S., who was primarily responsible for identifying and laying out the DRR's routes.

VERIFICATION

I, Harvey A. Crouch, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Harvey A. Crouch

Executed on April 27, 2012

4. THOMAS D. CROWLEY

Mr. Crowley is an economist and President of L.E. Peabody & Associates, Inc., an economic consulting firm that specializes in solving economic, marketing, and transportation problems. The Firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA, 22314, 760 E. Pusch View Lane, Tucson, AZ 85737 and 21 Founders Way, Queensbury, NY 12804.

Mr. Crowley is sponsoring portions of DuPont's Opening Evidence in Parts II and III. Specifically, Mr. Crowley is co-sponsoring Part II-A with Witness Timothy D. Crowley, Part III-A with Witnesses Michael E. Lillis, Robert D. Mulholland and Sean Nolan, Part III-G with Witness Daniel L. Fapp and Part III-H with Witness Daniel L. Fapp.

Mr. Crowley is a graduate of the University of Maine from which he obtained a Bachelor of Science degree in Economics. He has also taken graduate courses in transportation at The George Washington University in Washington, D.C. He spent three years in the United States Army and has been employed by L.E. Peabody & Associates, Inc. since February, 1971. He is a member of the American Economic Association, the Transportation Research Forum, and the American Railway Engineering Association.

As an economic consultant, Mr. Crowley has organized and directed economic studies and prepared reports for railroads, freight forwarders and other carriers, shippers, associations, and state governments and other public bodies dealing with transportation and related economic and financial matters. Examples of studies in which he has participated include organizing and directing traffic, operational and cost analyses in connection with multiple car movements, unit train operations for coal and other commodities, freight forwarder facilities, TOFC/COFC rail facilities, divisions of through rail rates, operating commuter passenger service, and other studies dealing with markets and the transportation by different modes of various commodities from

both eastern and western origins to various destinations in the United States. The nature of these studies has enabled Mr. Crowley to become familiar with the operating and accounting procedures utilized by railroads in the normal course of business.

Additionally, Mr. Crowley has inspected both railroad terminal and line-haul facilities used in handling general freight, intermodal and unit train movements of coal and other commodities in all portions of the United States. The determination of the traffic and operating characteristics for specific movements was based, in part, on these field trips.

In addition to utilizing the methodology for developing a maximum rail rate based on stand-alone costs, Mr. Crowley also presented testimony before the ICC in Ex Parte No. 347 (Sub-No. 1), *Coal Rate Guidelines - Nationwide*, the proceeding that established this methodology and before the STB in Ex Parte No. 657 (Sub-No. 1), *Major Issues In Rail Rate Cases*, the proceeding that modified the application of the stand-alone cost test. Mr. Crowley also presented testimony in a number of the annual proceedings at the STB to determine the railroad industry current cost of capital, i.e., STB Ex Parte No. 558, *Railroad Cost of Capital.* He has submitted evidence applying ICC (now the STB) stand-alone cost procedures in numerous rail rate cases. He has also developed and presented numerous calculations utilizing the various formulas employed by the ICC and STB (both Rail Form A and Uniform Railroad Costing System ("URCS")) to develop variable costs for rail common carriers. In this regard, Mr. Crowley was actively involved in the development of the URCS formula, and presented evidence to the ICC analyzing the formula in Ex Parte No. 431, *Adoption of the Uniform Railroad Costing System for Determining Variable Costs for the Purposes of Surcharge and Jurisdictional Threshold Calculations.*

As a result of his extensive economic consulting practice since 1971 and his participating in maximum-rate, rail merger, and rule-making proceedings before the ICC and the STB, Mr.

Crowley has become thoroughly familiar with the operations, practices and costs of the rail carriers that move traffic over the major rail routes in the United States.

VERIFICATION

I, Thomas D. Crowley, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Thomas D. Crowley

Executed on April 27, 2012

5. PHILIP H. BURRIS

Mr. Burris is Senior Vice President of L.E. Peabody & Associates, Inc., an economic consulting firm with offices in Alexandria, VA, Tucson, AZ and Queensbury, NY. The specific evidence Mr. Burris is sponsoring relates to the development of operating statistics based on the output of the RTC model and the operating plan (Part III-C), including the development of train crew personnel requirements (Part III-D), development of equipment lease, maintenance and servicing costs (Parts III-D-1 and III-D-2), operating unit costs (Parts III-D-3 and III-D-5 through III-D-9) and compensation levels for all the DRR transportation and operating (including engineering) employees, non-operating (General and Administrative) personnel, and training and recruiting costs (Parts III-D-2, III-D-3-d, and III-D-4). Mr. Burris is also sponsoring the non-road property investment (Part III-E) and the identification of land to be acquired through easements and the associated costs of that land (Part III-F-1).

Mr. Burris received his Bachelor of Science in Business Administration from Virginia Polytechnic Institute and State University in 1971. He was awarded a Masters in Business Administration, specializing in transportation economics, from American University in 1978. Mr. Burris has worked in the consulting industry for more than 30 years. In addition to his current position as Senior Vice President of L.E. Peabody & Associates, Inc., Mr. Burris has been an employee of the following consulting firms: A. T. Kearney, Wyer Dick & Associates, Inc. and George C. Shaffer & Associates.

Mr. Burris has extensive experience in the field of transportation economics as it pertains to transportation supply alternatives, plant location analysis, regulatory policy and dispute resolution before regulatory agencies as well as state and federal courts. He has designed, directed and executed analyses of the costs of moving various commodities by different modes of transportation including rail, barge, truck, pipeline and intermodal. He has also performed

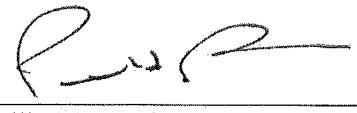
economic analyses of maximum reasonable rate levels for the movement of coal and other commodities using the Board's CMP methodology, and specifically the stand-alone cost constraint. Mr. Burris has submitted evidence regarding maximum reasonable rate levels using the stand-alone cost constraint to the Board and its predecessor and testified before the Railroad Commission of Texas, the Colorado Public Utilities Commission, the Illinois Commerce Commission, the Public Service Commission of Nevada and various state and federal courts and arbitration panels.

In the public sector, Mr. Burris has performed studies and written draft reports for the Railroad Accounting Principles Board, an independent body created by Congress to establish cost accounting principles for use in implementing the regulatory provisions of the Staggers Act of 1980.

Since 2005, Mr. Burris has served as a member of the Board of Directors of the South Central Florida Express Railroad, a wholly owned subsidiary of United States Sugar Corporation.

VERIFICATION

I, Philip H. Burris, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Philip H. Burris

Executed on April 27, 2012

6. CHARLES A. STEDMAN

Mr. Stedman is a Vice President of L. E. Peabody & Associates, Inc., headquartered in Alexandria, VA. The specific evidence Mr. Stedman is co-sponsoring relates to the roadbed preparation/earthworks component of the road property investment cost of the SARR, exclusive of culverts, roadbed specifications and yard drainage (Part III-F-2). Mr. Stedman is also sponsoring the development of SARR route miles (Part III-B-1-d).

Mr. Stedman has been employed by L. E. Peabody & Associates, Inc. since October 1981. Since that time, he has performed and directed numerous extensive projects and analyses undertaken on behalf of utility companies, short line railroads, state and local governments and entrepreneurs. These projects include: (a) participation in the development of variable cost evidence presented to the ICC and the Board in numerous cases; (b) the development of variable costs contained in numerous reports and other analyses presented to clients; (c) the development of stand-alone cost evidence presented to the ICC and the Board in numerous cases; (d) the development of evidence in abandonment cases before the ICC; (e) the development of net liquidation values and rehabilitation costs for interested parties in abandonments and acquisitions; and (f) the preliminary design (including route layout), construction and maintenance costs associated with the construction of a new rail line.

Prior to joining L. E. Peabody & Associates, Inc., Mr. Stedman was employed by the United States Railway Association ("USRA") where he monitored the effectiveness of the operating plan of Consolidated Rail Corporation ("Conrail") using a computer model, participated in data manipulation and analyzed results in order to make projections about Conrail's future operations.

Mr. Stedman also worked as the chief research assistant on a transportation project for the Maryland Department of Transportation and was the co-author of the resulting Report

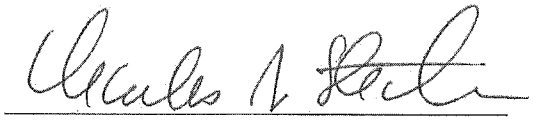
"International Air Cargo Potential at Baltimore-Washington International Airport." Recommendations in this Report were used to increase international air cargo shipment volumes through Baltimore-Washington International Airport. And, as a research assistant for the ICC, Mr. Stedman studied the effect of selected railroad mergers on the national railroad system using a computer model to aid in determining shifts in traffic patterns caused by specific rail mergers.

Mr. Stedman is a graduate of the University of Maryland where he obtained a Bachelor of Arts degree in Political Science with a minor in Business Transportation. He has attended numerous railroad construction and maintenance seminars across the country and is a Certified Track Foreman and a member of the American Railway Engineering and Maintenance-of-Way Association.

Mr. Stedman has conducted several field inspections of eastern and western carriers' rail lines in order to develop and determine the existing and potential operating and economic conditions of these lines. He has also conducted and directed detailed research into the valuation records of major eastern and western railroads. This research entailed, among other things, detailed reviews of both ICC and railroad valuation maps, land acquisition records (including title status and market value) and the ICC's Bureau of Valuation B.V. Form No. 561, commonly referred to as the ICC Engineering Reports.

VERIFICATION

I, Charles A. Stedman, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Charles A. Stedman

Executed on April 27, 2012

7. MICHAEL E. LILLIS

Mr. Lillis is a Vice President of L.E. Peabody & Associates, Inc., an economic consulting firm that specializes in solving economic, marketing, and transportation problems. The Firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA, 22314, 760 E. Pusch View Lane, Tucson, AZ 85737 and 21 Founders Way, Queensbury, NY 12804. Mr. Lillis is co-sponsoring along with Thomas D. Crowley, Part III-A-3.

Mr. Lillis received a Bachelor of Arts degree in economics from the University of Virginia in 1985. He has taken continuing education courses in law at the University of Virginia and has taken numerous graduate courses while enrolled in the MBA program at George Washington University.

Mr. Lillis has been employed by L.E. Peabody & Associates, Inc. since 1995. Prior to joining L. E. Peabody & Associates, Inc., Mr. Lillis worked for Western Fuels Association, Inc., ("WFA") a national fuel supply organization in the electric utility industry. While with WFA, he managed coal supply and rail transportation agreements for shippers that represented the membership of WFA. He organized and presented numerous economic studies and analyses for shippers relating to coal transportation, coal supply and related economic and regulatory problems. Mr. Lillis has negotiated, implemented and monitored both long term coal supply and rail transportation agreements. Mr. Lillis has conducted field trips to coal suppliers in Wyoming's Powder River Basin and New Mexico's San Juan Basin to develop on-site information used in the quantification of contract provisions and the development of operational mine costs.

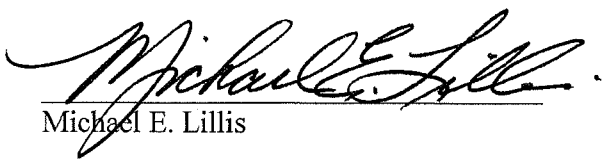
While at L.E. Peabody & Associates, Inc., Mr. Lillis has participated in studies that utilize various formulas employed by the Surface Transportation Board ("STB") in the development of costs for common carriers, including the Uniform Railroad Costing System ("URCS"). He has developed variable costs for common carriers with particular emphasis on the

general purpose costing system for rail carriers. Mr. Lillis has also performed extensive analyses in the area of stand-alone costing including route layout, design and construction costs, traffic and revenue development, forecasting and the development of detailed operating plans for various stand-alone railroads.

As part of his work at L.E. Peabody & Associates, Inc., Mr. Lillis conducted numerous studies for electric utilities regarding least cost alternatives for coal and natural gas delivery to various power plants. These studies included the valuation of existing contractual arrangements for fuel supply and transportation service, the evaluation of alternative fuel sources and transportation options (including trucking coal from nearby railroad locations, rail build-out to a competing railroad and conveyor delivery) and the development of operating characteristics and the associated operating and investment costs for each alternative. He has also developed numerous forecasts of coal prices, natural gas prices, freight rates and general economic indicators for electric utilities.

VERIFICATION

I, Michael E. Lillis, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Michael E. Lillis

Executed on April 27, 2012

8. DANIEL L. FAPP

Mr. Fapp is a Vice President of L.E. Peabody & Associates, Inc., an economic consulting firm that specializes in solving economic, transportation, marketing, and fuel supply problems. The Firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA, 22314, 760 E. Pusch View Lane, Tucson, AZ 85737 and 21 Founders Way, Queensbury, NY 12804. Mr. Fapp is co-sponsoring the RTC modeling component of Part III-C with Mr. William W. Humphrey. Mr. Fapp is also co-sponsoring Part III-G, the discounted cash flow analysis and Part III-H, the results of the SAC analysis with Mr. Thomas D. Crowley.

Mr. Fapp received a Bachelor of Science degree in Business Administration with an option in Marketing (cum laude) from the California State University, Northridge in 1987. In 1993, he received a Master of Business Administration degree specializing in finance and operations management from the University of Arizona's Eller College of Management. He is also a member of Beta Gamma Sigma, the national honor society for collegiate schools of business.

Mr. Fapp has been employed by L. E. Peabody & Associates, Inc. since December 1997. Prior to joining L. E. Peabody & Associates, Inc., he was employed by BHP Copper Inc. in the role of Transportation Manager - Finance and Administration, where he also served as an officer of the three BHP Copper Inc. subsidiary railroads: The San Manual Arizona Railroad, the Magma Arizona Railroad (also known as the BHP Arizona Railroad) and the BHP Nevada Railroad. Mr. Fapp has also held operations management positions with Arizona Lithographers in Tucson, AZ and MCA-Universal Studios in Universal City, CA.

While at BHP Copper Inc., Mr. Fapp was responsible for all financial and administrative functions of the company's transportation group. He also directed the BHP Copper Inc. subsidiary railroads' cost and revenue accounting staff, and managed the San Manuel Arizona

Railroad's and BHP Arizona Railroad's dispatchers and the railroad dispatching functions. He served on the company's Commercial and Transportation Management Team and the company's Railroad Acquisition Team, where he was responsible for evaluating the acquisition of new railroads, including developing financial and economic assessment models. During his time with MCA-Universal Studios, Mr. Fapp held several operations management positions, including Tour Operations Manager, where his duties included vehicle routing and scheduling, personnel scheduling, forecasting facilities utilization, and designing and performing queuing analyses.

As part of his work for L.E. Peabody & Associates, Inc., Mr. Fapp has performed and directed numerous projects and analyses undertaken on behalf of utility companies, short line railroads, bulk shippers, and industry and trade associations. Examples of studies which he has organized and/or directed include, traffic, operational and cost analyses in connection with the rail movement of coal, metallic ores, pulp and paper products, and other commodities. He has also analyzed multiple car movements, unit train operations, divisions of through rail rates and switching operations throughout the United States. The nature of these studies enabled him to become familiar with the operating procedures utilized by railroads in the normal course of business.

Since 1997, Mr. Fapp has participated in the development of cost of service analyses for the movement of coal over the major eastern and western coal-hauling railroads. He has conducted on-site studies of switching, detention and line-haul activities relating to the handling of coal. He has also participated in and managed several projects assisting short-line railroads. In these engagements, he assisted short-line railroads in their negotiations with connecting Class I carriers, performed railroad property and business evaluations, and worked on rail line abandonment projects.

Mr. Fapp has been frequently called upon to perform financial analyses and assessments of Class I, Class II and Class III railroad companies. In addition, he has developed various financial models exploring alternative methods of transportation contracting and cost assessment, developed corporate profitability and cost studies, and evaluated capital expenditure requirements. He has also determined the Going Concern Value of privately held freight and passenger railroads, including developing company specific costs of debt and equity for use in discounting future company cash flows.

His consulting assignments regularly involve working with and determining various facets of railroad financial issues, including cost of capital determinations. In these assignments, Mr. Fapp has calculated railroad capital structures, market values, cost of railroad debt, cost of preferred railroad equity and common railroad equity. He is also well acquainted with and has used the commonly accepted models for determining a firm's cost of equity, including single-stage and multi-stage Discounted Cash Flow models ("DCF"), Capital Asset Pricing Model ("CAPM"), Farma-French Three Factor Model and Arbitrage Pricing Model.

In his tenure with L. E. Peabody & Associates, Inc., Mr. Fapp has assisted in the development and presentation of traffic and revenue forecasts, operating expense forecasts, and DCF, which were presented in numerous proceedings before the STB. He presented evidence applying the STB's stand-alone cost procedures in a number of rail proceedings before the STB. He has also presented evidence before the STB in Ex Parte No. 661, *Rail Fuel Surcharges,* in Ex Parte No. 664, *Methodology To Be Employed In Determining the Rail Road Industry's Cost of Capital,* in Ex Parte No. 664 (Sub-No. 1), *Use Of A Multi-Stage Discounted Cash Flow Model In Determining The Railroad Industry's Cost of Capital*, and in Ex Parte No. 558 (Sub-No. 10), *Railroad Cost of Capital – 2006*, Ex Parte No. 661 (Sub No. 11), *Railroad Cost of Capital –*

2007, and Ex Parte No. 661 (Sub No. 12), *Railroad Cost of Capital – 2008.* In addition, his reports have been used as evidence before the Nevada State Tax Commission.

VERIFICATION

I, Daniel L. Fapp, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Daniel L. Fapp

Executed on April 27, 2012

9. ROBERT D. MULHOLLAND

Mr. Mulholland is a Vice President of L.E. Peabody & Associates, Inc., an economic consulting firm that specializes in solving economic, marketing, and transportation problems. The Firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA, 22314, 760 E. Pusch View Lane, Tucson, AZ 85737 and 21 Founders Way, Queensbury, NY 12804. Mr. Mulholland along with Thomas D. Crowley is sponsoring Part III-A-1.

Mr. Mulholland received a Bachelor's degree in Government & Legal Studies from Bowdoin College in 1995. In 2004, he received a Master's degree in Transportation Policy, Operations & Logistics from George Mason University's School of Public Policy.

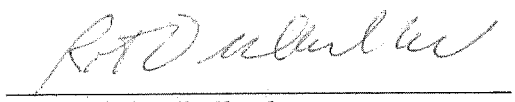
Mr. Mulholland was employed by L.E. Peabody & Associates, Inc. from 1995 through 2004 and rejoined the Firm in 2008. In 2004, Mr. Mulholland joined the Federal Highway Administration ("FHWA") where he directed the freight economics and freight infrastructure delivery programs for the Office of Freight Management & Operations of the FHWA. While employed at FHWA, Mr. Mulholland was a member of the United States Department of Transportation ("USDOT") inter-agency working group that drafted the current National Freight Policy. In addition, Mr. Mulholland served on the USDOT Freight Gateway Team, a group headed by the Undersecretary for Policy and composed of one representative from each of the surface modal agencies. In 2006, Mr. Mulholland joined ICF International where he directed and conducted numerous analyses of the trucking and rail industries for Federal transportation agencies including the Federal Motor Carrier Safety Administration ("FMCSA"), the Federal Railroad Administration ("FRA"), and the FHWA. His work included analyses of the current rail and trucking industries and forecasts of future trends in both industries.

As part of his work for L.E. Peabody & Associates, Inc., Mr. Mulholland has developed evidence containing traffic and revenue forecasts for hypothetical stand-alone railroads in several

Surface Transportation Board ("STB") proceedings dealing with the calculation of maximum reasonable rail transportation rates for coal shippers. He has conducted analyses of historical and forecasted coal transportation rates based on contract and tariff provisions and U.S. Government economic data for use in rail transportation contract negotiations. He has developed studies analyzing delivered fuel prices to electric utilities using Federal Energy Regulatory Commission ("FERC") and related data. Mr. Mulholland also conducted studies forecasting the impact of the Union Pacific-Southern Pacific merger on shippers with reduced access to rail competition following the merger, and developed studies analyzing the impact of the 1997-1998 Union Pacific Railroad service crisis on system traffic flows and transit times.

VERIFICATION

I, Robert D. Mulholland, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Robert D. Mulholland

Executed on April 27, 2012

10. TIMOTHY D. CROWLEY

Mr. Crowley is a Vice President of L.E. Peabody & Associates, Inc., an economic consulting firm that specializes in solving economic, marketing, and transportation problems. The Firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA, 22314, 760 E. Pusch View Lane, Tucson, AZ 85737 and 21 Founders Way, Queensbury, NY 12804. Mr. Timothy D. Crowley is co-sponsoring DuPont's opening quantitative market dominance evidence in Part II-A-1 with Mr. Thomas D. Crowley.

Mr. Crowley received a Bachelor of Science degree in Management with a concentration in Finance from Boston College in 2001. He graduated cum laude. He has been employed by L.E. Peabody & Associates, Inc. since 2002.

Mr. Crowley has provided analytical support for both market place and litigation projects sponsored by L. E. Peabody & Associates, Inc. The analytical support included the gathering, review and manipulation of data from the major Class I railroads, the Surface Transportation Board and various other government and public sources. Specifically, the analyses conducted by Mr. Crowley have included the development of the transportation costs associated with the movement of chemicals, coal and other products to different destinations located throughout the country.

Mr. Crowley has also assisted in developing the return on road property investment realized by major western railroads for specific sections of rail. These studies were used in variable, avoidable, and stand-alone cost analyses. He has forecasted transportation revenues included in transportation contracts entered into by major companies, taking into account the escalation factors used in specific contracts. Additionally, Mr. Crowley has reviewed virtually all major transportation coal contracts between eastern and western railroads and the major

consumers of coal in the United States. The results of this review were presented to the Surface Transportation Board.

Mr. Crowley has experience with the Surface Transportation Board's Simplified Standards For Rail Rate Cases issued in Ex Parte 646 (Sub No. 1). He has done extensive work with the revised guidelines for Non-Coal Proceedings, which incorporates a three benchmark methodology. This methodology includes calculations using the Revenue Shortfall Allocation Method ("RSAM"), in which Mr. Crowley was trained by members of the Surface Transportation Board. Mr. Crowley also has extensive experience with the Surface Transportation Board's recently revised full Stand Alone Cost procedures having developed and sponsored evidence in a number of recent maximum reasonable rate cases based on this constraint.

VERIFICATION

I, Timothy D. Crowley, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Timothy D. Crowley

Executed on April 27, 2012

11. SEAN D. NOLAN

Mr. Nolan is a Vice President of L. E. Peabody & Associates, Inc. an economic consulting firm with offices in Alexandria, VA, Tucson, AZ and Queensbury, NY. Mr. Nolan is co-sponsoring the forecasting aspects of Parts III-A-2 and 3 with Mr. Thomas D. Crowley.

Mr. Nolan received a Bachelor of Arts degree in Psychology with a minor in Economics from Bates College in 1988, and a Master of Business Administration degree from the University of Phoenix in 2006, specializing in managerial accounting. Mr. Nolan first joined the firm of L. E. Peabody & Associates, Inc. in November 1989.

Since 1989, Mr. Nolan participated in the development of cost of service analyses for the movement of coal over the major eastern and western coal-hauling railroads and he has conducted on-site studies of switching, detention and line-haul activities relating to the handling of coal. He has also participated in several projects providing potential build-out opportunities as effective competition in utilities' fuel procurement initiatives. Procurement initiatives have included the purchasing of fuel, transportation services, equipment, and management of inventories. Alternative scenarios have been supported by tailored financial models developed to estimate cost reductions and savings, actual versus budgeted variances, revenue to variable cost of service relationships, cash flows, and break-even and sensitivity analysis.

In his tenure with L. E. Peabody & Associates, Inc., Mr. Nolan collected and analyzed information needed to efficiently calculate rail costs utilizing the Surface Transportation Board's ("STB") Uniform Railroad Costing System ("URCS") to determine the maximum rate a captive shipper should pay based on the STB's constrained market pricing principles, and has supported the development and presentation of traffic and revenue forecasts, operating expense forecasts, and discounted cash-flow models presented in proceedings before the STB.

Mr. Nolan has previously submitted evidence to the STB regarding market dominance issues.

VERIFICATION

I, Sean D. Nolan, verify under penalty of perjury that I have read the Opening Evidence of Total Petrochemicals USA, Inc. in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Sean D. Nolan

Executed on April 27, 2012

12. WILLIAM W. HUMPHREY

Mr. Humphrey is an Assistant Vice President of L. E. Peabody & Associates, Inc. Mr. Humphrey is co-sponsoring DuPont's opening evidence in Part III-C with respect to the simulation of the SARR's operations using the Rail Traffic Controller ("RTC") Model with Mr. Daniel L. Fapp.

Mr. Humphrey received a Bachelor of Science degree in Sociology with a minor in Computer Science from Boston College in 2001. He has been employed by L. E. Peabody & Associates, Inc. since 2002.

Mr. Humphrey has been the lead programmer for numerous cases utilizing the industry-standard RTC Model to simulate various real-world railroad operations over multiple railroads in all parts of the United States. He has used the RTC model to create and analyze railroad systems for capacity analyses, rate cases, infrastructure investment analyses, and various other studies.

Mr. Humphrey has developed Microsoft Visual Studio applications including the Railroad Operations Simulator ("ROS") program used to model railroad operations by using advanced physics models which utilize highly detailed track information, train specific train characteristics, and detailed operational guidelines. He has designed programs that update, analyze, and summarize data originating at the Energy Information Administration. Mr. Humphrey has written programs that organize, analyze, manipulate, and summarize mainframe databases containing various industry data.

Mr. Humphrey has provided analytical support for testimony sponsored by L. E. Peabody & Associates, Inc. through the gathering and manipulation of data originating at the Energy Information Administration, the Surface Transportation Board, the Federal Railroad Administration and other publicly available sources. Specifically, these analyses include the development of the delivered costs of fuels to electric utilities and development of detailed track

statistics for various railroads located throughout the United States. Mr. Humphrey has conducted extensive research which has been used to support both fuel supply and transportation analyses developed by L. E. Peabody & Associates, Inc.

VERIFICATION

I, William W. Humphrey, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

William W. Humphrey

Executed on April 27, 2012

13. RICHARD R. HARPS, MAI, CRE

Mr. Harps is President of Harps & Harps, Inc., a Real Estate Valuation and Consulting firm. His business address is 1111 14th Street, NW, Suite 600, Washington, DC 20005. Mr. Harps, in conjunction with John Pinto, Elizabeth Vandermause and Daniel Vandermause, is sponsoring the land valuation evidence in Part III-F-1.

Mr. Harps has over 35 years of experience as a real estate appraiser and consultant. He holds the MAI designation from the Appraisal Institute, the CRE designation from the Counselors of Real Estate, and the FRICS designation from the Royal Institute of Chartered Surveyors. Mr. Harps is a certified general real estate appraiser in Maryland, Virginia and the District of Columbia.

Mr. Harps was President of the Washington, DC Association of Realtors in 1985, was a member of the Executive Committee of National Association of Realtors for 1986 and 1987 and is a member of the General Comprehensive Examination Panel of the Appraisal Institute. Mr. Harps was also President of the Washington DC Metropolitan Chapter of the Appraisal Institute in 1994, and member and past President of the Real Estate Counseling Group of America.

Mr. Harps conducted a valuation of the World Bank multi-building complex in Washington, DC, performed valuations of large multi-property ownership for estate tax purposes and valued surface and underground easements for acquisition by the Washington Metropolitan Area Transit Authority. He valued and consulted with the General Services Administration on the disposition of over 500,000 sq. ft. of air rights situated above rail yards in the District of Columbia. Mr. Harps has been qualified as an expert witness on real estate appraisal matters in numerous Federal courts and the District of Columbia.

VERIFICATION

I, Richard R. Harps, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Richard R. Harps

Executed on April 24, 2012

14. JOHN G. PINTO

Mr. Pinto is Founder and President of Rail Trac Associates, a Real Estate Valuation and Consulting firm. His business address is 1111 14th Street, NW, Suite 600, Washington, DC 20005. Mr. Pinto, in conjunction with Richard Harps, Elizabeth Vandermause and Daniel Vandermause is sponsoring the land valuation evidence in Part III-F-1.

Mr. Pinto has over 45 years of experience as a real estate appraiser and consultant. He holds the CRE designation. Mr. Pinto is a licensed Certified General Real Estate Appraiser in Delaware, New York, Georgia, and the District of Columbia.

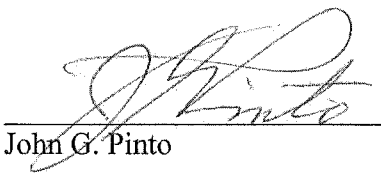
Mr. Pinto has performed real estate appraisals related to railroad property and rights-of-way for government agencies, railroads, transit authorities and private sector entities. Recent clients include: the District of Columbia Department of Transportation; Florida East Coast Railroad; Rail America; Washington Metropolitan Transportation Authority; Southeastern Pennsylvania Transportation Authority; Maryland State Highway Administration; New Jersey Transit Access Tunnel Project; Virginia Port Authority; Hampton Roads Transit Authority; New York Susquehanna & Western Railway; and the Federal Railroad Administration ("FRA").

Among other projects, Mr. Pinto was Manager, Project Land Requirements for the Northeast Corridor Improvement Program, involving the rehabilitation of the Amtrak System from Washington, DC to Boston, MA; and, on behalf of the FRA, the transfer of the Alaska Railroad to the State of Alaska; The Surface Transportation Board for the analysis of the Merger of the Union Pacific and Southern Pacific Railroads and the Acquisition of Conrail by CSX and Norfolk Southern.

Mr. Pinto is qualified as an expert in real estate appraisal in Federal courts in Connecticut, New York, Maryland and New Jersey and in State courts in Pennsylvania, New Jersey, Rhode Island, New York and Connecticut.

VERIFICATION

I, John G. Pinto, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



John G. Pinto

Executed on April 24, 2012

15. ELIZABETH W. VANDERMAUSE

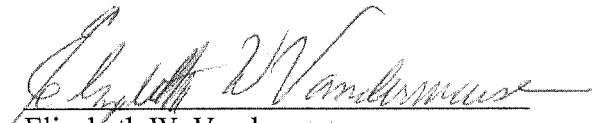
Elizabeth Vandermause is President of Merit Real Estate Analysis, a Real Estate Valuation and Consulting firm located at 2409 Hannon Court, Ellicott City, Maryland 21042. Ms. Vandermause, in conjunction with Richard Harps, John Pinto and Daniel Vandermause, is sponsoring the land valuation evidence in Part III-F-1.

Ms. Vandermause has over 30 years of experience in real estate appraisal, consulting and real estate sales, including land acquisition for builders and developers. Her appraisal and consulting experience includes appraisals for transportation authorities including the Washington Metropolitan Area Transit Authority (WMATA). She holds the MAI designation from the Appraisal Institute and is a Certified General licensed real estate appraiser in the State of Maryland.

Ms. Vandermause is qualified as an expert in Federal and Baltimore Circuit courts and has provided expert testimony in an arbitration proceeding.

VERIFICATION

I, Elizabeth W. Vandermause, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Elizabeth W. Vandermause

Executed on April 24, 2012

16. DANIEL VANDERMAUSE

Daniel C. Vandermause is Vice President of Merit Real Estate Analysis, a Real Estate Valuation and Consulting firm located at 2409 Hannon Court, Ellicott City, Maryland 21042. Mr. Vandermause, in conjunction with Richard Harps, John Pinto and Elizabeth Vandermause, is sponsoring the land valuation evidence in Part III-F-1.

Mr. Vandermause has 22 years of experience in real estate appraisal, consulting and real estate sales, including land assembly and acquisition for commercial and residential developers. His appraisal and consulting experience includes a broad variety of residential/commercial/ industrial property types in both Maryland and the District of Columbia. Mr. Vandermause is a licensed appraiser in Maryland and the District of Columbia.

Mr. Vandermause also has 16 years of experience in railroad transportation, including CSX Transportation, Fruit Growers Express, Chessie System, Norfolk Southern Railway and Southern Railway System. Mr. Vandermause's rail industry experience includes freight car utilization and distribution, cash flow analysis for freight car purchases, railroad cost and pricing analysis, market research, and computer systems design for equipment utilization and distribution. Mr. Vandermause authored the freight car utilization portion of the Norfolk Southern merger application before the Interstate Commerce Commission.

VERIFICATION

I, Daniel C. Vandermause, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Daniel C. Vandermause

Executed on April 24, 2012

17. JOSEPH A. KRUZICH

Mr. Kruzich is President of J&A Business Consulting, Inc., a firm specializing in information technology and communications. His business address is 209 Violet Drive, Sanibel, FL 33957. Mr. Kruzich is sponsoring evidence related to the SARR's information technology capital (hardware) and personnel requirements and other expenses for the SARR (Part III-D-3-c).

Mr. Kruzich has 38 years of experience in railroad accounting, executive administration and information technology. He began his railroad career with the Chicago, Burlington and Quincy Railroad in 1963 as a tax accountant and was promoted to an internal auditor in 1965. In June of 1968, he joined the Atchison, Topeka and Santa Fe Railroad ("ATSF") as a manager of work control procedures. His job responsibilities included reviewing various work procedures and providing recommendations on how the work processes could be improved to achieve a high degree of efficiency. This position provided him an opportunity to become very familiar with various work processes involved in running a railroad.

From 1973 through 1994, Mr. Kruzich held various positions of increasing responsibility at ATSF and its parent. As Acting Controller of Santa Fe Air Freight Company and head of industrial engineering at ATSF he performed various efficiency studies in the operating, engineering and mechanical departments. Mr. Kruzich also held the position of Director of Budgets for the entire ATSF operating department including engineering, mechanical, transportation and all support groups, and as such was responsible for coordination of all information technology issues with the Information Systems Department that related to the Operating Department. He was responsible for all administration duties related to the Vice President of Operations office as General Director of Administration and as Assistant to the President of ATSF. As Assistant Vice President of Administration in the Information Technology Group he oversaw all budget, administration, special studies and corporate

measurements systems. These positions provided him with the opportunity to manage a complete process in developing new systems from beginning to end.

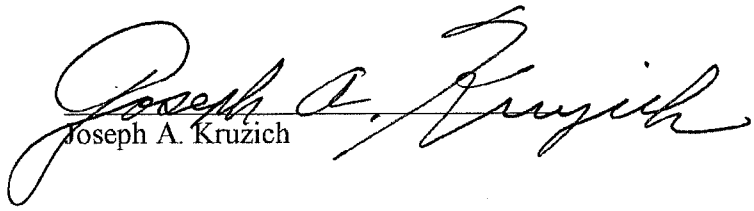
In 1995, Mr. Kruzich joined the Kansas City Southern Railway as Vice President of Administration, where he designed profitability, corporate measurement, revenue forecasting and corporate policy systems. In January 1997, he was promoted to Vice President Telecommunications and CIO. As CIO, Mr. Kruzich led the effort in developing the state-of-the-art railroad transportation system known as MCS ("Management Control System"). This system uses some of the most advanced technology such as MQ workflow, Citrix Metaframe, the latest version of Visual Basic and many other technologies and is designed around the business process.

In January 2000, Mr. Kruzich left the Kansas City Southern Railway and formed Forging Ahead Associates, LLC, recently renamed J&A Business Consulting, Inc. This company provides state-of-the-art services in the areas of strategic planning and the development of web sites and e-business initiatives, evaluates the benefits of outsourcing information technology and business processes, and works with clients to make the initial contacts in developing global market opportunities.

Mr. Kruzich graduated from Northeast Missouri State University (Truman University) in 1962 with a Bachelor of Science degree in Business. In 1984, he received a Masters of Business Administration in Finance from the Keller Graduate School of Management in Chicago, Illinois.

VERIFICATION

I, Joseph A. Kruzich, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Joseph A. Kruzich

Executed on April 27, 2012

18. VICTOR F. GRAPPONE

Mr. Grappone is President of Grappone Technologies P.E. P.C., a consulting firm that specializes in rail signaling and communications including train control systems, technical support and systems integration. His business address is 20 Jerusalem Avenue, Suite 201, Hicksville, NY 11801. Mr. Grappone developed and is sponsoring, DuPont's Opening Evidence with respect to the stand-alone railroad's SARR signal and communications systems as set forth in Parts III-B-4-b and c and III-F-6. Mr. Grappone is also sponsoring, jointly with DuPont Witness Harvey Crouch, the portion of the SARR maintenance-of-way plan relating to Communications & Signals Department personnel as set forth in Part III-D-5-b-ii.

Mr. Grappone has over 31 years of experience with railroad and transit signal and communications systems. His career in this field began in 1978, when he was hired by the Long Island Rail Road ("LIRR") as a Junior Engineer. In early 1981, Mr. Grappone was appointed Assistant Supervisor-Signals for the LIRR, where he was involved in the direct supervision of approximately 50 signal construction employees engaged in the installation and revision of signal systems as part of the LIRR's capital program. His responsibilities included task scheduling, personnel evaluation, on-site supervision and material ordering.

In mid-1984, Mr. Grappone was named Staff Engineer-Projects for the LIRR. In this position he was responsible for providing technical support for signal projects. In early 1987, Mr. Grappone was appointed to the position of Signal Circuit Designer for the LIRR, a position he held until late 1995. As Signal Circuit Designer, Mr. Grappone managed the technical aspects of the LIRR's recently-completed computer-based system that controlled the signal system at Penn Station (New York) and in the adjacent territory. This position also involved the direct supervision of a design team consisting of Signal Circuit Designers, Assistant Signal Circuit

Designers and Draftsmen. In this position Mr. Grappone was also responsible for the application of new technology to signal systems. Specific tasks included:

- Development of specifications for vital microprocessor-based systems for signal applications;
- Implementation of formalized procedures for performing FRA-mandated tests for signal systems;
- Development of a PC-based graphical control system; and
- Implementation of the first use of programmable logic controllers (PLC's) for the supervisory control functions.

From late 1995 to early 2001, Mr. Grappone held other positions involving signal and communications controls systems at the LIRR, including Acting Engineer – Signal Design, Project Manager responsible for developing and implementing a corporate signal strategy to direct all LIRR signaling efforts over a 20-year period, Principal Engineer – Signal Maintenance and Construction, and Principal Engineer – Communications Based Train Control ("CBTC"). In the latter position Mr. Grappone was responsible for the management and technical direction of the LIRR's CBTC program. In all of these positions, Mr. Grappone was responsible for signal and communications matters involving LIRR's lines that had heavy volumes of both passenger and freight rail traffic.

In May of 2001, Mr. Grappone left the LIRR and formed his own consulting firm, Grappone Technologies, Inc. GTI was reincorporated as Grappone Technologies PE PC in 2007. Major projects Mr. Grappone and his firm have undertaken include:

- Signal design for the New York City Transit Canarsie Line CBTC project, Auxiliary Wayside System.
- Design of office route verification logic for New York City's ATS (Automatic Train Supervision) project.
- Signal circuit checking for the reconfiguration of Harold interlocking on the Long Island Rail Road under the East Side Access project.

- Preparation of specifications and provision of technical and field support for other signal and communications projects for heavy rail and light rail transit systems in the Northeast.

- Circuit design for signal system revisions associated with the reconstruction of five stations on New York City Transit's Brighton Line.

During the course of his consulting work Mr. Grappone has applied for and obtained two patents involving train control systems, including U.S. Patent #6,381,506 for a programmable logic controller-based vital interlocking system (issued April 30, 2002) and U.S. Patent #6,655,639 for a broken rail detector for Positive Train Control (PTC)/CBTC applications (issued December 2, 2003).

Mr. Grappone has been a member of the Eastern Signal Engineers Association since June 1999 (inactive member since June 2001). He is presently a member of the Institute of Electrical and Electronics Engineers, Rapid Transit Vehicle Interface Committee Working Group 2: CBTC; the Communications-Based Train Control User Group; and the FRA's Rail Safety Advisory Committee, Positive Train Control Working Group.

Mr. Grappone obtained a B.S. degree in Electrical Engineering from Rensselaer Polytechnic Institute in 1978.

VERIFICATION

I, Victor F. Grappone, verify under penalty of perjury that I have read the Opening Evidence of E. I. DuPont de Nemours and Company in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Victor F. Grappone

Executed on April 27, 2012

PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

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

OPENING EVIDENCE AND ARGUMENT OF

E.I. DU PONT DE NEMOURS AND COMPANY

Volume IV: Exhibits

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April 30, 2012

Filing Contains Color Images

CASE GLOSSARY

AEP Texas 2006	*AEP Texas Northern Co v. BNSF Ry.*, STB Docket No. 41191 (Sub-No. 1) (served Nov. 8, 2006)
AEP Texas	*AEP Texas Northern Company v. BNSF Railway,* STB Docket No. 41191 (Sub-No. 1) (served Sept. 10, 2007)
AEPCO	*Arizona Electric Power Cooperative, Inc. v. BNSF Railway Company and Union Pacific Railroad Company,* STB Docket No. 42113 (served Nov. 22, 2011)
APS	*Arizona Pub. Serv. Co. and Pacificorp. v. The Atchison, T. and Santa Fe Ry.*, 2 S.T.B. 367 (1997)
Bottleneck Decision	*Central Power & Light Company v. Southern Pac. Transp. Co, et al.*, 1 STB 1059 (1996), aff'd sub nom. *MidAmerican Energy Company v. Surface Transportation Board,* 169 F.3d 1099 (8th Cir. 1999)
Coal Rate Guidelines or Guidelines	*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)
Coal Trading Corp.	*Coal Trading Corp. v. The Baltimore & Ohio R.R., et al.*, 6 I.C.C. 2d 361 (1990)
Consolidated Papers	*Consol. Papers, Inc. v. Chi.& Nw. Transp., Inc.*, 7 I.C.C.2d 330 (1991)
CP&L	*Carolina Power & Light Co. v. Norfolk Southern Ry,* STB Docket No. 42072 (served Dec. 23, 2003)
DMIR I and II	*Minnesota Power, Inc. v. Duluth, Missabe & Iron Range Ry.*, 4 S.T.B. 64 (1998), on reconsideration, 4 S.T.B. 288 (1999)
Duke/CSXT	*Duke Energy Corp. v. CSX Transportation Inc.,* STB Docket No. 42070 (served Feb. 4, 2004)
Duke/NS	*Duke Energy Corp. v. Norfolk Southern Railway,* STB Docket No. 42069 (served Nov. 6, 2003)

CASE GLOSSARY

DuPont (Nitrobenzene)	*E.I. du Pont de Nemours and Company v. CSX Transportation, Inc.,* STB Docket No. 42101 (served June 30, 2008)
DuPont (Plastics)	*E.I. du Pont de Nemours and Company v. CSX Transportation, Inc.,* STB Docket No. 42099 (served June 30, 2008)
FMC	*FMC Wyo. Corp. v. Union Pacific Railroad Company,* 4 S.T.B. 699 (2000)
General Electric	*Gen. Elec. Co. v. Balt.& Ohio R.R.,* No. 38125S, 1984 ICC LEXIS 206 (ICC served Oct. 12, 1984)
General Procedures	*General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases,* STB Ex Parte No. 347 (Sub-No. 3) (served March 12, 2001).
IPA	*Intermountain Power Agency v. Union Pacific Railroad Company,* STB Docket No. 42127 (Public Version of UP Reply dated Nov. 10, 2011)
KCPL	*Kansas City P & L Co. v. Union Pac. R.R. Co.*, STB Docket No. 42095 (served May 19, 2008)
Major Issues	*Major Issues in Rail Rate Cases,* STB Ex Parte No. 657 (Sub-No. 1) (served Oct. 30, 2006)
Market Dominance Determinations	*Mkt. Dominance Determinations & Consideration of Prod. Competition*, 365 I.C.C. 118 (1981)
McCarty Farms	*McCarty Farms v. Burlington N., Inc.*, 3 I.C.C.2d 822 (1987)
Nevada Power II	*Bituminous Coal – Hiawatha, Utah to Moapa, Nevada,* 10 I.C.C.2d 259 (1994)
OG&E	*Oklahoma Gas & Electric Co., v. Union Pacific Railroad Company,* STB Docket No. 42111 (served July 24, 2009)
Otter Tail	*Otter Tail Power Co., v. BNSF Ry.,* STB Docket No. 42071 (served Jan. 27, 2006)

CASE GLOSSARY

PP&L	*PPL Montana, LLC v. The Burlington Northern and Santa Fe Ry. Co.*, 6 S.T.B. 286 (2002)
PSCo/Xcel	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served June 8, 2004)
PSCo/Xcel II	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington Northern and Santa Fe Railway,* STB Docket No. 42057 (served Jan. 19, 2005)
Special Procedures	*Special Procedures for Making Findings of Mkt. Dominance as Required by the R.R. Revitalization and Regulatory Reform Act of 1976,* 353 I.C.C. 874 (1976)
TMPA	*Texas Municipal Power Agency v. Burlington Northern and Santa Fe Railway,* 6 S.T.B. 573 (2003)
WFA/Basin	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Sept. 10, 2007)
WFA/Basin II	*Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Railway,* STB Docket No. 42088 (served Feb. 18, 2009)
Wisconsin P&L	*Wisconsin Power and Light Co., v. Union Pacific Railroad,* 5 S.T.B. 955 (2001)
West Texas Utilities	*West Texas Utilities Co. v. Burlington Northern Railroad,* 1 STB 638 (1996), aff'd sub nom. *Burlington Northern Railroad v. STB,* 114 F.3d 206 (D.C. Cir. 1997)

ACRONYMS

The following acronyms are used:

AAR	Association of American Railroads
AASHTO	American Association of State Highway Officials
AEI	Automatic Equipment Identification
AEO	EIA's Annual Energy Outlook Forecast
AHM	Anhydrous Methylamines
AII-LF	All-Inclusive Less Fuel Index, published by AAR
AQM	Aqueous Methylamines
AREMA	American Railway Engineering and Maintenance-of-Way Assoc.
ARRA	American Reinvestment and Recovery Act of 2009
ATC	Average Total Cost
ATF	Across-the-Fence
ATV	All-Terrain Vehicle
B&B	Bridge and Building
BNSF	Burlington Northern Santa Fe Railway Company
C&S	Communications and Signals
CAGR	Compound Annual Growth Rate
CFS	2007 Commodity Flow Survey
cmp	Corrugated Aluminized Metal Pipe
CMP	Constrained Market Pricing
CN	Canadian National Railway
CNW	Chicago & NorthWestern
COBRA	Consolidated Omnibus Budget Reconciliation Act
CPI	Consumer Price Index
CSXT	CSX Transportation, Inc.
CTC	Central Traffic Control
CWR	Continuous Welded Rail
CY	Cubic Yards
DCF	Discounted Cash Flow
DFE	Difluoroethane
DME	Dimethyl Ether
DMF	Dimethyl Formamide
DMS	Dimethyl Sulfate
DOT	U.S. Department of Transportation
DP	Distributed Power
DRR	DuPont Stand-Alone Railroad
DTL	Direct to Locomotive Fueling
EDI	Electronic Data Interchange
EEO	Equal Employment Opportunity
EIA	Energy Information Administration
EOTD	End of Train Device
FED	Failed-equipment Detector
FRA	Federal Railroad Administration
FSC	Fuel Surcharges

G&A	General and Administrative
GDP-IPD	Gross Domestic Product – Implicit Price Deflator
GWR	Gross Weight on Rail
HCl	Hydrochloric Acid (a/k/a Muriatic Acid)
HDF	On-Highway Diesel Fuel Index
HR	Human Resources
ICC	Interstate Commerce Commission
IDC	Interest During Construction
IDS/IPS	Intrusion Detection System/Intrusion Prevention System
ISS	Interline Settlement System
IT	Information Technology
KCS	Kansas City Southern Lines
LAN	Local Area Network
MACRS	Modified Accelerated Cost Recovery System
MIT	Massachusetts Institute of Technology
MGT	Million Gross Tons
MLO	Manager of Locomotive Operations
MMF	Monomethyl Formamide
MMM	Maximum Markup Methodology
MOW	Maintenance of Way
MTO	Manager of Train Operations
NCREIF	National Council of Real Estate Investment Fiduciaries
NDGPS	Nationwide Differential GPS
NPI	NCREIF Property Index
NS	Norfolk Southern Railway Company
NT/PC	Network Personal Computer
O/D	Origin/Destination
OS	Operating Station
OSHA	Occupational Safety and Health Administration
PDO	Bio-Propanediol
Pet Coke	Calcined Petroleum Coke
PPI	Producer Price Index
PTC	Positive Train Control
R/VC	Revenue to Variable Cost
RCAF-A	Rail Cost Adjustment Factor, adjusted for productivity
RCAF-U	Rail Cost Adjustment Factor, unadjusted for productivity
RMI	A GE Transportation Company
RMS	RMI's Revenue Management Services System
ROW	Right of Way
RSIA	Rail Safety Improvement Act of 2010
RTC	Rail Traffic Controller Model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
SEC	Securities Exchange Commission
SO3	Sulfur Trioxide
SPLC	Standard Point Location Code
STB	Surface Transportation Board

STCC	Standard Transportation Commodity Code
STEO	Short-Term Energy Outlook
T&E	Train and Engine
TCS	Triple Crown Services
TDIS	Thoroughbred Direct Intermodal Services
TiCl4	Titanium Tetrachloride
TiO2	Titanium Dioxide
TMS	RMI's Transportation Management Services System
TRN	NS Train Event Train Symbol
UP	Union Pacific Railroad
UPS	Uninterruptible Power Supply
URCS	Uniform Railroad Costing System
WAN	Wide Area Network
WFL	Waste, Flammable Liquid
WTI	West Texas Intermediate

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EXHIBIT II-A

EXHIBIT NO. 1

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 2Q09

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2009	2Q2009 Index to 2Q09	2Q2009 Phase III Cost 1/	2Q2009 Jurisdictional Threshold 2/	2Q2009 Tariff Rate 3/	2Q2009 Revenue/Variable Cost Ratio 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,268	0.9867	$2,238	$4,028	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	$1,651	0.9867	$1,629	$2,932	xxx	xxx
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,239	0.9867	$1,222	$2,200	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,254	0.9867	$2,224	$4,004	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,252	0.9867	$2,222	$4,000	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,195	0.9867	$2,166	$3,899	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,896	0.9867	$2,858	$5,144	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,614	0.9867	$2,579	$4,642	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,305	0.9867	$2,274	$4,094	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,149	0.9867	$2,120	$3,817	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,754	0.9867	$1,731	$3,116	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	$1,239	0.9867	$1,222	$2,200	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,517	0.9867	$1,497	$2,695	xxx	xxx
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$404	0.9867	$398	$717	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	$1,805	0.9867	$1,781	$3,205	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,809	0.9867	$1,785	$3,213	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$573	0.9867	$565	$1,017	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,534	0.9867	$1,513	$2,724	$7,715	510%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,916	0.9867	$1,891	$3,403	$4,537	240%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,908	0.9867	$1,882	$3,388	$4,537	241%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,534	0.9867	$1,513	$2,724	$7,715	510%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,389	0.9867	$2,358	$4,244	$9,563	406%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,760	0.9867	$1,737	$3,127	$4,537	261%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,664	0.9867	$1,642	$2,956	$8,561	521%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,898	0.9867	$1,873	$3,372	$8,093	432%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,802	0.9867	$1,778	$3,201	$8,093	455%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,507	0.9867	$1,487	$2,677	$5,132	345%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,817	0.9867	$1,793	$3,227	$8,093	451%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,525	0.9867	$1,505	$2,709	$7,715	513%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,681	0.9867	$1,659	$2,986	$4,537	273%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,726	0.9867	$2,690	$4,841	$10,560	393%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,502	0.9867	$2,469	$4,443	$10,560	428%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,502	0.9867	$1,482	$2,667	$7,715	521%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,908	0.9867	$1,882	$3,388	$4,537	241%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,908	0.9867	$1,882	$3,388	$8,093	430%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,502	0.9867	$1,482	$2,668	$7,715	521%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,703	0.9867	$1,681	$3,025	$6,649	396%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,519	0.9867	$1,499	$2,697	$5,132	342%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,472	0.9867	$1,452	$2,614	$7,715	531%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,656	0.9867	$1,634	$2,942	$5,132	314%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,546	0.9867	$1,526	$2,746	$7,715	506%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,718	0.9867	$2,681	$4,827	$10,560	394%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,364	0.9867	$2,333	$4,200	$6,465	277%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$1,970	0.9867	$1,944	$3,499	$4,537	233%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,625	0.9867	$1,604	$2,887	$8,093	505%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,744	0.9867	$1,720	$3,097	$4,157	242%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,811	0.9867	$1,787	$3,216	$8,093	453%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,889	0.9867	$1,863	$3,354	$8,093	434%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,381	0.9867	$2,350	$4,230	$9,563	407%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,302	0.9867	$2,272	$4,089	$8,939	393%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,898	0.9867	$1,873	$3,372	$8,093	432%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,638	0.9867	$1,617	$2,910	$5,713	353%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,310	0.9867	$2,280	$4,103	$9,013	395%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,022	0.9867	$1,009	$1,816	$1,911	189%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$630	0.9867	$622	$1,120	$2,341	376%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,461	0.9867	$1,441	$2,594	$4,450	309%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,811	0.9867	$2,774	$4,992	$6,246	225%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,153	0.9867	$2,125	$3,824	$5,689	268%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,489	0.9867	$2,456	$4,421	$6,093	248%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,277	0.9867	$1,260	$2,269	$3,530	280%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,470	0.9867	$2,437	$4,387	$10,747	441%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,672	0.9867	$1,650	$2,970	$4,880	296%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,283	0.9867	$1,266	$2,280	$3,149	249%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,174	0.9867	$2,145	$3,862	$5,689	265%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,152	0.9867	$2,123	$3,822	$5,689	268%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,288	0.9867	$1,271	$2,287	$3,149	248%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,258	0.9867	$1,242	$2,235	$3,149	254%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,287	0.9867	$1,270	$2,287	$3,149	248%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 2Q09

	Origin		Destination						2Q2009			
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2009	Index to 2Q09	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,171	0.9867	$2,143	$3,857	$5,689	266%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,337	0.9867	$2,306	$4,151	$5,101	221%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,168	0.9867	$2,139	$3,850	$5,689	266%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,815	0.9867	$2,777	$4,999	$6,246	225%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,150	0.9867	$2,122	$3,819	$5,689	268%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,468	0.9867	$2,435	$4,383	$5,364	220%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$492	0.9867	$486	$874	$2,373	489%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,646	0.9867	$2,611	$4,700	$10,123	388%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,019	0.9867	$1,992	$3,586	$4,608	231%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,213	0.9867	$1,197	$2,155	$3,550	297%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$303	0.9867	$299	$539	$1,092	365%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$307	0.9867	$303	$546	$2,184	721%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$313	0.9867	$308	$555	$1,993	646%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,553	0.9867	$1,532	$2,758	$3,658	239%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$312	0.9867	$308	$554	$1,993	647%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,403	0.9867	$1,384	$2,492	$5,713	413%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,133	0.9867	$2,104	$3,788	$9,013	428%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,736	0.9867	$1,713	$3,083	$4,068	237%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$264	0.9867	$260	$469	$1,092	419%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,706	0.9867	$1,683	$3,029	$4,003	238%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,335	0.9867	$1,317	$2,371	xxx	xxx
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$939	0.9867	$927	$1,668	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$1,971	0.9867	$1,945	$3,500	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$965	0.9867	$952	$1,713	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,205	0.9867	$2,176	$3,916	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$267	0.9867	$263	$474	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$895	0.9867	$883	$1,589	xxx	xxx
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$594	0.9867	$587	$1,056	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,067	0.9867	$2,039	$3,670	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,041	0.9867	$3,000	$5,401	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$397	0.9867	$391	$705	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$419	0.9867	$413	$743	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,493	0.9867	$1,473	$2,652	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,422	0.9867	$1,403	$2,526	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$942	0.9867	$930	$1,673	xxx	xxx
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,330	0.9867	$1,313	$2,363	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,009	0.9867	$995	$1,792	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$362	0.9867	$357	$643	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,065	0.9867	$2,037	$3,667	xxx	xxx
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$627	0.9867	$618	$1,113	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$698	0.9867	$689	$1,240	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,339	0.9867	$1,321	$2,378	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,409	0.9867	$1,390	$2,503	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,155	0.9867	$1,139	$2,051	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$269	0.9867	$266	$478	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$459	0.9867	$453	$815	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$267	0.9867	$264	$475	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$752	0.9867	$742	$1,336	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,436	0.9867	$1,417	$2,550	xxx	xxx
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,278	0.9867	$1,261	$2,269	xxx	xxx
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,854	0.9867	$1,829	$3,292	xxx	xxx
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,554	0.9867	$2,520	$4,536	xxx	xxx
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$633	0.9867	$625	$1,125	$2,951	472%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,009	0.9867	$996	$1,793	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,235	0.9867	$2,206	$3,970	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$361	0.9867	$356	$641	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,073	0.9867	$2,046	$3,682	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,343	0.9867	$2,311	$4,161	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,622	0.9867	$1,600	$2,881	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$2,987	0.9867	$2,948	$5,306	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,073	0.9867	$2,046	$3,682	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,709	0.9867	$2,674	$4,812	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,073	0.9867	$2,046	$3,682	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,864	0.9867	$1,840	$3,311	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,073	0.9867	$2,046	$3,682	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,478	0.9867	$2,445	$4,401	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,235	0.9867	$2,206	$3,970	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,073	0.9867	$2,046	$3,682	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,553	0.9867	$1,533	$2,759	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$616	0.9867	$608	$1,095	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 2

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for DuPont Movements - 3Q09

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2009	Index to 3Q09	Phase III Cost 1/	3Q2009 Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,268	1.0077	$2,286	$4,114	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	$1,651	1.0077	$1,663	$2,994	xxx	xxx
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,239	1.0077	$1,248	$2,247	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,254	1.0077	$2,271	$4,089	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,252	1.0077	$2,269	$4,085	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,195	1.0077	$2,212	$3,982	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,896	1.0077	$2,918	$5,253	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,614	1.0077	$2,634	$4,741	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,305	1.0077	$2,323	$4,181	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,149	1.0077	$2,165	$3,898	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,754	1.0077	$1,768	$3,182	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	$1,239	1.0077	$1,248	$2,247	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,517	1.0077	$1,529	$2,752	xxx	xxx
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$404	1.0077	$407	$732	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	$1,805	1.0077	$1,818	$3,273	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,809	1.0077	$1,823	$3,281	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$573	1.0077	$577	$1,038	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,534	1.0077	$1,545	$2,782	$7,715	499%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,916	1.0077	$1,931	$3,475	$4,851	251%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,908	1.0077	$1,922	$3,460	$4,851	252%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,534	1.0077	$1,545	$2,781	$7,715	499%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,389	1.0077	$2,407	$4,333	$8,086	336%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,760	1.0077	$1,774	$3,193	$5,019	283%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,664	1.0077	$1,677	$3,019	$8,561	510%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,898	1.0077	$1,913	$3,443	$8,093	423%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,802	1.0077	$1,816	$3,269	$8,093	446%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,507	1.0077	$1,519	$2,733	$5,516	363%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,817	1.0077	$1,831	$3,296	$8,093	442%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,525	1.0077	$1,537	$2,766	$7,715	502%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,681	1.0077	$1,694	$3,049	$4,851	286%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,726	1.0077	$2,747	$4,944	$10,560	384%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,502	1.0077	$2,521	$4,538	$10,560	419%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,502	1.0077	$1,513	$2,724	$7,715	510%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,908	1.0077	$1,922	$3,460	$4,851	252%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,908	1.0077	$1,922	$3,460	$8,093	421%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,502	1.0077	$1,513	$2,724	$7,715	510%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,703	1.0077	$1,716	$3,089	$6,649	387%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,519	1.0077	$1,530	$2,755	$5,324	348%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,472	1.0077	$1,483	$2,669	$7,715	520%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,656	1.0077	$1,669	$3,004	$5,411	324%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,546	1.0077	$1,558	$2,804	$7,715	495%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,718	1.0077	$2,738	$4,929	$10,560	386%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,364	1.0077	$2,383	$4,289	$6,465	271%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$1,970	1.0077	$1,985	$3,574	$4,778	241%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,625	1.0077	$1,638	$2,948	$8,093	494%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,744	1.0077	$1,757	$3,162	$4,157	237%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,811	1.0077	$1,824	$3,284	$8,093	444%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,889	1.0077	$1,903	$3,425	$8,093	425%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,381	1.0077	$2,400	$4,319	$7,875	328%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,302	1.0077	$2,320	$4,176	$8,939	385%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,898	1.0077	$1,913	$3,443	$8,093	423%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,638	1.0077	$1,651	$2,972	$5,713	346%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,310	1.0077	$2,328	$4,190	$9,013	387%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,022	1.0077	$1,030	$1,854	$1,911	185%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$630	1.0077	$635	$1,143	$2,341	369%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,461	1.0077	$1,472	$2,649	$4,450	302%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,811	1.0077	$2,832	$5,098	$7,028	248%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,153	1.0077	$2,170	$3,906	$5,814	268%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,489	1.0077	$2,508	$4,515	$6,093	243%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,277	1.0077	$1,287	$2,317	$3,677	286%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,470	1.0077	$2,489	$4,480	$11,817	475%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,672	1.0077	$1,685	$3,033	$4,880	290%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,283	1.0077	$1,293	$2,328	$3,392	262%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,174	1.0077	$2,191	$3,944	$5,779	264%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,152	1.0077	$2,168	$3,903	$6,095	281%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,288	1.0077	$1,297	$2,335	$3,362	259%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,258	1.0077	$1,268	$2,282	$3,433	271%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,287	1.0077	$1,297	$2,335	$3,514	271%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 3Q09

	Origin		Destination					Index		3Q2009		
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2009	to 3Q09	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,171	1.0077	$2,188	$3,939	$5,824	266%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,337	1.0077	$2,355	$4,239	$5,101	217%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,168	1.0077	$2,184	$3,932	$5,993	274%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,815	1.0077	$2,836	$5,105	$6,863	242%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,150	1.0077	$2,167	$3,900	$6,037	279%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,468	1.0077	$2,487	$4,476	$5,364	216%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$492	1.0077	$496	$893	$2,373	479%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,646	1.0077	$2,667	$4,800	$10,123	380%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,019	1.0077	$2,035	$3,662	$4,659	229%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,213	1.0077	$1,222	$2,200	$3,958	324%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$303	1.0077	$306	$550	$1,296	424%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$307	1.0077	$310	$557	$1,982	640%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$313	1.0077	$315	$567	$1,993	633%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,553	1.0077	$1,565	$2,816	$4,096	262%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$312	1.0077	$315	$566	$1,993	634%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,403	1.0077	$1,414	$2,545	$5,713	404%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,133	1.0077	$2,149	$3,868	$9,013	419%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,736	1.0077	$1,749	$3,149	$4,698	269%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$264	1.0077	$266	$479	$1,092	411%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,706	1.0077	$1,719	$3,094	$4,328	252%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,335	1.0077	$1,345	$2,421	xxx	xxx
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$939	1.0077	$946	$1,703	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$1,971	1.0077	$1,986	$3,574	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$965	1.0077	$972	$1,750	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,205	1.0077	$2,222	$3,999	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$267	1.0077	$269	$484	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$895	1.0077	$901	$1,623	xxx	xxx
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$594	1.0077	$599	$1,078	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,067	1.0077	$2,082	$3,748	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,041	1.0077	$3,064	$5,515	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$397	1.0077	$400	$719	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$419	1.0077	$422	$759	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,493	1.0077	$1,505	$2,708	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,422	1.0077	$1,433	$2,579	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$942	1.0077	$949	$1,709	xxx	xxx
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,330	1.0077	$1,341	$2,413	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,009	1.0077	$1,017	$1,830	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$362	1.0077	$365	$657	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,065	1.0077	$2,080	$3,745	xxx	xxx
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$627	1.0077	$631	$1,136	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$698	1.0077	$703	$1,266	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,339	1.0077	$1,349	$2,428	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,409	1.0077	$1,420	$2,556	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,155	1.0077	$1,163	$2,094	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$269	1.0077	$271	$488	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$459	1.0077	$463	$833	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$267	1.0077	$269	$485	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$752	1.0077	$758	$1,364	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,436	1.0077	$1,447	$2,604	$7,502	519%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,278	1.0077	$1,287	$2,317	$5,843	454%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,854	1.0077	$1,868	$3,362	$4,200	225%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,554	1.0077	$2,573	$4,632	xxx	xxx
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$633	1.0077	$638	$1,149	$2,951	462%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,009	1.0077	$1,017	$1,831	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,235	1.0077	$2,253	$4,055	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$361	1.0077	$364	$655	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,073	1.0077	$2,089	$3,760	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,343	1.0077	$2,360	$4,249	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,622	1.0077	$1,634	$2,942	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$2,987	1.0077	$3,010	$5,418	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,073	1.0077	$2,089	$3,760	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,709	1.0077	$2,730	$4,914	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,073	1.0077	$2,089	$3,760	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,864	1.0077	$1,879	$3,382	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,073	1.0077	$2,089	$3,760	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,478	1.0077	$2,497	$4,494	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,235	1.0077	$2,253	$4,055	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,073	1.0077	$2,089	$3,760	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,553	1.0077	$1,565	$2,817	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$616	1.0077	$621	$1,118	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 3

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for DuPont Movements - 4Q09

Origin City (1)	ST	Destination City (2)	ST	Railroad(s) (3)	Commodity (4)	Phase III Cost Base Year 2009 (5)	Index to 4Q09 (6)	Phase III Cost 1/ (7)	4Q2009 Jurisdictional Threshold 2/ (8)	Tariff Rate 3/ (9)	Revenue/Variable Cost Ratio 4/ (10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,268	1.0199	$2,313	$4,164	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	$1,651	1.0199	$1,683	$3,030	xxx	xxx
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,239	1.0199	$1,264	$2,274	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,254	1.0199	$2,299	$4,138	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,252	1.0199	$2,297	$4,134	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,195	1.0199	$2,239	$4,030	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,896	1.0199	$2,953	$5,316	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,614	1.0199	$2,666	$4,798	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,305	1.0199	$2,351	$4,231	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,149	1.0199	$2,192	$3,945	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,754	1.0199	$1,789	$3,221	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	$1,239	1.0199	$1,264	$2,274	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,517	1.0199	$1,547	$2,785	xxx	xxx
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$404	1.0199	$412	$741	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	$1,805	1.0199	$1,841	$3,313	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,809	1.0199	$1,845	$3,321	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$573	1.0199	$584	$1,051	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,534	1.0199	$1,564	$2,815	$7,715	493%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,916	1.0199	$1,954	$3,517	$5,500	281%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,908	1.0199	$1,946	$3,502	$5,500	283%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,534	1.0199	$1,564	$2,815	$7,715	493%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,389	1.0199	$2,437	$4,386	$7,875	323%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,760	1.0199	$1,795	$3,232	$5,500	306%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,664	1.0199	$1,697	$3,055	$8,561	504%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,898	1.0199	$1,936	$3,485	$8,093	418%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,802	1.0199	$1,838	$3,309	$8,093	440%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,507	1.0199	$1,537	$2,767	$5,900	384%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,817	1.0199	$1,853	$3,336	$8,093	437%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,525	1.0199	$1,556	$2,800	$7,715	496%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,681	1.0199	$1,715	$3,086	$5,500	321%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,726	1.0199	$2,780	$5,004	$10,560	380%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,502	1.0199	$2,551	$4,593	$10,560	414%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,502	1.0199	$1,532	$2,757	$7,715	504%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,908	1.0199	$1,946	$3,502	$5,500	283%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,908	1.0199	$1,946	$3,502	$8,093	416%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,502	1.0199	$1,532	$2,757	$7,715	504%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,703	1.0199	$1,737	$3,127	$6,649	383%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,519	1.0199	$1,549	$2,788	$5,900	381%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,472	1.0199	$1,501	$2,701	$7,715	514%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,656	1.0199	$1,689	$3,041	$5,900	349%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,546	1.0199	$1,577	$2,838	$7,715	489%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,718	1.0199	$2,772	$4,989	$10,560	381%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,364	1.0199	$2,411	$4,341	$6,465	268%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$1,970	1.0199	$2,009	$3,617	$5,500	274%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,625	1.0199	$1,658	$2,984	$8,093	488%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,744	1.0199	$1,778	$3,201	$4,157	234%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,811	1.0199	$1,847	$3,324	$8,093	438%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,889	1.0199	$1,926	$3,467	$8,093	420%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,381	1.0199	$2,429	$4,372	$7,875	324%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,302	1.0199	$2,348	$4,227	$8,939	381%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,898	1.0199	$1,936	$3,485	$8,093	418%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,638	1.0199	$1,671	$3,008	$5,713	342%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,310	1.0199	$2,356	$4,241	$9,013	383%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,022	1.0199	$1,043	$1,877	$1,911	183%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$630	1.0199	$643	$1,157	$2,341	364%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,461	1.0199	$1,490	$2,681	$4,450	299%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,811	1.0199	$2,867	$5,160	$8,200	286%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,153	1.0199	$2,196	$3,953	$6,500	296%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,489	1.0199	$2,538	$4,569	$6,093	240%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,277	1.0199	$1,303	$2,345	$4,000	307%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,470	1.0199	$2,519	$4,535	$13,600	540%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,672	1.0199	$1,705	$3,070	$4,880	286%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,283	1.0199	$1,309	$2,356	$4,000	306%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,174	1.0199	$2,218	$3,992	$6,500	293%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,152	1.0199	$2,195	$3,950	$6,500	296%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,288	1.0199	$1,313	$2,364	$4,000	305%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,258	1.0199	$1,283	$2,310	$4,000	312%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,287	1.0199	$1,313	$2,363	$4,000	305%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 4Q09

	Origin		Destination						4Q2009			
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2009	Index to 4Q09	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,171	1.0199	$2,215	$3,986	$6,500	294%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,337	1.0199	$2,384	$4,291	$5,101	214%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,168	1.0199	$2,211	$3,980	$6,500	294%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,815	1.0199	$2,871	$5,167	$8,200	286%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,150	1.0199	$2,193	$3,947	$6,500	296%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,468	1.0199	$2,517	$4,531	$5,364	213%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$492	1.0199	$502	$903	$2,373	473%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,646	1.0199	$2,699	$4,858	$10,123	375%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,019	1.0199	$2,059	$3,707	$4,905	238%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,213	1.0199	$1,237	$2,227	$4,800	388%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$303	1.0199	$309	$557	$1,603	518%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$307	1.0199	$313	$564	$1,700	543%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$313	1.0199	$319	$574	$1,500	471%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,553	1.0199	$1,584	$2,851	$5,000	316%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$312	1.0199	$318	$573	$1,500	471%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,403	1.0199	$1,431	$2,575	$5,713	399%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,133	1.0199	$2,175	$3,915	$9,013	414%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,736	1.0199	$1,771	$3,187	$6,000	339%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$264	1.0199	$269	$485	$1,092	406%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,706	1.0199	$1,740	$3,131	$5,000	287%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,335	1.0199	$1,362	$2,451	xxx	xxx
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$939	1.0199	$958	$1,724	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$1,971	1.0199	$2,010	$3,618	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$965	1.0199	$984	$1,771	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,205	1.0199	$2,249	$4,048	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$267	1.0199	$272	$490	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$895	1.0199	$912	$1,642	xxx	xxx
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$594	1.0199	$606	$1,091	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,067	1.0199	$2,108	$3,794	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,041	1.0199	$3,101	$5,582	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$397	1.0199	$405	$728	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$419	1.0199	$427	$768	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,493	1.0199	$1,523	$2,741	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,422	1.0199	$1,450	$2,610	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$942	1.0199	$961	$1,729	xxx	xxx
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,330	1.0199	$1,357	$2,442	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,009	1.0199	$1,029	$1,852	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$362	1.0199	$369	$665	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,065	1.0199	$2,106	$3,790	xxx	xxx
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$627	1.0199	$639	$1,150	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$698	1.0199	$712	$1,282	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,339	1.0199	$1,365	$2,458	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,409	1.0199	$1,437	$2,587	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,155	1.0199	$1,178	$2,120	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$269	1.0199	$275	$494	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$459	1.0199	$468	$843	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$267	1.0199	$273	$491	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$752	1.0199	$767	$1,381	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,436	1.0199	$1,464	$2,636	$7,502	512%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,278	1.0199	$1,303	$2,345	$5,843	448%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,854	1.0199	$1,890	$3,403	$4,200	222%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,554	1.0199	$2,605	$4,688	$5,641	217%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$633	1.0199	$646	$1,163	$2,951	457%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,009	1.0199	$1,029	$1,853	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,235	1.0199	$2,280	$4,104	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$361	1.0199	$368	$663	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,073	1.0199	$2,114	$3,806	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,343	1.0199	$2,389	$4,300	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,622	1.0199	$1,654	$2,977	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$2,987	1.0199	$3,047	$5,484	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,073	1.0199	$2,114	$3,806	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,709	1.0199	$2,763	$4,974	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,073	1.0199	$2,114	$3,806	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,864	1.0199	$1,901	$3,423	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,073	1.0199	$2,114	$3,806	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,478	1.0199	$2,527	$4,549	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,235	1.0199	$2,280	$4,104	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,073	1.0199	$2,114	$3,806	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,553	1.0199	$1,584	$2,851	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$616	1.0199	$629	$1,131	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 4

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for DuPont Movements - 1Q10

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 1Q10	Phase III Cost 1/	1Q2010 Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	0.9918	$2,305	$4,150	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	$1,694	0.9918	$1,680	$3,025	xxx	xxx
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	0.9918	$1,252	$2,254	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	0.9918	$2,290	$4,121	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	0.9918	$2,289	$4,121	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	0.9918	$2,232	$4,017	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	0.9918	$2,947	$5,305	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	0.9918	$2,659	$4,786	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	0.9918	$2,344	$4,219	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	0.9918	$2,190	$3,941	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	0.9918	$1,789	$3,220	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	0.9918	$1,255	$2,259	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	0.9918	$1,539	$2,770	xxx	xxx
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	0.9918	$402	$724	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	0.9918	$1,831	$3,297	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	0.9918	$1,836	$3,305	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	0.9918	$575	$1,034	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	0.9918	$1,565	$2,816	$7,715	493%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	0.9918	$1,959	$3,526	$5,500	281%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	0.9918	$1,949	$3,508	$5,500	282%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	0.9918	$1,565	$2,816	$7,715	493%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	0.9918	$2,441	$4,395	$7,875	323%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	0.9918	$1,796	$3,233	$5,500	306%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	0.9918	$1,700	$3,059	$8,561	504%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	0.9918	$1,939	$3,490	$8,093	417%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	0.9918	$1,840	$3,312	$8,093	440%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	0.9918	$1,537	$2,767	$5,900	384%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	0.9918	$1,855	$3,340	$8,093	436%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	0.9918	$1,556	$2,802	$7,715	496%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	0.9918	$1,713	$3,084	$5,500	321%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	0.9918	$2,786	$5,016	$10,560	379%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	0.9918	$2,558	$4,605	$10,560	413%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	0.9918	$1,525	$2,744	$7,715	506%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	0.9918	$1,949	$3,508	$5,500	282%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	0.9918	$1,949	$3,508	$8,093	415%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	0.9918	$1,532	$2,758	$7,715	503%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	0.9918	$1,739	$3,130	$6,649	382%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	0.9918	$1,549	$2,788	$5,900	381%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	0.9918	$1,494	$2,689	$7,715	516%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	0.9918	$1,693	$3,048	$5,900	348%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	0.9918	$1,578	$2,840	$7,715	489%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	0.9918	$2,778	$5,000	$10,560	380%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	0.9918	$2,416	$4,348	$6,465	268%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	0.9918	$2,016	$3,628	$5,500	273%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	0.9918	$1,655	$2,979	$8,093	489%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	0.9918	$1,770	$3,186	$4,157	235%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	0.9918	$1,849	$3,328	$8,093	438%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	0.9918	$1,928	$3,471	$8,093	420%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	0.9918	$2,433	$4,380	$7,875	324%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	0.9918	$2,353	$4,235	$8,939	380%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	0.9918	$1,939	$3,489	$8,093	417%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	0.9918	$1,685	$3,032	$5,713	339%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	0.9918	$2,379	$4,281	$9,013	379%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	0.9918	$1,038	$1,869	$1,911	184%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	0.9918	$643	$1,158	$2,341	364%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	0.9918	$1,489	$2,681	$4,450	299%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	0.9918	$2,864	$5,154	$8,200	286%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	0.9918	$2,192	$3,946	$6,500	296%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	0.9918	$2,533	$4,559	$6,093	241%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	0.9918	$1,298	$2,337	$4,000	308%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	0.9918	$2,512	$4,522	$13,600	541%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	0.9918	$1,701	$3,062	$4,880	287%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	0.9918	$1,304	$2,348	$4,000	307%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	0.9918	$2,214	$3,985	$6,500	294%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	0.9918	$2,191	$3,944	$6,500	297%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	0.9918	$1,309	$2,355	$4,000	306%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	0.9918	$1,279	$2,301	$4,000	313%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	0.9918	$1,308	$2,355	$4,000	306%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 1Q10

	Origin		Destination							1Q2010		
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 1Q10	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	0.9918	$2,211	$3,980	$6,500	294%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	0.9918	$2,380	$4,284	$5,101	214%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	0.9918	$2,207	$3,973	$6,500	294%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	0.9918	$2,867	$5,161	$8,200	286%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	0.9918	$2,189	$3,940	$6,500	297%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	0.9918	$2,544	$4,579	$5,364	211%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	0.9918	$498	$896	$2,373	477%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	0.9918	$2,707	$4,873	$10,123	374%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	0.9918	$2,079	$3,742	$4,905	236%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	0.9918	$1,228	$2,211	$4,800	391%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	0.9918	$303	$546	$1,603	528%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	0.9918	$308	$554	$1,700	553%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	0.9918	$313	$564	$1,500	479%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	0.9918	$1,579	$2,843	$5,000	317%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	0.9918	$313	$563	$1,500	480%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	0.9918	$1,439	$2,589	$5,713	397%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	0.9918	$2,191	$3,945	$9,013	411%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	0.9918	$1,764	$3,175	$6,000	340%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	0.9918	$264	$475	$1,092	414%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	0.9918	$1,743	$3,138	$5,000	287%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	0.9918	$1,356	$2,440	xxx	xxx
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	0.9918	$956	$1,720	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	0.9918	$2,013	$3,623	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	0.9918	$982	$1,767	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	0.9918	$2,245	$4,041	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	0.9918	$266	$479	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	0.9918	$907	$1,633	xxx	xxx
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	0.9918	$605	$1,090	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	0.9918	$2,104	$3,787	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	0.9918	$3,087	$5,557	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	0.9918	$399	$717	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	0.9918	$423	$761	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	0.9918	$1,518	$2,732	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	0.9918	$1,444	$2,600	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	0.9918	$953	$1,715	xxx	xxx
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	0.9918	$1,351	$2,431	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	0.9918	$1,024	$1,843	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	0.9918	$364	$655	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	0.9918	$2,101	$3,782	xxx	xxx
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	0.9918	$633	$1,140	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	0.9918	$707	$1,272	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	0.9918	$1,360	$2,447	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	0.9918	$1,433	$2,580	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	0.9918	$1,171	$2,108	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	0.9918	$270	$486	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	0.9918	$435	$783	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	0.9918	$267	$480	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	0.9918	$762	$1,371	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	0.9918	$1,464	$2,635	$7,502	512%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	0.9918	$1,298	$2,337	$5,843	450%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	0.9918	$1,883	$3,389	$4,200	223%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	0.9918	$2,587	$4,657	$5,641	218%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	0.9918	$640	$1,153	$2,951	461%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	0.9918	$1,025	$1,844	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	0.9918	$2,274	$4,094	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	0.9918	$362	$652	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	0.9918	$2,109	$3,796	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	0.9918	$2,383	$4,290	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	0.9918	$1,648	$2,967	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	0.9918	$3,041	$5,474	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	0.9918	$2,109	$3,796	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	0.9918	$2,758	$4,964	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	0.9918	$2,109	$3,796	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	0.9918	$1,896	$3,412	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	0.9918	$2,109	$3,796	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	0.9918	$2,522	$4,539	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	0.9918	$2,274	$4,094	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	0.9918	$2,109	$3,796	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	0.9918	$1,578	$2,841	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	0.9918	$623	$1,121	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 5

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 2Q10

Origin City (1)	ST	Destination City (2)	ST	Railroad(s) (3)	Commodity (4)	Phase III Cost Base Year 2010 (5)	Index to 2Q10 (6)	2Q2010 Phase III Cost 1/ (7)	2Q2010 Jurisdictional Threshold 2/ (8)	2Q2010 Tariff Rate 3/ (9)	2Q2010 Revenue/Variable Cost Ratio 4/ (10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	1.0029	$2,331	$4,196	$12,014	515%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	1.0029	$1,699	$3,059	$4,626	272%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	1.0029	$1,266	$2,279	$6,264	495%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	1.0029	$2,315	$4,168	$13,638	589%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	1.0029	$2,315	$4,167	$9,200	397%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	1.0029	$2,257	$4,062	$6,084	270%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	1.0029	$2,980	$5,364	$11,566	388%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	1.0029	$2,689	$4,840	$5,860	218%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	1.0029	$2,370	$4,266	$6,193	261%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	1.0029	$2,214	$3,986	$4,800	217%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	1.0029	$1,809	$3,257	$4,125	228%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	1.0029	$1,269	$2,284	$3,302	260%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	1.0029	$1,556	$2,801	$3,752	241%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	1.0029	$407	$732	$1,500	369%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	1.0029	$1,852	$3,334	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	1.0029	$1,857	$3,342	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	1.0029	$581	$1,046	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	1.0029	$1,582	$2,848	$7,937	502%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	1.0029	$1,981	$3,566	$5,500	278%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	1.0029	$1,971	$3,548	$5,579	283%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	1.0029	$1,582	$2,848	$7,715	488%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	1.0029	$2,469	$4,444	$8,495	344%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	1.0029	$1,816	$3,269	$5,569	307%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	1.0029	$1,719	$3,093	$8,561	498%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	1.0029	$1,960	$3,529	$8,214	419%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	1.0029	$1,861	$3,349	$8,093	435%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	1.0029	$1,555	$2,798	$5,900	380%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	1.0029	$1,876	$3,377	$8,163	435%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	1.0029	$1,574	$2,833	$8,975	570%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	1.0029	$1,733	$3,119	$5,500	317%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	1.0029	$2,818	$5,072	$11,892	422%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	1.0029	$2,587	$4,656	$11,262	435%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	1.0029	$1,542	$2,775	$7,715	500%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	1.0029	$1,971	$3,548	$5,579	283%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	1.0029	$1,971	$3,548	$8,252	419%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	1.0029	$1,550	$2,789	$7,715	498%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	1.0029	$1,758	$3,165	$7,283	414%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	1.0029	$1,567	$2,820	$5,917	378%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	1.0029	$1,511	$2,719	$7,967	527%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	1.0029	$1,712	$3,082	$5,917	346%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	1.0029	$1,596	$2,872	$8,975	562%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	1.0029	$2,809	$5,056	$11,226	400%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	1.0029	$2,443	$4,397	$6,465	265%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	1.0029	$2,038	$3,669	$5,590	274%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	1.0029	$1,673	$3,012	$8,093	484%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	1.0029	$1,790	$3,222	$4,157	232%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	1.0029	$1,869	$3,365	$8,093	433%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	1.0029	$1,950	$3,510	$8,660	444%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	1.0029	$2,461	$4,429	$7,875	320%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	1.0029	$2,379	$4,282	$8,939	376%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	1.0029	$1,960	$3,529	$9,000	459%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	1.0029	$1,703	$3,066	$5,713	335%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	1.0029	$2,405	$4,329	$9,013	375%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	1.0029	$1,050	$1,890	$3,000	286%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	1.0029	$650	$1,171	$2,519	387%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	1.0029	$1,506	$2,711	$4,450	296%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	1.0029	$2,896	$5,212	$8,200	283%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	1.0029	$2,217	$3,990	$6,976	315%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	1.0029	$2,561	$4,610	$6,828	267%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	1.0029	$1,313	$2,363	$4,088	311%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	1.0029	$2,540	$4,573	$13,733	541%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	1.0029	$1,720	$3,096	$5,171	301%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	1.0029	$1,319	$2,374	$4,140	314%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	1.0029	$2,239	$4,030	$7,100	317%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	1.0029	$2,215	$3,988	$6,500	293%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0029	$1,323	$2,382	$4,140	313%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	1.0029	$1,293	$2,327	$4,233	327%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0029	$1,323	$2,381	$4,140	313%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 2Q10

	Origin		Destination							2Q2010		
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 2Q10	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	1.0029	$2,236	$4,024	$6,500	291%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	1.0029	$2,407	$4,333	$5,101	212%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	1.0029	$2,232	$4,017	$6,950	311%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	1.0029	$2,900	$5,219	$8,286	286%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	1.0029	$2,214	$3,985	$6,745	305%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	1.0029	$2,572	$4,630	$5,881	229%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	1.0029	$503	$906	$2,387	474%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	1.0029	$2,738	$4,928	$11,325	414%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	1.0029	$2,102	$3,784	$5,223	248%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	1.0029	$1,242	$2,235	$5,432	437%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	1.0029	$307	$552	$1,645	536%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	1.0029	$311	$560	$1,700	547%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	1.0029	$317	$570	$1,535	485%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	1.0029	$1,597	$2,875	$5,635	353%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	1.0029	$316	$569	$1,535	485%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	1.0029	$1,455	$2,619	$5,713	393%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	1.0029	$2,216	$3,989	$9,013	407%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	1.0029	$1,784	$3,211	$6,052	339%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	1.0029	$267	$480	$1,353	507%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	1.0029	$1,763	$3,173	$5,038	286%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	1.0029	$1,371	$2,467	$7,022	512%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	1.0029	$966	$1,739	$7,281	754%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	1.0029	$2,035	$3,663	$9,585	471%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	1.0029	$993	$1,787	$7,281	733%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	1.0029	$2,270	$4,086	$5,051	223%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0029	$269	$485	$992	368%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	1.0029	$917	$1,651	$2,700	294%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	1.0029	$612	$1,102	$1,585	259%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	1.0029	$2,127	$3,829	$8,966	421%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	1.0029	$3,122	$5,619	$6,986	224%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	1.0029	$403	$725	$1,490	370%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	1.0029	$427	$769	$1,684	394%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	1.0029	$1,535	$2,763	$3,532	230%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	1.0029	$1,460	$2,629	$5,400	370%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	1.0029	$964	$1,734	$5,638	585%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	1.0029	$1,366	$2,458	$3,000	220%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	1.0029	$1,036	$1,864	$4,800	463%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	1.0029	$368	$662	$2,520	685%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	1.0029	$2,125	$3,825	$7,151	337%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	1.0029	$641	$1,153	$4,500	703%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	1.0029	$715	$1,287	$3,000	420%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	1.0029	$1,375	$2,475	$7,022	511%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	1.0029	$1,449	$2,609	$3,800	262%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	1.0029	$1,184	$2,132	$5,000	422%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	1.0029	$273	$492	$1,025	375%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	1.0029	$440	$792	$1,128	256%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0029	$270	$486	$992	368%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	1.0029	$770	$1,386	$2,000	260%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	1.0029	$1,481	$2,665	$7,502	507%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	1.0029	$1,313	$2,363	$6,106	465%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	1.0029	$1,904	$3,427	$5,044	265%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	1.0029	$2,616	$4,709	$5,788	221%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	1.0029	$648	$1,166	$3,467	535%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	1.0029	$1,036	$1,865	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	1.0029	$2,300	$4,140	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	1.0029	$366	$659	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	1.0029	$2,132	$3,838	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	1.0029	$2,410	$4,338	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	1.0029	$1,667	$3,000	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	1.0029	$3,075	$5,535	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	1.0029	$2,132	$3,838	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	1.0029	$2,789	$5,020	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	1.0029	$2,132	$3,838	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	1.0029	$1,917	$3,451	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	1.0029	$2,132	$3,838	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	1.0029	$2,550	$4,590	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	1.0029	$2,300	$4,139	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	1.0029	$2,132	$3,838	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	1.0029	$1,596	$2,873	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	1.0029	$630	$1,134	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 6

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 3Q10

Origin City (1)	ST	Destination City (2)	ST	Railroad(s) (3)	Commodity (4)	Phase III Cost Base Year 2010 (5)	Index to 3Q10 (6)	3Q2010 Phase III Cost 1/ (7)	3Q2010 Jurisdictional Threshold 2/ (8)	3Q2010 Tariff Rate 3/ (9)	3Q2010 Revenue/Variable Cost Ratio 4/ (10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	0.9936	$2,310	$4,157	$12,014	520%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	0.9936	$1,683	$3,030	$4,626	275%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	0.9936	$1,254	$2,258	$6,264	499%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	0.9936	$2,294	$4,129	$13,638	595%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	0.9936	$2,293	$4,128	$9,200	401%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	0.9936	$2,236	$4,024	$6,084	272%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	0.9936	$2,952	$5,314	$11,566	392%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	0.9936	$2,664	$4,795	$5,860	220%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	0.9936	$2,348	$4,226	$6,193	264%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	0.9936	$2,193	$3,948	$4,800	219%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	0.9936	$1,792	$3,226	$4,125	230%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	0.9936	$1,257	$2,263	$3,302	263%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	0.9936	$1,542	$2,775	$3,752	243%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	0.9936	$403	$726	$1,500	372%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	0.9936	$1,835	$3,302	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	0.9936	$1,839	$3,311	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	0.9936	$576	$1,036	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	0.9936	$1,567	$2,821	$8,975	573%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	0.9936	$1,962	$3,532	$5,950	303%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	0.9936	$1,952	$3,514	$5,950	305%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	0.9936	$1,567	$2,821	$8,975	573%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	0.9936	$2,446	$4,402	$11,400	466%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	0.9936	$1,799	$3,239	$5,950	331%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	0.9936	$1,702	$3,064	$8,561	503%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	0.9936	$1,942	$3,496	$9,000	463%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	0.9936	$1,843	$3,318	$9,000	488%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	0.9936	$1,540	$2,772	$6,000	390%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	0.9936	$1,859	$3,346	$9,000	484%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	0.9936	$1,559	$2,806	$8,975	576%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	0.9936	$1,716	$3,090	$5,950	347%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	0.9936	$2,791	$5,024	$14,555	521%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	0.9936	$2,563	$4,613	$14,555	568%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	0.9936	$1,527	$2,749	$8,975	588%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	0.9936	$1,952	$3,514	$5,950	305%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	0.9936	$1,952	$3,514	$9,000	461%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	0.9936	$1,535	$2,763	$8,975	585%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	0.9936	$1,742	$3,136	$8,975	515%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	0.9936	$1,552	$2,793	$6,000	387%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	0.9936	$1,496	$2,694	$8,975	600%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	0.9936	$1,696	$3,054	$6,000	354%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	0.9936	$1,581	$2,845	$8,975	568%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	0.9936	$2,783	$5,009	$14,555	523%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	0.9936	$2,420	$4,356	$6,465	267%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	0.9936	$2,019	$3,635	$5,950	295%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	0.9936	$1,658	$2,984	$9,000	543%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	0.9936	$1,773	$3,191	$4,157	234%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	0.9936	$1,852	$3,334	$9,000	486%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	0.9936	$1,932	$3,477	$9,000	466%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	0.9936	$2,438	$4,388	$11,400	468%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	0.9936	$2,357	$4,242	$12,588	534%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	0.9936	$1,942	$3,496	$9,000	463%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	0.9936	$1,687	$3,037	$5,713	339%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	0.9936	$2,383	$4,289	$9,013	378%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	0.9936	$1,040	$1,872	$3,000	288%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	0.9936	$644	$1,160	$3,356	521%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	0.9936	$1,492	$2,685	$5,425	364%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	0.9936	$2,869	$5,163	$8,774	306%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	0.9936	$2,196	$3,953	$9,200	419%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	0.9936	$2,537	$4,567	$10,272	405%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	0.9936	$1,300	$2,341	$4,700	361%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	0.9936	$2,517	$4,530	$13,865	551%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	0.9936	$1,704	$3,067	$6,920	406%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	0.9936	$1,306	$2,352	$4,700	360%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	0.9936	$2,218	$3,992	$9,200	415%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	0.9936	$2,195	$3,951	$9,200	419%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	0.9936	$1,311	$2,359	$4,700	359%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	0.9936	$1,281	$2,305	$4,700	367%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	0.9936	$1,311	$2,359	$4,700	359%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 3Q10

	Origin		Destination						3Q2010			
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 3Q10	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	0.9936	$2,215	$3,987	$9,200	415%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	0.9936	$2,384	$4,292	$5,101	214%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	0.9936	$2,211	$3,980	$9,200	416%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	0.9936	$2,872	$5,170	$8,774	305%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	0.9936	$2,193	$3,947	$9,200	420%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	0.9936	$2,548	$4,587	$6,075	238%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	0.9936	$499	$898	$2,450	491%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	0.9936	$2,712	$4,882	$13,730	506%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	0.9936	$2,083	$3,749	$6,389	307%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	0.9936	$1,230	$2,214	$8,395	682%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	0.9936	$304	$547	$1,700	559%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	0.9936	$308	$555	$1,700	552%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	0.9936	$314	$565	$1,700	542%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	0.9936	$1,582	$2,848	$8,611	544%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	0.9936	$313	$564	$1,700	543%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	0.9936	$1,441	$2,594	$5,713	396%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	0.9936	$2,195	$3,952	$9,013	411%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	0.9936	$1,767	$3,181	$6,295	356%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	0.9936	$264	$476	$2,577	975%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	0.9936	$1,746	$3,143	$5,215	299%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	0.9936	$1,358	$2,444	$7,022	517%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	0.9936	$957	$1,723	$7,281	761%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	0.9936	$2,016	$3,629	$9,585	475%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	0.9936	$984	$1,770	$7,281	740%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	0.9936	$2,249	$4,048	$5,051	225%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	0.9936	$267	$480	$992	372%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	0.9936	$909	$1,635	$2,700	297%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	0.9936	$606	$1,092	$1,585	261%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	0.9936	$2,107	$3,793	$8,966	425%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	0.9936	$3,092	$5,566	$6,986	226%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	0.9936	$399	$719	$1,490	373%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	0.9936	$423	$762	$1,684	398%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	0.9936	$1,521	$2,737	$3,532	232%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	0.9936	$1,447	$2,604	$5,400	373%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	0.9936	$954	$1,718	$5,638	591%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	0.9936	$1,353	$2,435	$3,000	222%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	0.9936	$1,026	$1,847	$4,800	468%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	0.9936	$364	$656	$2,520	691%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	0.9936	$2,105	$3,789	$7,151	340%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	0.9936	$635	$1,142	$4,500	709%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	0.9936	$708	$1,274	$3,000	424%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	0.9936	$1,362	$2,452	$7,022	516%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	0.9936	$1,436	$2,584	$3,800	265%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	0.9936	$1,173	$2,112	$5,000	426%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	0.9936	$271	$487	$1,025	379%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	0.9936	$436	$784	$1,128	259%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	0.9936	$267	$481	$992	371%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	0.9936	$763	$1,373	$2,000	262%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	0.9936	$1,467	$2,640	$7,502	511%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	0.9936	$1,301	$2,341	$7,332	564%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	0.9936	$1,886	$3,395	$9,000	477%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	0.9936	$2,592	$4,665	$7,347	283%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	0.9936	$642	$1,155	$4,500	701%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	0.9936	$1,026	$1,847	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	0.9936	$2,278	$4,101	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	0.9936	$363	$653	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	0.9936	$2,113	$3,803	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	0.9936	$2,388	$4,298	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	0.9936	$1,651	$2,972	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	0.9936	$3,046	$5,484	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	0.9936	$2,112	$3,802	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	0.9936	$2,763	$4,973	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	0.9936	$2,112	$3,802	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	0.9936	$1,899	$3,418	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	0.9936	$2,113	$3,803	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	0.9936	$2,526	$4,547	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	0.9936	$2,278	$4,101	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	0.9936	$2,112	$3,802	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	0.9936	$1,581	$2,846	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	0.9936	$624	$1,123	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 7

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 4Q10

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 4Q10	Phase III Cost 1/	4Q2010 Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	1.0119	$2,352	$4,234	$12,014	511%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	1.0119	$1,714	$3,086	$4,626	270%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	1.0119	$1,277	$2,299	$6,264	490%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	1.0119	$2,336	$4,205	$13,638	584%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	1.0119	$2,336	$4,204	$9,200	394%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	1.0119	$2,277	$4,098	$6,084	267%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	1.0119	$3,007	$5,412	$11,566	385%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	1.0119	$2,713	$4,883	$5,860	216%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	1.0119	$2,391	$4,304	$6,193	259%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	1.0119	$2,234	$4,021	$4,800	215%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	1.0119	$1,825	$3,285	$4,125	226%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	1.0119	$1,280	$2,305	$3,302	258%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	1.0119	$1,570	$2,826	$3,752	239%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	1.0119	$411	$739	$1,500	365%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	1.0119	$1,868	$3,363	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	1.0119	$1,873	$3,372	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	1.0119	$586	$1,055	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	1.0119	$1,596	$2,873	$8,975	562%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	1.0119	$1,998	$3,597	$5,950	298%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	1.0119	$1,988	$3,579	$5,950	299%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	1.0119	$1,596	$2,873	$8,975	562%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	1.0119	$2,491	$4,483	$11,400	458%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	1.0119	$1,832	$3,298	$5,950	325%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	1.0119	$1,734	$3,121	$8,561	494%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	1.0119	$1,978	$3,560	$9,000	455%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	1.0119	$1,877	$3,379	$9,000	479%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	1.0119	$1,568	$2,823	$6,000	383%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	1.0119	$1,893	$3,407	$9,000	475%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	1.0119	$1,588	$2,858	$8,975	565%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	1.0119	$1,748	$3,146	$5,950	340%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	1.0119	$2,843	$5,117	$14,555	512%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	1.0119	$2,610	$4,698	$14,555	558%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	1.0119	$1,555	$2,800	$8,975	577%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	1.0119	$1,988	$3,579	$5,950	299%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	1.0119	$1,988	$3,579	$9,000	453%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	1.0119	$1,563	$2,814	$8,975	574%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	1.0119	$1,774	$3,193	$8,975	506%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	1.0119	$1,580	$2,845	$6,000	380%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	1.0119	$1,524	$2,743	$8,975	589%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	1.0119	$1,728	$3,110	$6,000	347%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	1.0119	$1,610	$2,898	$8,975	558%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	1.0119	$2,834	$5,101	$14,555	514%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	1.0119	$2,464	$4,436	$6,465	262%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	1.0119	$2,056	$3,702	$5,950	289%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	1.0119	$1,688	$3,039	$9,000	533%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	1.0119	$1,806	$3,250	$4,214	233%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	1.0119	$1,886	$3,395	$9,000	477%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	1.0119	$1,967	$3,541	$9,000	457%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	1.0119	$2,482	$4,468	$11,400	459%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	1.0119	$2,400	$4,320	$12,588	524%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	1.0119	$1,978	$3,560	$9,000	455%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	1.0119	$1,719	$3,093	$5,713	332%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	1.0119	$2,427	$4,368	$9,013	371%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	1.0119	$1,059	$1,906	$3,000	283%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	1.0119	$656	$1,181	$3,356	511%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	1.0119	$1,519	$2,735	$5,425	357%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	1.0119	$2,921	$5,259	$8,774	300%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	1.0119	$2,237	$4,026	$9,200	411%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	1.0119	$2,584	$4,651	$10,272	398%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	1.0119	$1,324	$2,384	$4,700	355%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	1.0119	$2,563	$4,613	$13,865	541%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	1.0119	$1,736	$3,124	$6,920	399%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	1.0119	$1,331	$2,395	$4,700	353%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	1.0119	$2,259	$4,066	$9,200	407%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	1.0119	$2,235	$4,023	$9,200	412%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0119	$1,335	$2,403	$4,700	352%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	1.0119	$1,304	$2,348	$4,700	360%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0119	$1,335	$2,403	$4,700	352%

Variable Cost, Jurisdictional Threshold, Tariff Rate and Revenue/Variable Cost Ratios Per Car for DuPont Movements - 4Q10

	Origin		Destination						4Q2010			
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 4Q10	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	1.0119	$2,256	$4,060	$9,200	408%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	1.0119	$2,428	$4,371	$5,101	210%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	1.0119	$2,252	$4,053	$9,200	409%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	1.0119	$2,925	$5,266	$8,774	300%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	1.0119	$2,233	$4,020	$9,200	412%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	1.0119	$2,595	$4,671	$6,075	234%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	1.0119	$508	$914	$2,450	482%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	1.0119	$2,762	$4,971	$13,730	497%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	1.0119	$2,121	$3,818	$6,389	301%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	1.0119	$1,253	$2,255	$8,395	670%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	1.0119	$310	$557	$1,700	549%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	1.0119	$314	$565	$1,700	542%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	1.0119	$319	$575	$1,700	532%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	1.0119	$1,611	$2,900	$8,611	534%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	1.0119	$319	$574	$1,700	533%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	1.0119	$1,468	$2,642	$5,713	389%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	1.0119	$2,236	$4,024	$9,013	403%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	1.0119	$1,800	$3,239	$6,295	350%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	1.0119	$269	$485	$2,577	957%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	1.0119	$1,779	$3,201	$5,215	293%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	1.0119	$1,383	$2,489	$7,022	508%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	1.0119	$975	$1,755	$7,281	747%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	1.0119	$2,053	$3,696	$9,585	467%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	1.0119	$1,002	$1,803	$7,281	727%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	1.0119	$2,290	$4,122	$5,051	221%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0119	$272	$489	$992	365%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	1.0119	$925	$1,666	$2,700	292%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	1.0119	$618	$1,112	$1,585	257%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	1.0119	$2,146	$3,863	$8,966	418%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	1.0119	$3,149	$5,669	$6,986	222%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	1.0119	$407	$732	$1,490	366%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	1.0119	$431	$776	$1,684	391%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	1.0119	$1,549	$2,788	$3,532	228%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	1.0119	$1,473	$2,652	$5,400	366%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	1.0119	$972	$1,750	$5,638	580%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	1.0119	$1,378	$2,480	$3,000	218%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	1.0119	$1,045	$1,881	$4,800	459%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	1.0119	$371	$668	$2,520	679%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	1.0119	$2,144	$3,859	$7,151	334%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	1.0119	$646	$1,163	$4,500	696%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	1.0119	$721	$1,298	$3,000	416%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	1.0119	$1,387	$2,497	$7,022	506%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	1.0119	$1,462	$2,632	$3,800	260%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	1.0119	$1,195	$2,151	$5,000	418%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	1.0119	$276	$496	$1,025	372%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	1.0119	$444	$799	$1,128	254%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0119	$272	$490	$992	364%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	1.0119	$777	$1,399	$2,000	257%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	1.0119	$1,494	$2,689	$7,502	502%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	1.0119	$1,324	$2,384	$7,332	554%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	1.0119	$1,921	$3,458	$9,000	468%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	1.0119	$2,639	$4,751	$7,347	278%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	1.0119	$653	$1,176	$4,500	689%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	1.0119	$1,045	$1,881	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	1.0119	$2,320	$4,176	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	1.0119	$370	$665	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	1.0119	$2,151	$3,873	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	1.0119	$2,432	$4,377	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	1.0119	$1,682	$3,027	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	1.0119	$3,103	$5,585	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	1.0119	$2,151	$3,872	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	1.0119	$2,813	$5,064	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	1.0119	$2,151	$3,872	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	1.0119	$1,934	$3,481	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	1.0119	$2,151	$3,873	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	1.0119	$2,573	$4,631	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	1.0119	$2,320	$4,176	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	1.0119	$2,151	$3,873	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	1.0119	$1,610	$2,898	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	1.0119	$635	$1,144	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 8

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 1Q11

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 1Q11	Phase III Cost 1/	1Q2011 Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	1.0431	$2,425	$4,364	$12,855	530%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	1.0431	$1,767	$3,181	$11,836	670%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	1.0431	$1,317	$2,370	$8,814	669%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	1.0431	$2,408	$4,334	$18,562	771%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	1.0431	$2,408	$4,334	$9,844	409%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	1.0431	$2,347	$4,225	$6,510	277%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	1.0431	$3,099	$5,579	$12,376	399%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	1.0431	$2,796	$5,034	$6,270	224%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	1.0431	$2,465	$4,437	$6,627	269%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	1.0431	$2,303	$4,145	$5,136	223%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	1.0431	$1,882	$3,387	$4,125	219%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	1.0431	$1,320	$2,376	$4,596	348%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	1.0431	$1,619	$2,913	$6,139	379%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	1.0431	$423	$762	$1,605	379%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	1.0431	$1,926	$3,467	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	1.0431	$1,931	$3,476	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	1.0431	$604	$1,088	xxx	xxx
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	1.0431	$1,646	$2,962	$12,100	735%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	1.0431	$2,060	$3,708	$11,812	573%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	1.0431	$2,050	$3,690	$11,812	576%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	1.0431	$1,646	$2,962	$12,100	735%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	1.0431	$2,568	$4,622	$19,539	761%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	1.0431	$1,889	$3,400	$11,812	625%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	1.0431	$1,787	$3,217	$10,242	573%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	1.0431	$2,039	$3,670	$14,136	693%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	1.0431	$1,935	$3,483	$14,136	730%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	1.0431	$1,617	$2,910	$8,533	528%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	1.0431	$1,951	$3,513	$14,136	724%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	1.0431	$1,637	$2,946	$12,100	739%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	1.0431	$1,802	$3,244	$11,812	655%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	1.0431	$2,931	$5,275	$22,732	776%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	1.0431	$2,690	$4,843	$22,732	845%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	1.0431	$1,603	$2,886	$12,100	755%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	1.0431	$2,050	$3,690	$11,812	576%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	1.0431	$2,050	$3,690	$14,136	690%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	1.0431	$1,612	$2,901	$12,100	751%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	1.0431	$1,829	$3,292	$13,450	735%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	1.0431	$1,629	$2,933	$8,533	524%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	1.0431	$1,571	$2,828	$12,100	770%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	1.0431	$1,781	$3,206	$8,533	479%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	1.0431	$1,660	$2,987	$12,100	729%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	1.0431	$2,922	$5,259	$22,732	778%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	1.0431	$2,540	$4,573	$13,535	533%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	1.0431	$2,120	$3,816	$11,812	557%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	1.0431	$1,740	$3,133	$14,136	812%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	1.0431	$1,861	$3,351	$4,531	243%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	1.0431	$1,944	$3,500	$14,136	727%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	1.0431	$2,028	$3,651	$14,136	697%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	1.0431	$2,559	$4,606	$19,539	763%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	1.0431	$2,474	$4,454	$19,888	804%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	1.0431	$2,039	$3,670	$14,136	693%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	1.0431	$1,772	$3,189	$6,113	345%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	1.0431	$2,502	$4,503	$9,644	386%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	1.0431	$1,092	$1,965	$4,170	382%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	1.0431	$676	$1,218	$3,591	531%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	1.0431	$1,566	$2,819	$7,690	491%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	1.0431	$3,012	$5,421	$9,388	312%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	1.0431	$2,306	$4,150	$9,844	427%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	1.0431	$2,664	$4,795	$10,991	413%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	1.0431	$1,365	$2,457	$5,029	368%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	1.0431	$2,642	$4,756	$24,453	926%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	1.0431	$1,789	$3,220	$7,404	414%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	1.0431	$1,372	$2,469	$5,029	367%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	1.0431	$2,328	$4,191	$9,844	423%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	1.0431	$2,304	$4,148	$9,844	427%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0431	$1,376	$2,477	$5,029	365%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	1.0431	$1,345	$2,420	$5,029	374%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0431	$1,376	$2,477	$5,029	365%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 1Q11

	Origin		Destination					1Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 1Q11	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	1.0431	$2,325	$4,186	$9,844	423%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	1.0431	$2,503	$4,506	$6,205	248%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	1.0431	$2,321	$4,178	$9,844	424%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	1.0431	$3,016	$5,428	$9,388	311%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	1.0431	$2,302	$4,144	$9,844	428%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	1.0431	$2,675	$4,815	$12,624	472%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	1.0431	$524	$942	$2,486	475%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	1.0431	$2,847	$5,125	$21,912	770%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	1.0431	$2,187	$3,936	$8,384	383%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	1.0431	$1,292	$2,325	$8,983	695%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	1.0431	$319	$574	$2,400	752%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	1.0431	$323	$582	$2,900	897%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	1.0431	$329	$593	$2,400	729%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	1.0431	$1,661	$2,990	$9,214	555%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	1.0431	$329	$592	$2,400	730%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	1.0431	$1,513	$2,723	$6,113	404%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	1.0431	$2,305	$4,149	$9,644	418%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	1.0431	$1,855	$3,339	$8,928	481%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	1.0431	$278	$500	$2,758	994%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	1.0431	$1,833	$3,300	$6,899	376%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	1.0431	$1,426	$2,566	$12,375	868%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	1.0431	$1,005	$1,809	$10,487	1044%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	1.0431	$2,117	$3,810	$12,839	607%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	1.0431	$1,033	$1,859	$10,487	1016%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	1.0431	$2,361	$4,250	$8,926	378%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0431	$280	$504	$1,061	379%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	1.0431	$954	$1,717	$3,431	360%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	1.0431	$637	$1,146	$1,585	249%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	1.0431	$2,212	$3,982	$9,085	411%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	1.0431	$3,247	$5,844	$8,409	259%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	1.0431	$419	$754	$1,490	355%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	1.0431	$444	$800	$1,684	379%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	1.0431	$1,597	$2,874	$3,825	240%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	1.0431	$1,519	$2,734	$6,224	410%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	1.0431	$1,002	$1,804	$6,210	620%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	1.0431	$1,420	$2,557	$3,411	240%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	1.0431	$1,077	$1,939	$5,505	511%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	1.0431	$383	$689	$2,553	667%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	1.0431	$2,210	$3,978	$7,246	328%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	1.0431	$666	$1,199	$4,560	684%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	1.0431	$743	$1,338	$3,051	410%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	1.0431	$1,430	$2,574	$8,033	562%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	1.0431	$1,507	$2,713	$3,922	260%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	1.0431	$1,232	$2,217	$5,066	411%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	1.0431	$284	$511	$1,025	361%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	1.0431	$457	$823	$1,128	247%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0431	$281	$505	$1,005	358%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	1.0431	$801	$1,442	$2,120	265%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	1.0431	$1,540	$2,772	$8,265	537%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	1.0431	$1,365	$2,458	$7,845	575%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	1.0431	$1,980	$3,565	$10,777	544%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	1.0431	$2,721	$4,897	$9,864	363%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	1.0431	$674	$1,212	$4,500	668%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	1.0431	$1,078	$1,940	$9,265	860%
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	1.0431	$2,392	$4,305	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	1.0431	$381	$686	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	1.0431	$2,218	$3,992	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	1.0431	$2,507	$4,512	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	1.0431	$1,734	$3,121	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	1.0431	$3,198	$5,757	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	1.0431	$2,218	$3,992	xxx	xxx
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	1.0431	$2,900	$5,221	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	1.0431	$2,218	$3,992	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	1.0431	$1,994	$3,589	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	1.0431	$2,218	$3,992	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	1.0431	$2,652	$4,774	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	1.0431	$2,392	$4,305	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	1.0431	$2,218	$3,992	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	1.0431	$1,660	$2,988	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	1.0431	$655	$1,179	xxx	xxx

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 9

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 2Q11

Origin City (1)	ST	Destination City (2)	ST	Railroad(s) (3)	Commodity (4)	Phase III Cost Base Year 2010 (5)	Index to 2Q11 (6)	Phase III Cost 1/ (7)	2Q2011 Jurisdictional Threshold 2/ (8)	Tariff Rate 3/ (9)	Revenue/Variable Cost Ratio 4/ (10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	1.0853	$2,523	$4,541	$12,855	510%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	1.0853	$1,839	$3,310	$11,836	644%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	1.0853	$1,370	$2,466	$8,814	643%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	1.0853	$2,505	$4,510	$18,562	741%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	1.0853	$2,505	$4,509	$9,844	393%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	1.0853	$2,442	$4,396	$6,510	267%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	1.0853	$3,225	$5,805	$12,376	384%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	1.0853	$2,910	$5,237	$6,270	215%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	1.0853	$2,565	$4,616	$6,627	258%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	1.0853	$2,396	$4,313	$5,136	214%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	1.0853	$1,958	$3,524	$4,125	211%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	1.0853	$1,373	$2,472	$4,596	335%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	1.0853	$1,684	$3,031	$6,139	365%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	1.0853	$440	$793	$1,605	364%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	1.0853	$2,004	$3,607	$7,812	390%
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	1.0853	$2,009	$3,616	$6,108	304%
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	1.0853	$629	$1,132	$3,614	575%
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	1.0853	$1,712	$3,082	$12,100	707%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	1.0853	$2,144	$3,859	$11,812	551%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	1.0853	$2,133	$3,839	$11,812	554%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	1.0853	$1,712	$3,082	$12,100	707%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	1.0853	$2,672	$4,809	$19,539	731%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	1.0853	$1,966	$3,538	$11,812	601%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	1.0853	$1,860	$3,348	$10,242	551%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	1.0853	$2,121	$3,819	$14,136	666%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	1.0853	$2,014	$3,624	$14,136	702%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	1.0853	$1,682	$3,028	$8,533	507%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	1.0853	$2,030	$3,655	$14,136	696%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	1.0853	$1,703	$3,066	$12,100	710%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	1.0853	$1,875	$3,375	$11,812	630%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	1.0853	$3,049	$5,489	$22,732	745%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	1.0853	$2,799	$5,039	$22,732	812%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	1.0853	$1,668	$3,003	$12,100	725%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	1.0853	$2,133	$3,839	$11,812	554%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	1.0853	$2,133	$3,839	$14,136	663%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	1.0853	$1,677	$3,019	$12,100	722%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	1.0853	$1,903	$3,425	$13,450	707%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	1.0853	$1,695	$3,051	$8,533	503%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	1.0853	$1,635	$2,942	$12,100	740%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	1.0853	$1,853	$3,336	$8,533	460%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	1.0853	$1,727	$3,108	$12,100	701%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	1.0853	$3,040	$5,472	$22,732	748%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	1.0853	$2,643	$4,758	$13,535	512%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	1.0853	$2,206	$3,970	$11,812	536%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	1.0853	$1,811	$3,260	$14,136	781%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	1.0853	$1,937	$3,486	$4,606	238%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	1.0853	$2,023	$3,641	$14,136	699%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	1.0853	$2,110	$3,798	$14,136	670%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	1.0853	$2,663	$4,793	$19,539	734%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	1.0853	$2,574	$4,634	$19,888	773%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	1.0853	$2,121	$3,818	$14,136	666%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	1.0853	$1,843	$3,318	$6,113	332%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	1.0853	$2,603	$4,685	$9,644	371%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	1.0853	$1,136	$2,045	$4,170	367%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	1.0853	$704	$1,267	$3,591	510%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	1.0853	$1,630	$2,933	$7,690	472%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	1.0853	$3,134	$5,640	$9,388	300%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	1.0853	$2,399	$4,318	$9,844	410%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	1.0853	$2,772	$4,989	$10,991	397%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	1.0853	$1,421	$2,557	$5,029	354%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	1.0853	$2,749	$4,948	$24,453	890%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	1.0853	$1,862	$3,351	$7,404	398%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	1.0853	$1,427	$2,569	$5,029	352%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	1.0853	$2,423	$4,361	$9,844	406%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	1.0853	$2,397	$4,315	$9,844	411%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0853	$1,432	$2,577	$5,029	351%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	1.0853	$1,399	$2,518	$5,029	359%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0853	$1,432	$2,577	$5,029	351%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 2Q11

	Origin		Destination					2Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 2Q11	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	1.0853	$2,419	$4,355	$9,844	407%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	1.0853	$2,605	$4,688	$10,944	420%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	1.0853	$2,415	$4,347	$9,844	408%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	1.0853	$3,138	$5,648	$9,388	299%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	1.0853	$2,396	$4,312	$9,844	411%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	1.0853	$2,784	$5,010	$12,624	454%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	1.0853	$545	$981	$2,486	456%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	1.0853	$2,962	$5,332	$21,912	740%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	1.0853	$2,275	$4,095	$8,384	369%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	1.0853	$1,344	$2,419	$8,983	668%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	1.0853	$332	$598	$2,400	723%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	1.0853	$337	$606	$2,900	862%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	1.0853	$343	$617	$2,400	700%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	1.0853	$1,728	$3,111	$9,214	533%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	1.0853	$342	$616	$2,400	701%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	1.0853	$1,574	$2,834	$6,113	388%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	1.0853	$2,398	$4,317	$9,644	402%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	1.0853	$1,930	$3,474	$8,928	463%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	1.0853	$289	$520	$2,758	955%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	1.0853	$1,908	$3,434	$6,899	362%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	1.0853	$1,483	$2,670	$12,375	834%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	1.0853	$1,046	$1,882	$10,487	1003%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	1.0853	$2,202	$3,964	$12,839	583%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	1.0853	$1,074	$1,934	$10,487	976%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	1.0853	$2,456	$4,422	$8,926	363%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0853	$291	$525	$1,061	364%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	1.0853	$993	$1,787	$3,431	346%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	1.0853	$662	$1,192	$1,585	239%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	1.0853	$2,302	$4,144	$8,966	389%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	1.0853	$3,378	$6,080	$6,986	207%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	1.0853	$436	$785	$1,490	342%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	1.0853	$462	$832	$1,684	364%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	1.0853	$1,661	$2,990	$3,532	213%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	1.0853	$1,580	$2,845	$5,400	342%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	1.0853	$1,043	$1,877	$5,638	541%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	1.0853	$1,478	$2,660	$3,000	203%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	1.0853	$1,121	$2,017	$4,800	428%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	1.0853	$398	$717	$2,520	633%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	1.0853	$2,299	$4,139	$7,151	311%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	1.0853	$693	$1,248	$4,500	649%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	1.0853	$773	$1,392	$3,000	388%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	1.0853	$1,488	$2,678	$7,022	472%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	1.0853	$1,568	$2,823	$3,800	242%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	1.0853	$1,282	$2,307	$5,000	390%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	1.0853	$296	$532	$1,025	347%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	1.0853	$476	$857	$1,128	237%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0853	$292	$526	$992	340%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	1.0853	$834	$1,500	$2,000	240%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	1.0853	$1,602	$2,884	$7,502	468%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	1.0853	$1,421	$2,557	$7,845	552%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	1.0853	$2,061	$3,709	$9,000	437%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	1.0853	$2,831	$5,096	$9,864	348%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	1.0853	$701	$1,261	$4,815	687%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	1.0853	$1,121	$2,018	$9,265	826%
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	1.0853	$2,489	$4,480	$10,844	436%
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	1.0853	$396	$714	$3,900	984%
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	1.0853	$2,308	$4,154	$10,008	434%
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	1.0853	$2,608	$4,695	$10,476	402%
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	1.0853	$1,804	$3,247	$5,844	324%
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	1.0853	$3,328	$5,990	$14,928	449%
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	1.0853	$2,308	$4,154	$10,008	434%
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	1.0853	$3,018	$5,432	$12,882	427%
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	1.0853	$2,308	$4,154	$10,008	434%
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	1.0853	$2,075	$3,734	$8,880	428%
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	1.0853	$2,308	$4,154	$10,008	434%
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	1.0853	$2,759	$4,967	$12,192	442%
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	1.0853	$2,489	$4,480	$10,844	436%
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	1.0853	$2,308	$4,154	$10,008	434%
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	1.0853	$1,727	$3,109	$7,200	417%
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	1.0853	$681	$1,227	$6,444	946%

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 10

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 3Q11

Origin City (1)	ST	Destination City (2)	ST	Railroad(s) (3)	Commodity (4)	Phase III Cost Base Year 2010 (5)	3Q2011 Index to 3Q11 (6)	3Q2011 Phase III Cost 1/ (7)	3Q2011 Jurisdictional Threshold 2/ (8)	3Q2011 Tariff Rate 3/ (9)	3Q2011 Revenue/Variable Cost Ratio 4/ (10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	1.0838	$2,519	$4,535	$12,855	510%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	1.0838	$1,836	$3,305	$11,836	645%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	1.0838	$1,368	$2,463	$8,814	644%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	1.0838	$2,502	$4,503	$18,562	742%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	1.0838	$2,502	$4,503	$9,844	394%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	1.0838	$2,439	$4,389	$6,510	267%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	1.0838	$3,220	$5,796	$12,376	384%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	1.0838	$2,905	$5,230	$6,270	216%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	1.0838	$2,561	$4,610	$6,627	259%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	1.0838	$2,393	$4,307	$5,136	215%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	1.0838	$1,955	$3,519	$4,125	211%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	1.0838	$1,371	$2,468	$4,596	335%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	1.0838	$1,682	$3,027	$6,139	365%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	1.0838	$440	$791	$1,605	365%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	1.0838	$2,001	$3,602	$7,812	390%
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	1.0838	$2,006	$3,611	$6,108	304%
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	1.0838	$628	$1,130	$3,614	576%
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	1.0838	$1,710	$3,078	$12,100	708%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	1.0838	$2,140	$3,853	$11,812	552%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	1.0838	$2,130	$3,833	$11,812	555%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	1.0838	$1,710	$3,077	$12,100	708%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	1.0838	$2,668	$4,802	$19,539	732%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	1.0838	$1,963	$3,533	$11,812	602%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	1.0838	$1,857	$3,343	$10,242	552%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	1.0838	$2,118	$3,813	$14,136	667%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	1.0838	$2,011	$3,619	$14,136	703%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	1.0838	$1,680	$3,024	$8,533	508%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	1.0838	$2,027	$3,649	$14,136	697%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	1.0838	$1,701	$3,061	$12,100	711%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	1.0838	$1,872	$3,370	$11,812	631%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	1.0838	$3,045	$5,481	$22,732	747%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	1.0838	$2,795	$5,031	$22,732	813%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	1.0838	$1,666	$2,998	$12,100	726%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	1.0838	$2,130	$3,833	$11,812	555%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	1.0838	$2,130	$3,833	$14,136	664%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	1.0838	$1,674	$3,014	$12,100	723%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	1.0838	$1,900	$3,420	$13,450	708%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	1.0838	$1,693	$3,047	$8,533	504%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	1.0838	$1,632	$2,938	$12,100	741%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	1.0838	$1,850	$3,331	$8,533	461%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	1.0838	$1,724	$3,104	$12,100	702%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	1.0838	$3,035	$5,464	$22,732	749%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	1.0838	$2,639	$4,751	$13,535	513%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	1.0838	$2,203	$3,965	$11,812	536%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	1.0838	$1,808	$3,255	$14,136	782%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	1.0838	$1,934	$3,481	$5,011	259%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	1.0838	$2,020	$3,636	$14,136	700%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	1.0838	$2,107	$3,793	$14,136	671%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	1.0838	$2,659	$4,786	$19,539	735%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	1.0838	$2,571	$4,627	$19,888	774%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	1.0838	$2,118	$3,813	$14,136	667%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	1.0838	$1,841	$3,313	$6,113	332%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	1.0838	$2,599	$4,678	$9,644	371%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	1.0838	$1,134	$2,042	$4,170	368%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	1.0838	$703	$1,265	$3,591	511%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	1.0838	$1,627	$2,929	$7,690	473%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	1.0838	$3,129	$5,632	$9,388	300%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	1.0838	$2,395	$4,312	$9,844	411%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	1.0838	$2,768	$4,982	$10,991	397%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	1.0838	$1,418	$2,553	$5,029	355%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	1.0838	$2,745	$4,941	$24,453	891%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	1.0838	$1,859	$3,346	$7,404	398%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	1.0838	$1,425	$2,565	$5,029	353%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	1.0838	$2,419	$4,354	$9,844	407%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	1.0838	$2,394	$4,309	$9,844	411%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0838	$1,430	$2,574	$5,029	352%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	1.0838	$1,397	$2,515	$5,029	360%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0838	$1,430	$2,573	$5,029	352%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 3Q11

	Origin		Destination						3Q2011			
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 3Q11	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	1.0838	$2,416	$4,349	$9,844	407%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	1.0838	$2,601	$4,682	$10,944	421%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	1.0838	$2,412	$4,341	$9,844	408%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	1.0838	$3,133	$5,640	$9,388	300%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	1.0838	$2,392	$4,306	$9,844	412%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	1.0838	$2,779	$5,003	$12,624	454%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	1.0838	$544	$979	$2,486	457%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	1.0838	$2,958	$5,325	$21,912	741%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	1.0838	$2,272	$4,089	$8,384	369%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	1.0838	$1,342	$2,416	$8,983	669%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	1.0838	$332	$597	$2,400	724%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	1.0838	$336	$605	$2,900	863%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	1.0838	$342	$616	$2,400	701%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	1.0838	$1,726	$3,106	$9,214	534%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	1.0838	$342	$615	$2,400	702%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	1.0838	$1,572	$2,829	$6,113	389%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	1.0838	$2,395	$4,310	$9,644	403%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	1.0838	$1,927	$3,469	$8,928	463%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	1.0838	$288	$519	$2,758	956%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	1.0838	$1,905	$3,429	$6,899	362%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	1.0838	$1,481	$2,666	$12,375	835%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	1.0838	$1,044	$1,879	$10,487	1004%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	1.0838	$2,199	$3,958	$12,839	584%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	1.0838	$1,073	$1,931	$10,487	978%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	1.0838	$2,453	$4,415	$8,926	364%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0838	$291	$524	$1,061	365%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	1.0838	$991	$1,784	$3,431	346%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	1.0838	$661	$1,191	$1,691	256%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	1.0838	$2,299	$4,138	$9,594	417%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	1.0838	$3,373	$6,072	$14,518	430%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	1.0838	$435	$784	$1,490	342%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	1.0838	$462	$831	$1,684	365%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	1.0838	$1,659	$2,986	$5,084	306%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	1.0838	$1,578	$2,841	$9,761	619%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	1.0838	$1,041	$1,874	$8,664	832%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	1.0838	$1,476	$2,656	$5,174	351%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	1.0838	$1,119	$2,014	$8,532	762%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	1.0838	$398	$716	$2,696	678%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	1.0838	$2,296	$4,133	$7,652	333%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	1.0838	$692	$1,246	$4,815	696%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	1.0838	$772	$1,390	$3,269	423%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	1.0838	$1,486	$2,674	$12,375	833%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	1.0838	$1,566	$2,819	$4,444	284%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	1.0838	$1,280	$2,303	$5,350	418%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	1.0838	$295	$531	$1,314	445%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	1.0838	$475	$855	$1,383	291%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0838	$292	$525	$1,061	364%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	1.0838	$832	$1,498	$2,633	316%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	1.0838	$1,600	$2,880	$11,542	721%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	1.0838	$1,419	$2,553	$7,845	553%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	1.0838	$2,058	$3,704	$18,406	895%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	1.0838	$2,827	$5,088	$9,864	349%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	1.0838	$700	$1,260	$4,815	688%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	1.0838	$1,119	$2,015	$9,265	828%
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	1.0838	$2,485	$4,473	$10,844	436%
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	1.0838	$396	$713	$3,900	985%
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	1.0838	$2,304	$4,148	$10,008	434%
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	1.0838	$2,604	$4,688	$10,476	402%
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	1.0838	$1,801	$3,242	$5,844	324%
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	1.0838	$3,323	$5,981	$14,928	449%
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	1.0838	$2,304	$4,148	$10,008	434%
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	1.0838	$3,013	$5,424	$12,882	427%
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	1.0838	$2,304	$4,148	$10,008	434%
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	1.0838	$2,071	$3,729	$8,880	429%
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	1.0838	$2,304	$4,148	$10,008	434%
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	1.0838	$2,755	$4,960	$12,192	442%
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	1.0838	$2,485	$4,473	$10,844	436%
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	1.0838	$2,304	$4,148	$10,008	434%
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	1.0838	$1,725	$3,104	$7,200	417%
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	1.0838	$680	$1,225	$6,444	947%

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 11

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 4Q11

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 4Q11	4Q2011 Phase III Cost 1/	4Q2011 Jurisdictional Threshold 2/	4Q2011 Tariff Rate 3/	4Q2011 Revenue/Variable Cost Ratio 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	1.0758	$2,501	$4,501	$12,855	514%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	1.0758	$1,823	$3,281	$11,836	649%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	1.0758	$1,358	$2,445	$8,814	649%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	1.0758	$2,484	$4,470	$18,562	747%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	1.0758	$2,483	$4,470	$9,844	396%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	1.0758	$2,421	$4,357	$6,510	269%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	1.0758	$3,197	$5,754	$12,376	387%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	1.0758	$2,884	$5,192	$6,270	217%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	1.0758	$2,542	$4,576	$6,627	261%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	1.0758	$2,375	$4,275	$5,136	216%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	1.0758	$1,941	$3,493	$4,125	213%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	1.0758	$1,361	$2,450	$4,596	338%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	1.0758	$1,669	$3,005	$6,139	368%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	1.0758	$436	$786	$1,605	368%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	1.0758	$1,987	$3,576	$7,812	393%
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	1.0758	$1,992	$3,585	$6,108	307%
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	1.0758	$623	$1,122	$3,614	580%
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	1.0758	$1,697	$3,055	$12,100	713%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	1.0758	$2,125	$3,825	$11,812	556%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	1.0758	$2,114	$3,805	$11,812	559%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	1.0758	$1,697	$3,055	$12,100	713%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	1.0758	$2,648	$4,767	$19,539	738%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	1.0758	$1,948	$3,507	$11,812	606%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	1.0758	$1,843	$3,318	$10,242	556%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	1.0758	$2,103	$3,785	$14,136	672%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	1.0758	$1,996	$3,593	$14,136	708%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	1.0758	$1,668	$3,002	$8,533	512%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	1.0758	$2,013	$3,623	$14,136	702%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	1.0758	$1,688	$3,039	$12,100	717%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	1.0758	$1,859	$3,345	$11,812	636%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	1.0758	$3,023	$5,441	$22,732	752%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	1.0758	$2,775	$4,995	$22,732	819%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	1.0758	$1,654	$2,977	$12,100	732%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	1.0758	$2,114	$3,805	$11,812	559%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	1.0758	$2,114	$3,805	$14,136	669%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	1.0758	$1,662	$2,992	$12,100	728%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	1.0758	$1,886	$3,395	$13,450	713%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	1.0758	$1,680	$3,025	$8,533	508%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	1.0758	$1,620	$2,917	$12,100	747%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	1.0758	$1,837	$3,306	$8,533	465%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	1.0758	$1,712	$3,081	$12,100	707%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	1.0758	$3,013	$5,424	$22,732	754%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	1.0758	$2,620	$4,716	$13,535	517%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	1.0758	$2,186	$3,936	$11,812	540%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	1.0758	$1,795	$3,231	$14,136	787%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	1.0758	$1,920	$3,456	$5,139	268%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	1.0758	$2,005	$3,610	$14,136	705%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	1.0758	$2,092	$3,765	$14,136	676%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	1.0758	$2,639	$4,751	$19,539	740%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	1.0758	$2,552	$4,593	$19,888	779%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	1.0758	$2,103	$3,785	$14,136	672%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	1.0758	$1,827	$3,289	$6,113	335%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	1.0758	$2,580	$4,644	$9,644	374%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	1.0758	$1,126	$2,027	$4,170	370%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	1.0758	$698	$1,256	$3,591	515%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	1.0758	$1,615	$2,908	$7,690	476%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	1.0758	$3,106	$5,591	$9,388	302%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	1.0758	$2,378	$4,280	$9,844	414%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	1.0758	$2,747	$4,945	$10,991	400%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	1.0758	$1,408	$2,535	$5,029	357%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	1.0758	$2,725	$4,905	$24,453	897%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	1.0758	$1,845	$3,322	$7,404	401%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	1.0758	$1,415	$2,546	$5,029	355%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	1.0758	$2,401	$4,323	$9,844	410%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	1.0758	$2,377	$4,278	$9,844	414%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0758	$1,419	$2,555	$5,029	354%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	1.0758	$1,387	$2,496	$5,029	363%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0758	$1,419	$2,554	$5,029	354%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 4Q11

	Origin		Destination						4Q2011			
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 4Q11	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	1.0758	$2,398	$4,317	$9,844	410%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	1.0758	$2,582	$4,647	$10,944	424%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	1.0758	$2,394	$4,309	$9,844	411%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	1.0758	$3,110	$5,599	$9,388	302%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	1.0758	$2,375	$4,274	$9,844	415%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	1.0758	$2,759	$4,967	$12,624	458%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	1.0758	$540	$972	$2,486	460%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	1.0758	$2,937	$5,286	$21,912	746%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	1.0758	$2,255	$4,059	$8,384	372%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	1.0758	$1,332	$2,398	$8,983	674%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	1.0758	$329	$592	$2,400	729%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	1.0758	$334	$600	$2,900	869%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	1.0758	$340	$611	$2,400	707%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	1.0758	$1,713	$3,083	$9,214	538%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	1.0758	$339	$611	$2,400	708%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	1.0758	$1,560	$2,809	$6,113	392%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	1.0758	$2,377	$4,279	$9,644	406%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	1.0758	$1,913	$3,444	$8,928	467%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	1.0758	$286	$515	$2,758	963%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	1.0758	$1,891	$3,404	$6,899	365%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	1.0758	$1,470	$2,647	$12,375	842%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	1.0758	$1,037	$1,866	$10,487	1012%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	1.0758	$2,183	$3,929	$12,839	588%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	1.0758	$1,065	$1,917	$10,487	985%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	1.0758	$2,435	$4,383	$8,926	367%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0758	$289	$520	$1,061	367%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	1.0758	$984	$1,771	$3,431	349%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	1.0758	$657	$1,182	$1,910	291%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	1.0758	$2,282	$4,107	$9,594	420%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	1.0758	$3,348	$6,027	$14,518	434%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	1.0758	$432	$778	$1,490	345%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	1.0758	$458	$825	$1,684	367%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	1.0758	$1,647	$2,964	$5,084	309%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	1.0758	$1,567	$2,820	$9,761	623%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	1.0758	$1,034	$1,860	$8,664	838%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	1.0758	$1,465	$2,637	$5,174	353%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	1.0758	$1,111	$2,000	$8,532	768%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	1.0758	$395	$710	$2,696	683%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	1.0758	$2,279	$4,103	$7,652	336%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	1.0758	$687	$1,237	$4,815	701%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	1.0758	$767	$1,380	$3,269	426%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	1.0758	$1,475	$2,655	$12,375	839%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	1.0758	$1,555	$2,798	$4,444	286%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	1.0758	$1,270	$2,287	$5,350	421%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	1.0758	$293	$527	$1,910	652%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	1.0758	$472	$849	$1,910	405%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0758	$289	$521	$1,061	367%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	1.0758	$826	$1,487	$2,633	319%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	1.0758	$1,588	$2,859	$11,542	727%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	1.0758	$1,408	$2,535	$7,845	557%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	1.0758	$2,043	$3,677	$18,406	901%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	1.0758	$2,806	$5,051	$9,864	352%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	1.0758	$695	$1,250	$4,815	693%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	1.0758	$1,111	$2,000	$9,265	834%
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	1.0758	$2,467	$4,440	$10,844	440%
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	1.0758	$393	$707	$3,900	992%
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	1.0758	$2,287	$4,117	$10,008	438%
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	1.0758	$2,585	$4,654	$10,476	405%
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	1.0758	$1,788	$3,219	$5,844	327%
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	1.0758	$3,299	$5,938	$14,928	453%
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	1.0758	$2,287	$4,117	$10,008	438%
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	1.0758	$2,991	$5,384	$12,882	431%
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	1.0758	$2,287	$4,117	$10,008	438%
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	1.0758	$2,056	$3,701	$8,880	432%
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	1.0758	$2,287	$4,117	$10,008	438%
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	1.0758	$2,735	$4,923	$12,192	446%
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	1.0758	$2,467	$4,440	$10,844	440%
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	1.0758	$2,287	$4,117	$10,008	438%
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	1.0758	$1,712	$3,082	$7,200	421%
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	1.0758	$676	$1,216	$6,444	954%

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 12

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 1Q12

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	1Q2012 Index to 1Q12	1Q2012 Phase III Cost 1/	1Q2012 Jurisdictional Threshold 2/	1Q2012 Tariff Rate 3/	1Q2012 Revenue/Variable Cost Ratio 4/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Exhibit A - Local Moves											
1. **Removed**											
2. Bayway	NJ	Waynesville	NC	NS	2819315	$2,324	1.0790	$2,508	$4,515	$12,855	513%
3. Belle	WV	Danville	IL	NS	2813980	$1,694	1.0790	$1,828	$3,291	$11,836	647%
4. **Removed**											
5. **Removed**											
6. **Removed**											
7. **Removed**											
8. **Removed**											
9. Belle	WV	Wyandotte	MI	NS	2813934	$1,263	1.0790	$1,362	$2,452	$8,814	647%
10. Charleston	TN	Edgemoor	DE	NS	2812815	$2,308	1.0790	$2,491	$4,484	$18,562	745%
11. Edgemoor	DE	Chicago	IL	NS	2816130	$2,308	1.0790	$2,491	$4,483	$9,844	395%
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$2,250	1.0790	$2,428	$4,370	$6,510	268%
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$2,971	1.0790	$3,206	$5,771	$12,376	386%
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$2,681	1.0790	$2,893	$5,207	$6,270	217%
15. Edgemoor	DE	Wabash	IN	NS	2816130	$2,363	1.0790	$2,550	$4,590	$6,627	260%
16. Lemoyne	AL	Giant	SC	NS	4810560	$2,208	1.0790	$2,382	$4,288	$5,136	216%
17. Loudon	TN	Braithwaite	LA	NS	2818512	$1,804	1.0790	$1,946	$3,504	$4,125	212%
18. Louisville	KY	Decatur	IL	NS	2819450	$1,265	1.0790	$1,365	$2,458	$4,596	337%
19. Louisville	KY	Lafayette	IN	NS	2819450	$1,552	1.0790	$1,674	$3,014	$6,139	367%
20. **Removed**											
21. **Removed**											
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$406	1.0790	$438	$788	$1,605	367%
23. Reybold	DE	Detroit	MI	NS	2819315	$1,847	1.0790	$1,992	$3,586	$7,812	392%
24. Reybold	DE	Fort Mill	SC	NS	2819315	$1,851	1.0790	$1,997	$3,595	$6,108	306%
25. Reybold	DE	Morrisville	PA	NS	2819315	$579	1.0790	$625	$1,125	$3,614	578%
Exhibit B - Joint Moves											
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$1,578	1.0790	$1,702	$3,064	$12,100	711%
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$1,975	1.0790	$2,131	$3,836	$11,812	554%
3. **Removed**											
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$1,965	1.0790	$2,120	$3,817	$11,812	557%
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$1,578	1.0790	$1,702	$3,064	$12,100	711%
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$2,462	1.0790	$2,656	$4,781	$19,539	736%
7. **Removed**											
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$1,811	1.0790	$1,954	$3,517	$11,812	604%
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$1,714	1.0790	$1,849	$3,328	$10,242	554%
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$1,955	1.0790	$2,109	$3,796	$14,136	670%
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$1,855	1.0790	$2,002	$3,603	$14,136	706%
12. **Removed**											
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$1,550	1.0790	$1,673	$3,011	$8,533	510%
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$1,871	1.0790	$2,019	$3,634	$14,136	700%
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$1,569	1.0790	$1,693	$3,048	$12,100	715%
16. **Removed**											
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$1,728	1.0790	$1,864	$3,355	$11,812	634%
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$2,809	1.0790	$3,032	$5,457	$22,732	750%
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$2,579	1.0790	$2,783	$5,009	$22,732	817%
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$1,537	1.0790	$1,659	$2,985	$12,100	730%
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$1,965	1.0790	$2,120	$3,817	$11,812	557%
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$1,965	1.0790	$2,120	$3,817	$14,136	667%
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$1,545	1.0790	$1,667	$3,001	$12,100	726%
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$1,753	1.0790	$1,892	$3,405	$13,450	711%
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$1,562	1.0790	$1,685	$3,034	$8,533	506%
26. **Removed**											
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$1,506	1.0790	$1,625	$2,925	$12,100	745%
28. **Removed**											
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$1,707	1.0790	$1,842	$3,316	$8,533	463%
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$1,591	1.0790	$1,717	$3,090	$12,100	705%
31. **Removed**											
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$2,801	1.0790	$3,022	$5,440	$22,732	752%
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$2,435	1.0790	$2,628	$4,730	$13,535	515%
34. **Removed**											
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$2,032	1.0790	$2,193	$3,947	$11,812	539%
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$1,669	1.0790	$1,800	$3,241	$14,136	785%
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$1,784	1.0790	$1,926	$3,466	$5,139	267%
38. **Removed**											
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$1,864	1.0790	$2,011	$3,620	$14,136	703%
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$1,944	1.0790	$2,098	$3,776	$14,136	674%
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$2,453	1.0790	$2,647	$4,765	$19,539	738%
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$2,372	1.0790	$2,560	$4,607	$19,888	777%
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$1,955	1.0790	$2,109	$3,796	$14,136	670%
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,698	1.0790	$1,833	$3,299	$6,113	334%
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,398	1.0790	$2,588	$4,658	$9,644	373%
46. **Removed**											
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,047	1.0790	$1,129	$2,033	$4,170	369%
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$649	1.0790	$700	$1,260	$3,591	513%
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$1,501	1.0790	$1,620	$2,916	$7,690	475%
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$2,887	1.0790	$3,115	$5,608	$9,388	301%
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$2,210	1.0790	$2,385	$4,293	$9,844	413%
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$2,554	1.0790	$2,756	$4,960	$10,991	399%
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$1,309	1.0790	$1,412	$2,542	$5,029	356%
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$2,533	1.0790	$2,733	$4,920	$24,453	895%
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$1,715	1.0790	$1,851	$3,331	$7,404	400%
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,315	1.0790	$1,419	$2,554	$5,029	354%
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$2,232	1.0790	$2,409	$4,336	$9,844	409%
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$2,209	1.0790	$2,384	$4,290	$9,844	413%
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0790	$1,424	$2,562	$5,029	353%
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,289	1.0790	$1,391	$2,504	$5,029	362%
61. **Removed**											
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$1,319	1.0790	$1,423	$2,562	$5,029	353%

Variable Cost, Jurisdictional Threshold, Tariff Rate and
Revenue/Variable Cost Ratios Per Car for DuPont Movements - 1Q12

	Origin		Destination							1Q2012		
	City	ST	City	ST	Railroad(s)	Commodity	Phase III Cost Base Year 2010	Index to 1Q12	Phase III Cost 1/	Jurisdictional Threshold 2/	Tariff Rate 3/	Revenue/Variable Cost Ratio 4/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$2,229	1.0790	$2,405	$4,330	$9,844	409%
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$2,400	1.0790	$2,590	$4,661	$10,944	423%
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$2,225	1.0790	$2,401	$4,322	$9,844	410%
66.	**Removed**											
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$2,891	1.0790	$3,120	$5,615	$9,388	301%
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$2,207	1.0790	$2,382	$4,287	$9,844	413%
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$2,565	1.0790	$2,767	$4,981	$12,624	456%
70.	**Removed**											
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$502	1.0790	$542	$975	$2,486	459%
72.	**Removed**											
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$2,730	1.0790	$2,945	$5,302	$21,912	744%
74.	**Removed**											
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,096	1.0790	$2,262	$4,071	$8,384	371%
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$1,238	1.0790	$1,336	$2,405	$8,983	672%
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$306	1.0790	$330	$594	$2,400	727%
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$310	1.0790	$335	$602	$2,900	867%
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$316	1.0790	$341	$613	$2,400	704%
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$1,592	1.0790	$1,718	$3,093	$9,214	536%
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$315	1.0790	$340	$612	$2,400	705%
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$1,450	1.0790	$1,565	$2,817	$6,113	391%
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$2,210	1.0790	$2,384	$4,291	$9,644	405%
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$1,778	1.0790	$1,919	$3,454	$8,928	465%
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$266	1.0790	$287	$517	$2,758	961%
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$1,758	1.0790	$1,897	$3,414	$6,899	364%
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,367	1.0790	$1,475	$2,654	$12,375	839%
88.	**Removed**											
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$963	1.0790	$1,040	$1,871	$10,487	1009%
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$2,029	1.0790	$2,190	$3,941	$12,839	586%
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$990	1.0790	$1,068	$1,923	$10,487	982%
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$2,263	1.0790	$2,442	$4,396	$8,926	365%
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0790	$290	$522	$1,061	366%
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$914	1.0790	$987	$1,776	$3,431	348%
95.	**Removed**											
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$610	1.0790	$659	$1,185	$1,910	290%
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$2,121	1.0790	$2,289	$4,120	$9,594	419%
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$3,112	1.0790	$3,358	$6,045	$14,518	432%
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$402	1.0790	$434	$780	$1,490	344%
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$426	1.0790	$460	$827	$1,684	366%
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$1,531	1.0790	$1,652	$2,973	$5,084	308%
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$1,456	1.0790	$1,571	$2,828	$9,761	621%
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$961	1.0790	$1,037	$1,866	$8,664	836%
104.	**Removed**											
105.	**Removed**											
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$1,362	1.0790	$1,469	$2,645	$5,174	352%
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$1,033	1.0790	$1,114	$2,006	$8,532	766%
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$367	1.0790	$396	$712	$2,696	681%
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$2,119	1.0790	$2,286	$4,115	$7,652	335%
110.	**Removed**											
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$639	1.0790	$689	$1,240	$4,815	699%
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$713	1.0790	$769	$1,384	$3,269	425%
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$1,371	1.0790	$1,479	$2,663	$12,375	837%
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$1,445	1.0790	$1,559	$2,807	$4,444	285%
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$1,181	1.0790	$1,274	$2,293	$5,350	420%
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$272	1.0790	$294	$529	$1,910	650%
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$438	1.0790	$473	$852	$1,910	404%
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$269	1.0790	$290	$523	$1,061	365%
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$768	1.0790	$829	$1,492	$2,633	318%
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$1,476	1.0790	$1,593	$2,867	$11,542	725%
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$1,309	1.0790	$1,412	$2,542	$7,845	555%
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$1,899	1.0790	$2,049	$3,688	$18,406	898%
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$2,608	1.0790	$2,815	$5,066	$9,864	350%
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$646	1.0790	$697	$1,254	$4,815	691%
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$1,033	1.0790	$1,115	$2,006	$9,265	831%
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$2,293	1.0790	$2,474	$4,454	$10,844	438%
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$365	1.0790	$394	$710	$3,900	989%
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$2,126	1.0790	$2,294	$4,130	$10,008	436%
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$2,403	1.0790	$2,593	$4,667	$10,476	404%
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$1,662	1.0790	$1,793	$3,228	$5,844	326%
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$3,066	1.0790	$3,309	$5,955	$14,928	451%
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$2,126	1.0790	$2,294	$4,130	$10,008	436%
133.	**Removed**											
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$2,780	1.0790	$3,000	$5,400	$12,882	429%
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$2,126	1.0790	$2,294	$4,130	$10,008	436%
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$1,911	1.0790	$2,062	$3,712	$8,880	431%
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$2,126	1.0790	$2,294	$4,130	$10,008	436%
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$2,542	1.0790	$2,743	$4,938	$12,192	444%
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$2,293	1.0790	$2,474	$4,454	$10,844	438%
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$2,126	1.0790	$2,294	$4,130	$10,008	436%
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$1,591	1.0790	$1,717	$3,091	$7,200	419%
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$628	1.0790	$678	$1,220	$6,444	951%

1/ Column (5) x Column (6)
2/ Column (7) x 1.8
3/ Tariff Rate from Exhibit II-A-16
4/ Column (9)/Column (7)

EXHIBIT NO. 13

	Origin		Destination			Shipment	Cars Per		Car	Commodity	Movement
	City	ST	City	ST	Route	Type(s)	Train	Car Type	Owner	(Full STCC)	Type
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	**Removed**										
2.	Bayway	NJ	Waynesville	NC	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
3.	Belle	WV	Danville	IL	NS	ORIG & TERM	1.0	Tank Car > 22,000 Gallons	Private	2813980	Single Car
4.	**Removed**										
5.	**Removed**										
6.	**Removed**										
7.	**Removed**										
8.	**Removed**										
9.	Belle	WV	Wyandotte	MI	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2813934	Single Car
10.	Charleston	TN	Edgemoor	DE	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812815	Single Car
11.	Edgemoor	DE	Chicago	IL	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
12.	Edgemoor	DE	Chillicothe	OH	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
13.	Edgemoor	DE	Mahrt	AL	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
14.	Edgemoor	DE	Riverwood Intl	GA	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
15.	Edgemoor	DE	Wabash	IN	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
16.	Lemoyne	AL	Giant	SC	NS	ORIG & TERM	1.0	Tank Car > 22,000 Gallons	Private	4810560	Single Car
17.	Loudon	TN	Braithwaite	LA	NS	ORIG & TERM	1.0	Tank Car > 22,000 Gallons	Private	2818512	Single Car
18.	Louisville	KY	Decatur	IL	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819450	Single Car
19.	Louisville	KY	Lafayette	IN	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819450	Single Car
20.	**Removed**										
21.	**Removed**										
22.	McIntosh	AL	Lemoyne	AL	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
23.	Reybold	DE	Detroit	MI	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
24.	Reybold	DE	Fort Mill	SC	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
25.	Reybold	DE	Morrisville	PA	NS	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
	Exhibit B - Joint Moves										
1.	Belle	WV	Anaheim	CA	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818221	Single Car
2.	Belle	WV	Bayport	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818620	Single Car
3.	**Removed**										
4.	Belle	WV	Brownsville	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818221	Single Car
5.	Belle	WV	Burley	ID	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
6.	Belle	WV	Cadet	MO	NS-KCITY-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
7.	**Removed**										
8.	Belle	WV	Channelview	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818130	Single Car
9.	Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818221	Single Car
10.	Belle	WV	Conroe	TX	NS-ESTL-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
11.	Belle	WV	Corsicana	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
12.	**Removed**										
13.	Belle	WV	East Billings	MT	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818130	Single Car
14.	Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
15.	Belle	WV	Finley	WA	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
16.	**Removed**										
17.	Belle	WV	Freeport	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818130	Single Car
18.	Belle	WV	Garyville	LA	NS-NEWOR-CN	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
19.	Belle	WV	Geismar	LA	NS-NEWOR-CN	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
20.	Belle	WV	Janesville	WI	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2818131	Single Car
21.	Belle	WV	Laredo	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818221	Single Car
22.	Belle	WV	Laredo	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818131	Single Car
23.	Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813980	Single Car
24.	Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
25.	Belle	WV	Los Angeles	CA	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818130	Single Car
26.	**Removed**										
27.	Belle	WV	Millsdale	IL	NS-CHGO-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2818131	Single Car
28.	**Removed**										
29.	Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818221	Single Car
30.	Belle	WV	San Dimas	CA	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813980	Single Car
31.	**Removed**										
32.	Belle	WV	St Gabriel	LA	NS-NEWOR-CN	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
33.	Belle	WV	St Joseph	MO	NS-KCITY-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818130	Single Car
34.	**Removed**										
35.	Belle	WV	Strang	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818221	Single Car
36.	Belle	WV	Strang	TX	NS-ESTL-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
37.	Belle	WV	Strang	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819183	Single Car
38.	**Removed**										
39.	Belle	WV	Texas City	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
40.	Belle	WV	Verona	MO	NS-ESTL-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
41.	Belle	WV	West Memphis	AR	NS-KCITY-UP	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
42.	Belle	WV	Winford Spur	LA	NS-MERID-KCS	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813980	Single Car
43.	Belle	WV	Wichita	KS	NS-ESTL-BNSF	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
44.	Bloomington	TX	Greenville	SC	UP-NEWOR-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	2821142	Single Car
45.	Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	2821142	Single Car
46.	**Removed**										
47.	Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
48.	Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	2991315	Single Car
49.	Dowling	TX	Fort Mill	SC	KCS-MERID-NS	RECEIVE & TERM	1.0	1/	Private	2815112	Single Car
50.	Edgemoor	DE	Garland	TX	NS-MERID-KCS	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
51.	Edgemoor	DE	Groos	MI	NS-CHGO-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car

	Origin		Destination			Shipment	Cars Per		Car	Commodity	Movement
	City	ST	City	ST	Route	Type(s)	Train	Car Type	Owner	(Full STCC)	Type
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819971	Single Car
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	2991315	Single Car
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	2813984	Single Car
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	2813984	Single Car
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	2991315	Single Car
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	4810560	Single Car
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819330	Single Car
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2812815	Single Car
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	2821142	Single Car
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	2821142	Single Car
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	RECEIVE & TERM	1.0	1/	Private	2815112	Single Car
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	2815112	Single Car
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	2812350	Single Car
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812815	Single Car
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813980	Single Car
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	ORIG & DELIVER	1.0	Covered Hopper	Private	3274110	Single Car
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	RECEIVE & TERM	1.0	Covered Hopper	Railroad	2991315	Single Car
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2818512	Single Car
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2818512	Single Car
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819325	Single Car
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819340	Single Car
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819345	Single Car
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812815	Single Car
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2812220	Single Car
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	RECEIVE & TERM	1.0	1/	Private	2815112	Single Car
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	RECEIVE & TERM	1.0	Covered Hopper	Private	1441325	Single Car
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	RECEIVE & TERM	1.0	Covered Hopper	Railroad	1441325	Single Car
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
120.	Belle	WV	Divine	IL	NS-PINE-CN	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813980	Single Car
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	2813934	Single Car
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2819325	Single Car
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	RECEIVE & TERM	1.0	Covered Hopper	Railroad	2991315	Single Car
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	2816130	Single Car
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2812410	Single Car
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car

	Origin		Destination			Shipment	Cars Per		Car	Commodity	Movement
	City	ST	City	ST	Route	Type(s)	Train	Car Type	Owner	(Full STCC)	Type
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	2819315	Single Car

1/ DuPont and NS did not agree on car type for this lane at the time of submission on December 22, 2011. After further review DuPont agrees with NS' proposed car type for these three lanes.

EXHIBIT NO. 14

Highly Confidential Information

Redacted

EXHIBIT NO. 15

Summary of Traffic and Operating Parameters for DuPont Movements

Origin City (1)	ST	Destination City (2)	ST	Route (3)	Miles (4)	Shipment Type(s) (5)	Cars Per Train (6)	Car Type (7)	Car Owner (8)	Tons Per Car (9)	Commodity (Full STCC) (10)	Movement Type (11)
Exhibit A - Local Moves												
1. **Removed**												
2. Bayway	NJ	Waynesville	NC	NS	836	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.3	2819315	Single Car
3. Belle	WV	Danville	IL	NS	595	ORIG & TERM	1.0	Tank Car > 22,000 Gallons	Private	78.6	2813980	Single Car
4. **Removed**												
5. **Removed**												
6. **Removed**												
7. **Removed**												
8. **Removed**												
9. Belle	WV	Wyandotte	MI	NS	435	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	77.9	2813934	Single Car
10. Charleston	TN	Edgemoor	DE	NS	870	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	89.9	2812815	Single Car
11. Edgemoor	DE	Chicago	IL	NS	822	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	99.9	2816130	Single Car
12. Edgemoor	DE	Chillicothe	OH	NS	798	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	99.8	2816130	Single Car
13. Edgemoor	DE	Mahrt	AL	NS	1,098	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	100.5	2816130	Single Car
14. Edgemoor	DE	Riverwood Intl	GA	NS	976	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	100.5	2816130	Single Car
15. Edgemoor	DE	Wabash	IN	NS	841	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	100.7	2816130	Single Car
16. Lemoyne	AL	Giant	SC	NS	841	ORIG & TERM	1.0	Tank Car > 22,000 Gallons	Private	74.8	4810560	Single Car
17. Loudon	TN	Braithwaite	LA	NS	591	ORIG & TERM	1.0	Tank Car > 22,000 Gallons	Private	93.7	2818512	Single Car
18. Louisville	KY	Decatur	IL	NS	385	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.6	2819450	Single Car
19. Louisville	KY	Lafayette	IN	NS	508	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.1	2819450	Single Car
20. **Removed**												
21. **Removed**												
22. McIntosh	AL	Lemoyne	AL	NS	22	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.3	2812220	Single Car
23. Reybold	DE	Detroit	MI	NS	651	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
24. Reybold	DE	Fort Mill	SC	NS	653	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
25. Reybold	DE	Morrisville	PA	NS	97	ORIG & TERM	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
Exhibit B - Joint Moves												
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	607	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.0	2813980	Single Car
2. Belle	WV	Bayport	TX	NS-ESTL-UP	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	90.2	2818620	Single Car
3. **Removed**												
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	757	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	83.2	2818221	Single Car
5. Belle	WV	Burley	ID	NS-CHGO-UP	607	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.0	2813934	Single Car
6. Belle	WV	Cadet	MO	NS-KCITY-UP	1,001	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.1	2813934	Single Car
7. **Removed**												
8. Belle	WV	Channelview	TX	NS-ESTL-UP	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	73.1	2818130	Single Car
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	648	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	83.2	2818221	Single Car
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	772	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.7	2813934	Single Car
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	77.7	2813934	Single Car
12. **Removed**												
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	598	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	77.0	2818130	Single Car
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	79.3	2813934	Single Car
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	598	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	79.5	2813934	Single Car
16. **Removed**												
17. Belle	WV	Freeport	TX	NS-ESTL-UP	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	64.4	2818130	Single Car
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	1,151	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.8	2813934	Single Car
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	1,023	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	83.2	2813934	Single Car
20. Belle	WV	Janesville	WI	NS-CHGO-UP	600	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	86.5	2818131	Single Car
21. Belle	WV	Laredo	TX	NS-ESTL-UP	757	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	83.2	2818221	Single Car
22. Belle	WV	Laredo	TX	NS-ESTL-UP	757	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	83.2	2818131	Single Car
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	589	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.9	2813980	Single Car
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	678	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	79.9	2813934	Single Car
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	607	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	76.0	2818130	Single Car
26. **Removed**												
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	585	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	86.8	2818131	Single Car
28. **Removed**												
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	598	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	97.0	2818221	Single Car
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	607	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	79.7	2813980	Single Car
31. **Removed**												
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	1,151	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.3	2813934	Single Car
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	1,001	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	76.1	2818130	Single Car
34. **Removed**												
35. Belle	WV	Strang	TX	NS-ESTL-UP	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	96.2	2818221	Single Car
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	58.3	2813934	Single Car
37. Belle	WV	Strang	TX	NS-ESTL-UP	732	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	82.1	2819183	Single Car
38. **Removed**												
39. Belle	WV	Texas City	TX	NS-ESTL-UP	732	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.6	2813934	Single Car
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	772	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	77.7	2813934	Single Car
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	1,001	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	77.4	2813934	Single Car
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	957	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.8	2813980	Single Car
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	772	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.7	2813934	Single Car
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	669	RECEIVE & TERM	1.0	Covered Hopper	Private	93.9	2821142	Single Car
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	1,027	RECEIVE & TERM	1.0	Covered Hopper	Private	87.3	2821142	Single Car
46. **Removed**												
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	352	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	98.0	2812220	Single Car
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	195	RECEIVE & TERM	1.0	Covered Hopper	Private	94.0	2991315	Single Car
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	589	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	73.3	2815112	Single Car
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	1,123	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.2	2816130	Single Car
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	837	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.4	2816130	Single Car
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	1,021	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2816130	Single Car
53. Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	457	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.8	2816130	Single Car
54. Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	1,039	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	88.8	2819971	Single Car
55. Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	627	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.9	2816130	Single Car
56. Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	462	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	99.9	2816130	Single Car
57. Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	844	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.9	2816130	Single Car
58. Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	837	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.3	2816130	Single Car
59. Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	462	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.6	2816130	Single Car
60. Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	449	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.7	2816130	Single Car
61. **Removed**												
62. Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	462	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.6	2816130	Single Car
63. Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	844	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.6	2816130	Single Car

Summary of Traffic and Operating Parameters for DuPont Movements

	Origin		Destination				Shipment	Cars Per		Car	Tons Per	Commodity	Movement
	City	ST	City	ST	Route	Miles	Type(s)	Train	Car Type	Owner	Car	(Full STCC)	Type
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	914	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	101.0	2816130	Single Car
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	844	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.3	2816130	Single Car
66.	**Removed**												
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	1,123	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.4	2816130	Single Car
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	837	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	100.1	2816130	Single Car
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	1,040	RECEIVE & TERM	1.0	Covered Hopper	Private	97.7	2991315	Single Car
70.	**Removed**												
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	120	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	87.2	2813984	Single Car
72.	**Removed**												
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	1,072	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	85.8	2813984	Single Car
74.	**Removed**												
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	838	RECEIVE & TERM	1.0	Covered Hopper	Private	96.6	2991315	Single Car
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	492	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	76.8	4810560	Single Car
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	41	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	83.3	2819330	Single Car
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	41	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	89.6	2812815	Single Car
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	41	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	98.9	2812220	Single Car
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	585	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	97.9	2812220	Single Car
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	41	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	98.5	2812220	Single Car
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	662	RECEIVE & TERM	1.0	Covered Hopper	Private	67.2	2821142	Single Car
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	1,087	RECEIVE & TERM	1.0	Covered Hopper	Private	65.1	2821142	Single Car
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	699	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	89.1	2815112	Single Car
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	19	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	95.0	2815112	Single Car
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	645	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	89.1	2812350	Single Car
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	514	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	89.2	2812815	Single Car
88.	**Removed**												
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	331	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.9	2813980	Single Car
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	810	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	77.7	2813934	Single Car
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	344	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	78.3	2813934	Single Car
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	863	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	99.6	2819315	Single Car
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	21	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	99.8	2819315	Single Car
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	297	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	97.5	2819315	Single Car
95.	**Removed**												
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	189	ORIG & DELIVER	1.0	Covered Hopper	Private	83.9	3274110	Single Car
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	802	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	99.8	2816130	Single Car
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	1,044	RECEIVE & TERM	1.0	Covered Hopper	Railroad	93.4	2991315	Single Car
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	84	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	86.0	2818512	Single Car
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	84	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	95.0	2818512	Single Car
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	555	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	99.2	2819315	Single Car
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	545	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	92.1	2819325	Single Car
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	365	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	74.2	2819340	Single Car
104.	**Removed**												
105.	**Removed**												
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	508	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	90.5	2819345	Single Car
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	344	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	99.2	2812220	Single Car
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	63	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.2	2812220	Single Car
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	807	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.5	2816130	Single Car
110.	**Removed**												
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	180	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	96.8	2816130	Single Car
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	210	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.1	2812220	Single Car
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	514	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	89.7	2812815	Single Car
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	514	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	100.7	2812220	Single Car
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	433	RECEIVE & TERM	1.0	Tank Car > 22,000 Gallons	Private	88.4	2815112	Single Car
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	24	RECEIVE & TERM	1.0	Covered Hopper	Private	98.2	1441325	Single Car
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	24	RECEIVE & TERM	1.0	Covered Hopper	Railroad	98.8	1441325	Single Car
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	21	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	101.3	2819315	Single Car
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	231	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	100.3	2819315	Single Car
120.	Belle	WV	Divine	IL	NS-PINE-CN	571	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	75.2	2813980	Single Car
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	581	ORIG & DELIVER	1.0	Tank Car > 22,000 Gallons	Private	50.4	2813934	Single Car
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	765	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	86.4	2819325	Single Car
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	838	RECEIVE & TERM	1.0	Covered Hopper	Railroad	96.7	2991315	Single Car
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	181	RECEIVE & TERM	1.0	Tank Car < 22,000 Gallons	Private	98.8	2816130	Single Car
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	352	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	95.0	2812410	Single Car
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	907	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	64	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	834	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	955	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	631	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	1,245	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	834	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
133.	**Removed**												
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	1,120	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	834	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	740	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	834	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	1,016	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	907	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	834	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	600	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	179	ORIG & DELIVER	1.0	Tank Car < 22,000 Gallons	Private	93.4	2819315	Single Car

EXHIBIT NO. 16

Summary of Tariff Rates for DuPont Movements 2Q09 - 1Q12

	Origin		Destination		Commodity	2Q09 Average Rate	3Q09 Average Rate 1/	4Q09 Average Rate	1Q10 Average Rate	2Q10 Average Rate 1/	3Q10 Average Rate	4Q10 Average Rate	1Q11 Average Rate	2Q11 Average Rate	3Q11 Average Rate	4Q11 Average Rate	1Q12 Average Rate
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Exhibit A - Local Moves																	
1.	**Removed**																
2.	Bayway	NJ	Waynesville	NC	SULFURIC ACID	xxx	xxx	xxx	xxx	$12,014	$12,014	$12,014	$12,855	$12,855	$12,855	$12,855	$12,855
3.	Belle	WV	Danville	IL	DIMETHYL ETHER	xxx	xxx	xxx	xxx	$4,626	$4,626	$4,626	$11,836	$11,836	$11,836	$11,836	$11,836
4.	**Removed**																
5.	**Removed**																
6.	**Removed**																
7.	**Removed**																
8.	**Removed**																
9.	Belle	WV	Wyandotte	MI	METHYLAMINE AN	xxx	xxx	xxx	xxx	$6,264	$6,264	$6,264	$8,814	$8,814	$8,814	$8,814	$8,814
10.	Charleston	TN	Edgemoor	DE	CHLORINE	xxx	xxx	xxx	xxx	$13,638	$13,638	$13,638	$18,562	$18,562	$18,562	$18,562	$18,562
11.	Edgemoor	DE	Chicago	IL	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$9,200	$9,200	$9,200	$9,844	$9,844	$9,844	$9,844	$9,844
12.	Edgemoor	DE	Chillicothe	OH	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$6,084	$6,084	$6,084	$6,510	$6,510	$6,510	$6,510	$6,510
13.	Edgemoor	DE	Mahrt	AL	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$11,566	$11,566	$11,566	$12,376	$12,376	$12,376	$12,376	$12,376
14.	Edgemoor	DE	Riverwood Intl	GA	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$5,860	$5,860	$5,860	$6,270	$6,270	$6,270	$6,270	$6,270
15.	Edgemoor	DE	Wabash	IN	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$6,193	$6,193	$6,193	$6,627	$6,627	$6,627	$6,627	$6,627
16.	Lemoyne	AL	Giant	SC	WASTE FLAMMABLE L	xxx	xxx	xxx	xxx	$4,800	$4,800	$4,800	$5,136	$5,136	$5,136	$5,136	$5,136
17.	Loudon	TN	Braithwaite	LA	PROPANEDIOL BIO	xxx	xxx	xxx	xxx	$4,125	$4,125	$4,125	$4,125	$4,125	$4,125	$4,125	$4,125
18.	Louisville	KY	Decatur	IL	ACID MURIATIC (HY	xxx	xxx	xxx	xxx	$3,302	$3,302	$3,302	$4,596	$4,596	$4,596	$4,596	$4,596
19.	Louisville	KY	Lafayette	IN	ACID MURIATIC (HY	xxx	xxx	xxx	xxx	$3,752	$3,752	$3,752	$6,139	$6,139	$6,139	$6,139	$6,139
20.	**Removed**																
21.	**Removed**																
22.	McIntosh	AL	Lemoyne	AL	SODIUM CAUSTIC	xxx	xxx	xxx	xxx	$1,500	$1,500	$1,500	$1,605	$1,605	$1,605	$1,605	$1,605
23.	Reybold	DE	Detroit	MI	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$7,812	$7,812	$7,812	$7,812
24.	Reybold	DE	Fort Mill	SC	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$6,108	$6,108	$6,108	$6,108
25.	Reybold	DE	Morrisville	PA	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$3,614	$3,614	$3,614	$3,614
Exhibit B - Joint Moves																	
1.	Belle	WV	Anaheim	CA	DIMETHYL ETHER	$7,715	$7,715	$7,715	$7,715	$7,937	$8,975	$8,975	$12,100	$12,100	$12,100	$12,100	$12,100
2.	Belle	WV	Bayport	TX	ACID, GLYCOLIC	$4,537	$4,851	$5,500	$5,500	$5,500	$5,950	$5,950	$11,812	$11,812	$11,812	$11,812	$11,812
3.	**Removed**																
4.	Belle	WV	Brownsville	TX	DIMETHYL FORMAMID	$4,537	$4,851	$5,500	$5,500	$5,579	$5,950	$5,950	$11,812	$11,812	$11,812	$11,812	$11,812
5.	Belle	WV	Burley	ID	METHYLAMINE AN	$7,715	$7,715	$7,715	$7,715	$7,715	$8,975	$8,975	$12,100	$12,100	$12,100	$12,100	$12,100
6.	Belle	WV	Cadet	MO	METHYLAMINE AN	$9,563	$8,086	$7,875	$7,875	$8,495	$11,400	$11,400	$19,539	$19,539	$19,539	$19,539	$19,539
7.	**Removed**																
8.	Belle	WV	Channelview	TX	METHYLAMINE, AQU	$4,537	$5,019	$5,500	$5,500	$5,569	$5,950	$5,950	$11,812	$11,812	$11,812	$11,812	$11,812
9.	Belle	WV	City of Commerce	CA	DIMETHYL FORMAMID	$8,561	$8,561	$8,561	$8,561	$8,561	$8,561	$8,561	$10,242	$10,242	$10,242	$10,242	$10,242
10.	Belle	WV	Conroe	TX	METHYLAMINE AN	$8,093	$8,093	$8,093	$8,093	$8,214	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
11.	Belle	WV	Corsicana	TX	METHYLAMINE AN	$8,093	$8,093	$8,093	$8,093	$8,093	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
12.	**Removed**																
13.	Belle	WV	East Billings	MT	METHYLAMINE, AQU	$5,132	$5,516	$5,900	$5,900	$5,900	$6,000	$6,000	$8,533	$8,533	$8,533	$8,533	$8,533
14.	Belle	WV	Ethyl	AR	METHYLAMINE AN	$8,093	$8,093	$8,093	$8,093	$8,163	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
15.	Belle	WV	Finley	WA	METHYLAMINE AN	$7,715	$7,715	$7,715	$7,715	$8,975	$8,975	$8,975	$12,100	$12,100	$12,100	$12,100	$12,100
16.	**Removed**																
17.	Belle	WV	Freeport	TX	METHYLAMINE, AQU	$4,537	$4,851	$5,500	$5,500	$5,500	$5,950	$5,950	$11,812	$11,812	$11,812	$11,812	$11,812
18.	Belle	WV	Garyville	LA	METHYLAMINE AN	$10,560	$10,560	$10,560	$10,560	$11,892	$14,555	$14,555	$22,732	$22,732	$22,732	$22,732	$22,732
19.	Belle	WV	Geismar	LA	METHYLAMINE AN	$10,560	$10,560	$10,560	$10,560	$11,262	$14,555	$14,555	$22,732	$22,732	$22,732	$22,732	$22,732
20.	Belle	WV	Janesville	WI	DIMETHYL SULFATE	$7,715	$7,715	$7,715	$7,715	$7,715	$8,975	$8,975	$12,100	$12,100	$12,100	$12,100	$12,100
21.	Belle	WV	Laredo	TX	DIMETHYL FORMAMID	$4,537	$4,851	$5,500	$5,500	$5,579	$5,950	$5,950	$11,812	$11,812	$11,812	$11,812	$11,812
22.	Belle	WV	Laredo	TX	DIMETHYL SULFATE	$8,093	$8,093	$8,093	$8,093	$8,252	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
23.	Belle	WV	Lorenzo	IL	DIMETHYL ETHER	$7,715	$7,715	$7,715	$7,715	$7,715	$8,975	$8,975	$12,100	$12,100	$12,100	$12,100	$12,100
24.	Belle	WV	Los Angeles	CA	METHYLAMINE AN	$6,649	$6,649	$6,649	$6,649	$7,283	$8,975	$8,975	$13,450	$13,450	$13,450	$13,450	$13,450
25.	Belle	WV	Los Angeles	CA	METHYLAMINE, AQU	$5,132	$5,324	$5,900	$5,900	$5,917	$6,000	$6,000	$8,533	$8,533	$8,533	$8,533	$8,533
26.	**Removed**																
27.	Belle	WV	Millsdale	IL	DIMETHYL SULFATE	$7,715	$7,715	$7,715	$7,715	$7,967	$8,975	$8,975	$12,100	$12,100	$12,100	$12,100	$12,100
28.	**Removed**																
29.	Belle	WV	Saint Paul	MN	DIMETHYL FORMAMID	$5,132	$5,411	$5,900	$5,900	$5,917	$6,000	$6,000	$8,533	$8,533	$8,533	$8,533	$8,533
30.	Belle	WV	San Dimas	CA	DIMETHYL ETHER	$7,715	$7,715	$7,715	$7,715	$8,975	$8,975	$8,975	$12,100	$12,100	$12,100	$12,100	$12,100
31.	**Removed**																
32.	Belle	WV	St Gabriel	LA	METHYLAMINE AN	$10,560	$10,560	$10,560	$10,560	$11,226	$14,555	$14,555	$22,732	$22,732	$22,732	$22,732	$22,732
33.	Belle	WV	St Joseph	MO	METHYLAMINE, AQU	$6,465	$6,465	$6,465	$6,465	$6,465	$6,465	$6,465	$13,535	$13,535	$13,535	$13,535	$13,535
34.	**Removed**																
35.	Belle	WV	Strang	TX	DIMETHYL FORMAMID	$4,537	$4,778	$5,500	$5,500	$5,590	$5,950	$5,950	$11,812	$11,812	$11,812	$11,812	$11,812
36.	Belle	WV	Strang	TX	METHYLAMINE AN	$8,093	$8,093	$8,093	$8,093	$8,093	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
37.	Belle	WV	Strang	TX	MONOMETHYL FORMAM	$4,157	$4,157	$4,157	$4,157	$4,157	$4,157	$4,214	$4,531	$4,606	$5,011	$5,139	$5,139
38.	**Removed**																
39.	Belle	WV	Texas City	TX	METHYLAMINE AN	$8,093	$8,093	$8,093	$8,093	$8,093	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
40.	Belle	WV	Verona	MO	METHYLAMINE AN	$8,093	$8,093	$8,093	$8,093	$8,660	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
41.	Belle	WV	West Memphis	AR	METHYLAMINE AN	$9,563	$7,875	$7,875	$7,875	$7,875	$11,400	$11,400	$19,539	$19,539	$19,539	$19,539	$19,539
42.	Belle	WV	Winford Spur	LA	DIMETHYL ETHER	$8,939	$8,939	$8,939	$8,939	$8,939	$12,588	$12,588	$19,888	$19,888	$19,888	$19,888	$19,888
43.	Belle	WV	Wichita	KS	METHYLAMINE AN	$8,093	$8,093	$8,093	$8,093	$9,000	$9,000	$9,000	$14,136	$14,136	$14,136	$14,136	$14,136
44.	Bloomington	TX	Greenville	SC	POLYETHYLENE	$5,713	$5,713	$5,713	$5,713	$5,713	$5,713	$5,713	$6,113	$6,113	$6,113	$6,113	$6,113
45.	Bloomington	TX	Washington; Warren	NJ	POLYETHYLENE	$9,013	$9,013	$9,013	$9,013	$9,013	$9,013	$9,013	$9,644	$9,644	$9,644	$9,644	$9,644
46.	**Removed**																
47.	Charleston; Bradley	TN	Woodstock	TN	SODIUM CAUSTIC	$1,911	$1,911	$1,911	$1,911	$3,000	$3,000	$3,000	$4,170	$4,170	$4,170	$4,170	$4,170
48.	Cresap	WV	Edgemoor	DE	COKE PETROLEUM CA	$2,341	$2,341	$2,341	$2,341	$2,519	$3,356	$3,356	$3,591	$3,591	$3,591	$3,591	$3,591
49.	Dowling	TX	Fort Mill	SC	OIL ANILINE	$4,450	$4,450	$4,450	$4,450	$4,450	$5,425	$5,425	$7,690	$7,690	$7,690	$7,690	$7,690
50.	Edgemoor	DE	Garland	TX	TITANIUM DIOXIDE	$6,246	$7,028	$8,200	$8,200	$8,200	$8,774	$8,774	$9,388	$9,388	$9,388	$9,388	$9,388
51.	Edgemoor	DE	Groos	MI	TITANIUM DIOXIDE	$5,689	$5,814	$6,500	$6,500	$6,976	$9,200	$9,200	$9,844	$9,844	$9,844	$9,844	$9,844
52.	Edgemoor	DE	Laredo	TX	TITANIUM DIOXIDE	$6,093	$6,093	$6,093	$6,093	$6,828	$10,272	$10,272	$10,991	$10,991	$10,991	$10,991	$10,991
53.	Edgemoor	DE	Madawaska	ME	TITANIUM DIOXIDE	$3,530	$3,677	$4,000	$4,000	$4,088	$4,700	$4,700	$5,029	$5,029	$5,029	$5,029	$5,029
54.	Edgemoor	DE	Pasadena	TX	TITANIUM TETRACHL	$10,747	$11,817	$13,600	$13,600	$13,733	$13,865	$13,865	$24,453	$24,453	$24,453	$24,453	$24,453
55.	Edgemoor	DE	Port Huron	MI	TITANIUM DIOXIDE	$4,880	$4,880	$4,880	$4,880	$5,171	$6,920	$6,920	$7,404	$7,404	$7,404	$7,404	$7,404
56.	Edgemoor	DE	Portland	ME	TITANIUM DIOXIDE	$3,149	$3,392	$4,000	$4,000	$4,140	$4,700	$4,700	$5,029	$5,029	$5,029	$5,029	$5,029
57.	Edgemoor	DE	Portland	OR	TITANIUM DIOXIDE	$5,689	$5,779	$6,500	$6,500	$7,100	$9,200	$9,200	$9,844	$9,844	$9,844	$9,844	$9,844
58.	Edgemoor	DE	Quinnesec	MI	TITANIUM DIOXIDE	$5,689	$6,095	$6,500	$6,500	$6,500	$9,200	$9,200	$9,844	$9,844	$9,844	$9,844	$9,844
59.	Edgemoor	DE	Rileys	ME	TITANIUM DIOXIDE	$3,149	$3,362	$4,000	$4,000	$4,140	$4,700	$4,700	$5,029	$5,029	$5,029	$5,029	$5,029
60.	Edgemoor	DE	Rumford	ME	TITANIUM DIOXIDE	$3,149	$3,433	$4,000	$4,000	$4,233	$4,700	$4,700	$5,029	$5,029	$5,029	$5,029	$5,029
61.	**Removed**																
62.	Edgemoor	DE	Shawmutt	ME	TITANIUM DIOXIDE	$3,149	$3,514	$4,000	$4,000	$4,140	$4,700	$4,700	$5,029	$5,029	$5,029	$5,029	$5,029
63.	Edgemoor	DE	Snoboy	CA	TITANIUM DIOXIDE	$5,689	$5,824	$6,500	$6,500	$6,500	$9,200	$9,200	$9,844	$9,844	$9,844	$9,844	$9,844
64.	Edgemoor	DE	Snoboy	CA	TITANIUM DIOXIDE	$5,101	$5,101	$5,101	$5,101	$5,101	$5,101	$5,101	$6,205	$10,944	$10,944	$10,944	$10,944
65.	Edgemoor	DE	St Paul	MN	TITANIUM DIOXIDE	$5,689	$5,993	$6,500	$6,500	$6,950	$9,200	$9,200	$9,844	$9,844	$9,844	$9,844	$9,844

Summary of Tariff Rates for DuPont Movements 2Q09 - 1Q12

	Origin (1)		Destination (2)		Commodity (3)	2Q09 Average Rate (4)	3Q09 Average Rate 1/ (5)	4Q09 Average Rate (6)	1Q10 Average Rate (7)	2Q10 Average Rate 1/ (8)	3Q10 Average Rate (9)	4Q10 Average Rate (10)	1Q11 Average Rate (11)	2Q11 Average Rate (12)	3Q11 Average Rate (13)	4Q11 Average Rate (14)	1Q12 Average Rate (15)
66.	**Removed**																
67.	Edgemoor	DE	West Monroe	LA	TITANIUM DIOXIDE	$6,246	$6,863	$8,200	$8,200	$8,286	$8,774	$8,774	$9,388	$9,388	$9,388	$9,388	$9,388
68.	Edgemoor	DE	Wheeling	IL	TITANIUM DIOXIDE	$5,689	$6,037	$6,500	$6,500	$6,745	$9,200	$9,200	$9,844	$9,844	$9,844	$9,844	$9,844
69.	Enid	OK	Edgemoor	DE	COKE PETROLEUM CA	$5,364	$5,364	$5,364	$5,364	$5,881	$6,075	$6,075	$12,624	$12,624	$12,624	$12,624	$12,624
70.	**Removed**																
71.	Gregory	TX	Dragon	MS	DIFLUOROETHANE	$2,373	$2,373	$2,373	$2,373	$2,387	$2,450	$2,450	$2,486	$2,486	$2,486	$2,486	$2,486
72.	**Removed**																
73.	Gregory	TX	Royce	NJ	DIFLUOROETHANE	$10,123	$10,123	$10,123	$10,123	$11,325	$13,730	$13,730	$21,912	$21,912	$21,912	$21,912	$21,912
74.	**Removed**																
75.	Lemont	IL	Edgemoor	DE	COKE PETROLEUM CA	$4,608	$4,659	$4,905	$4,905	$5,223	$6,389	$6,389	$8,384	$8,384	$8,384	$8,384	$8,384
76.	Lemoyne	AL	Artesia	MS	WASTE FLAMMABLE L	$3,550	$3,958	$4,800	$4,800	$5,432	$8,395	$8,395	$8,983	$8,983	$8,983	$8,983	$8,983
77.	McIntosh	AL	Burnside	LA	ACID SULFURIC,SPE	$1,092	$1,296	$1,603	$1,603	$1,645	$1,700	$1,700	$2,400	$2,400	$2,400	$2,400	$2,400
78.	McIntosh	AL	Delisle	MS	CHLORINE	$2,184	$1,982	$1,700	$1,700	$1,700	$1,700	$1,700	$2,900	$2,900	$2,900	$2,900	$2,900
79.	McIntosh	AL	Delisle	MS	SODIUM CAUSTIC	$1,993	$1,993	$1,500	$1,500	$1,535	$1,700	$1,700	$2,400	$2,400	$2,400	$2,400	$2,400
80.	McIntosh	AL	Orange	TX	SODIUM CAUSTIC	$3,658	$4,096	$5,000	$5,000	$5,635	$8,611	$8,611	$9,214	$9,214	$9,214	$9,214	$9,214
81.	McIntosh	AL	Woodstock	TN	SODIUM CAUSTIC	$1,993	$1,993	$1,500	$1,500	$1,535	$1,700	$1,700	$2,400	$2,400	$2,400	$2,400	$2,400
82.	Orange	TX	Greenville	SC	POLYETHYLENE	$5,713	$5,713	$5,713	$5,713	$5,713	$5,713	$5,713	$6,113	$6,113	$6,113	$6,113	$6,113
83.	Orange	TX	Washington; Warren	NJ	POLYETHYLENE	$9,013	$9,013	$9,013	$9,013	$9,013	$9,013	$9,013	$9,644	$9,644	$9,644	$9,644	$9,644
84.	Pascagoula	MS	Fort Mill	SC	OIL ANILINE	$4,068	$4,698	$6,000	$6,000	$6,052	$6,295	$6,295	$8,928	$8,928	$8,928	$8,928	$8,928
85.	Pascagoula	MS	Lemoyne	AL	OIL ANILINE	$1,092	$1,092	$1,092	$1,092	$1,353	$2,577	$2,577	$2,758	$2,758	$2,758	$2,758	$2,758
86.	Strang	TX	Lemoyne	AL	SODIUM METHYLATE	$4,003	$4,328	$5,000	$5,000	$5,038	$5,215	$5,215	$6,899	$6,899	$6,899	$6,899	$6,899
87.	Beauharnois	PQ	Edgemoor	DE	CHLORINE	xxx	xxx	xxx	xxx	$7,022	$7,022	$7,022	$12,375	$12,375	$12,375	$12,375	$12,375
88.	**Removed**																
89.	Belle	WV	Gainesville	GA	DIMETHYL ETHER	xxx	xxx	xxx	xxx	$7,281	$7,281	$7,281	$10,487	$10,487	$10,487	$10,487	$10,487
90.	Belle	WV	Port Bienville	MS	METHYLAMINE AN	xxx	xxx	xxx	xxx	$9,585	$9,585	$9,585	$12,839	$12,839	$12,839	$12,839	$12,839
91.	Belle	WV	Theodore	AL	METHYLAMINE AN	xxx	xxx	xxx	xxx	$7,281	$7,281	$7,281	$10,487	$10,487	$10,487	$10,487	$10,487
92.	Bellwood	VA	Dallas	GA	SULFURIC ACID	xxx	xxx	xxx	xxx	$5,051	$5,051	$5,051	$8,926	$8,926	$8,926	$8,926	$8,926
93.	Bellwood	VA	Fort Mill	SC	SULFURIC ACID	xxx	xxx	xxx	xxx	$992	$992	$992	$1,061	$1,061	$1,061	$1,061	$1,061
94.	Bellwood	VA	Rockwell	NC	SULFURIC ACID	xxx	xxx	xxx	xxx	$2,700	$2,700	$2,700	$3,431	$3,431	$3,431	$3,431	$3,431
95.	**Removed**																
96.	Danville	VA	Ampthill	VA	LIME COMMON OR HY	xxx	xxx	xxx	xxx	$1,585	$1,585	$1,585	$1,585	$1,585	$1,691	$1,910	$1,910
97.	Edgemoor	DE	New Johnsonville	TN	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$8,966	$8,966	$8,966	$9,085	$8,966	$9,594	$9,594	$9,594
98.	Enid	OK	Edgemoor	DE	COKE PETROLEUM CA	xxx	xxx	xxx	xxx	$6,986	$6,986	$6,986	$8,409	$6,986	$14,518	$14,518	$14,518
99.	Loudon	TN	Graingers	NC	PROPANEDIOL BIO	xxx	xxx	xxx	xxx	$1,490	$1,490	$1,490	$1,490	$1,490	$1,490	$1,490	$1,490
100.	Loudon	TN	Graingers	NC	PROPANEDIOL BIO	xxx	xxx	xxx	xxx	$1,684	$1,684	$1,684	$1,684	$1,684	$1,684	$1,684	$1,684
101.	Miami Fort	OH	Dallas	GA	SULFURIC ACID	xxx	xxx	xxx	xxx	$3,532	$3,532	$3,532	$3,825	$3,532	$5,084	$5,084	$5,084
102.	Miami Fort	OH	Gracewood	GA	SULFUR TRIOXIDE	xxx	xxx	xxx	xxx	$5,400	$5,400	$5,400	$6,224	$5,400	$9,761	$9,761	$9,761
103.	Miami Fort	OH	McIntosh	AL	ACID FUMING SULFU	xxx	xxx	xxx	xxx	$5,638	$5,638	$5,638	$6,210	$5,638	$8,664	$8,664	$8,664
104.	**Removed**																
105.	**Removed**																
106.	Miami Fort	OH	Pepper	VA	ACID FUMING SULFU	xxx	xxx	xxx	xxx	$3,000	$3,000	$3,000	$3,411	$3,000	$5,174	$5,174	$5,174
107.	Natrium	WV	Belle	WV	SODIUM CAUSTIC	xxx	xxx	xxx	xxx	$4,800	$4,800	$4,800	$5,505	$4,800	$8,532	$8,532	$8,532
108.	Natrium	WV	Danville	VA	SODIUM CAUSTIC	xxx	xxx	xxx	xxx	$2,520	$2,520	$2,520	$2,553	$2,520	$2,696	$2,696	$2,696
109.	New Johnsonville	TN	Chapman	PA	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$7,151	$7,151	$7,151	$7,246	$7,151	$7,652	$7,652	$7,652
110.	**Removed**																
111.	New Johnsonville	TN	Morrow	GA	TITANIUM DIOXIDE	xxx	xxx	xxx	xxx	$4,500	$4,500	$4,500	$4,560	$4,500	$4,815	$4,815	$4,815
112.	Niagara Falls	NY	Belle	WV	SODIUM CAUSTIC	xxx	xxx	xxx	xxx	$3,000	$3,000	$3,000	$3,051	$3,000	$3,269	$3,269	$3,269
113.	Niagara Falls	NY	Edgemoor	DE	CHLORINE	xxx	xxx	xxx	xxx	$7,022	$7,022	$7,022	$8,033	$7,022	$12,375	$12,375	$12,375
114.	Niagara Falls	NY	Edgemoor	DE	SODIUM CAUSTIC	xxx	xxx	xxx	xxx	$3,800	$3,800	$3,800	$3,922	$3,800	$4,444	$4,444	$4,444
115.	Pascagoula	MS	Fort Mill	SC	OIL ANILINE	xxx	xxx	xxx	xxx	$5,000	$5,000	$5,000	$5,066	$5,000	$5,350	$5,350	$5,350
116.	Starke	FL	Huntsville	AL	SAND ZIRCON	xxx	xxx	xxx	xxx	$1,025	$1,025	$1,025	$1,025	$1,025	$1,314	$1,910	$1,910
117.	Starke	FL	Huntsville	AL	SAND ZIRCON	xxx	xxx	xxx	xxx	$1,128	$1,128	$1,128	$1,128	$1,128	$1,383	$1,910	$1,910
118.	Wurtland	KY	Fort Mill	SC	SULFURIC ACID	xxx	xxx	xxx	xxx	$992	$992	$992	$1,005	$992	$1,061	$1,061	$1,061
119.	Wurtland	KY	McIntosh	AL	SULFURIC ACID	xxx	xxx	xxx	xxx	$2,000	$2,000	$2,000	$2,120	$2,000	$2,633	$2,633	$2,633
120.	Belle	WV	Divine	IL	DIMETHYL ETHER	xxx	$7,502	$7,502	$7,502	$7,502	$7,502	$7,502	$8,265	$7,502	$11,542	$11,542	$11,542
121.	Belle	WV	Mapleton	IL	METHYLAMINE AN	xxx	$5,843	$5,843	$5,843	$6,106	$7,332	$7,332	$7,845	$7,845	$7,845	$7,845	$7,845
122.	Burnside	LA	Gracewood	GA	SULFUR TRIOXIDE	xxx	$4,200	$4,200	$4,200	$5,044	$9,000	$9,000	$10,777	$9,000	$18,406	$18,406	$18,406
123.	Lemont	IL	Edgemoor	DE	COKE PETROLEUM CA	xxx	xxx	$5,641	$5,641	$5,788	$7,347	$7,347	$9,864	$9,864	$9,864	$9,864	$9,864
124.	New Johnsonville	TN	McDonough	GA	TITANIUM DIOXIDE	$2,951	$2,951	$2,951	$2,951	$3,467	$4,500	$4,500	$4,500	$4,815	$4,815	$4,815	$4,815
125.	Charleston	TN	Woodstock	TN	POTASSIUM HYDROXIDE	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$9,265	$9,265	$9,265	$9,265	$9,265
126.	Reybold	DE	Albuquerque	NM	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,844	$10,844	$10,844	$10,844
127.	Reybold	DE	Baltimore	MD	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$3,900	$3,900	$3,900	$3,900
128.	Reybold	DE	Blair	NE	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,008	$10,008	$10,008	$10,008
129.	Reybold	DE	Brewton	AL	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,476	$10,476	$10,476	$10,476
130.	Reybold	DE	Castle Hayne	NC	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$5,844	$5,844	$5,844	$5,844
131.	Reybold	DE	Clifton	AZ	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$14,928	$14,928	$14,928	$14,928
132.	Reybold	DE	Corson	SD	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,008	$10,008	$10,008	$10,008
133.	**Removed**																
134.	Reybold	DE	Ferguson	MS	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$12,882	$12,882	$12,882	$12,882
135.	Reybold	DE	Hastings	NE	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,008	$10,008	$10,008	$10,008
136.	Reybold	DE	Indianapolis	IN	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$8,880	$8,880	$8,880	$8,880
137.	Reybold	DE	Omaha	NE	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,008	$10,008	$10,008	$10,008
138.	Reybold	DE	Orange	TX	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$12,192	$12,192	$12,192	$12,192
139.	Reybold	DE	Phoenix	AZ	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,844	$10,844	$10,844	$10,844
140.	Reybold	DE	Sioux City	IA	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$10,008	$10,008	$10,008	$10,008
141.	Reybold	DE	Toledo	OH	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$7,200	$7,200	$7,200	$7,200
142.	Reybold	DE	Washington	WV	SULFURIC ACID	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	$6,444	$6,444	$6,444	$6,444

1/ 3Q09 and 2Q10 rates are a weighted average as the rates changed mid quarter. For movements with NS Waybill records, the weighted average is based on actual carloads shipped for the lane. For all other lanes the rates equal the weighted average based on the number of days the rate was applicable for the quarter. For calculations see workpaper "DuPont Issue Lead Unit Waybills_2009 & 2010 Data for T&O Final.xlsx" tabs "3Q09 Rates Development" and "2Q10 Rates Development".

EXHIBIT NO. 17

Highly Confidential Information

Redacted

EXHIBIT NO. 18

Highly Confidential Information

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EXHIBIT NO. 19

Highly Confidential Information

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EXHIBIT NO. 20

Highly Confidential Information

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EXHIBIT NO. 21

Highly Confidential Information

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EXHIBIT NO. 22

Highly Confidential Information

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EXHIBIT NO. 23

Highly Confidential Information

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EXHIBIT NO. 24

Highly Confidential Information

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EXHIBIT NO. 25

Highly Confidential Information

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EXHIBIT NO. 26

Highly Confidential Information

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EXHIBIT NO. 27

Highly Confidential Information

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EXHIBIT NO. 28

Highly Confidential Information

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EXHIBIT NO. 30

Highly Confidential Information

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EXHIBIT NO. 31

Highly Confidential Information

Redacted

EXHIBIT NO. 32

Highly Confidential Information

Redacted

EXHIBIT NO. 33

Highly Confidential Information

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EXHIBIT NO. 34

Highly Confidential Information

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EXHIBIT NO. 35

Highly Confidential Information

Redacted

EXHIBIT NO. 36

Highly Confidential Information

Redacted

EXHIBIT II-B

EXHIBIT NO. 1

Highly Confidential Information

Redacted

EXHIBIT NO. 2

Highly Confidential Information

Redacted

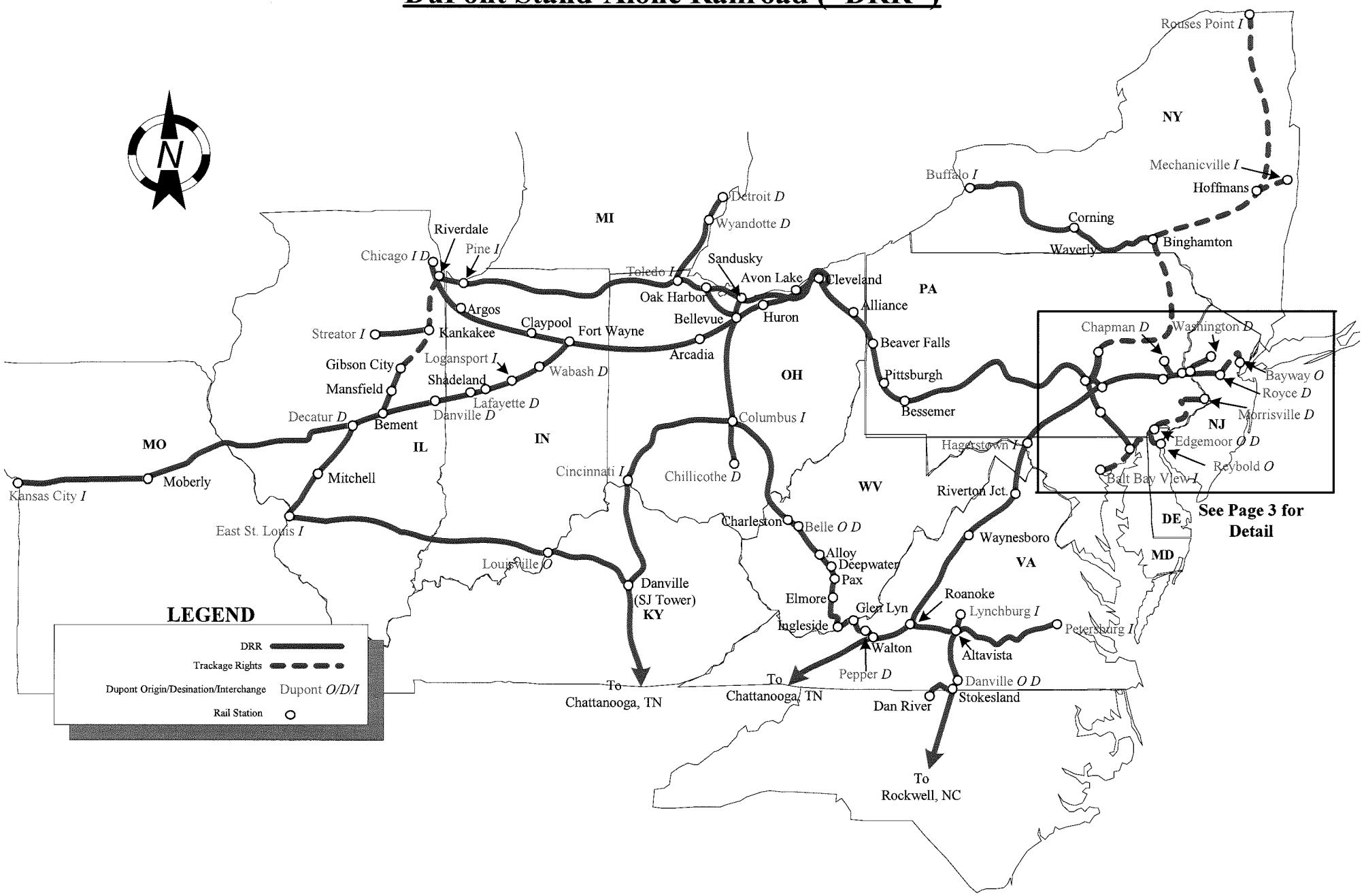
EXHIBIT NO. 3

Exhibit II-B-3
Highly Confidential Information
Redacted

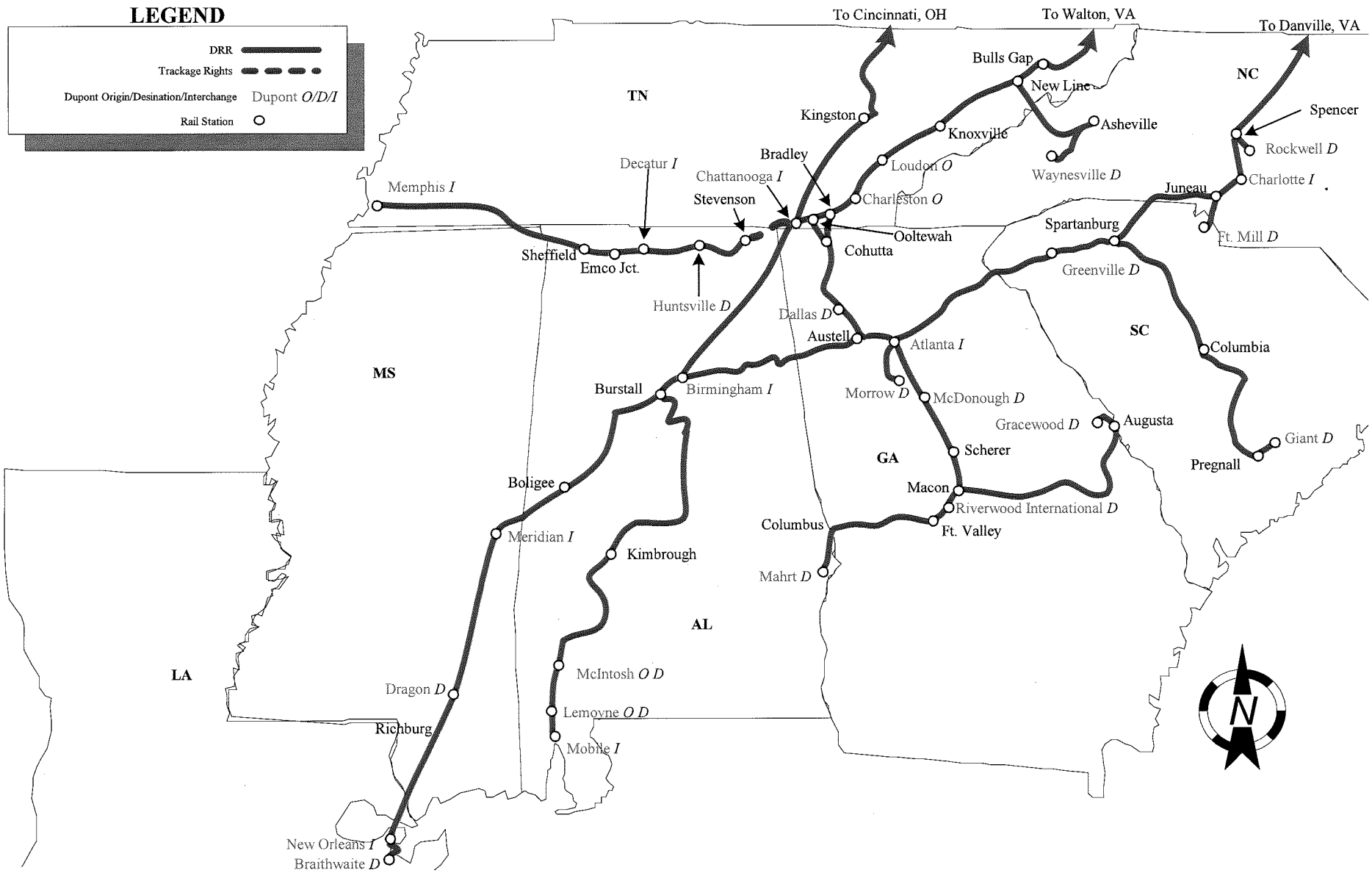
EXHIBIT III-A

EXHIBIT NO. 1

DuPont Stand-Alone Railroad ("DRR")



DuPont Stand-Alone Railroad ("DRR")



DuPont Stand-Alone Railroad ("DRR")

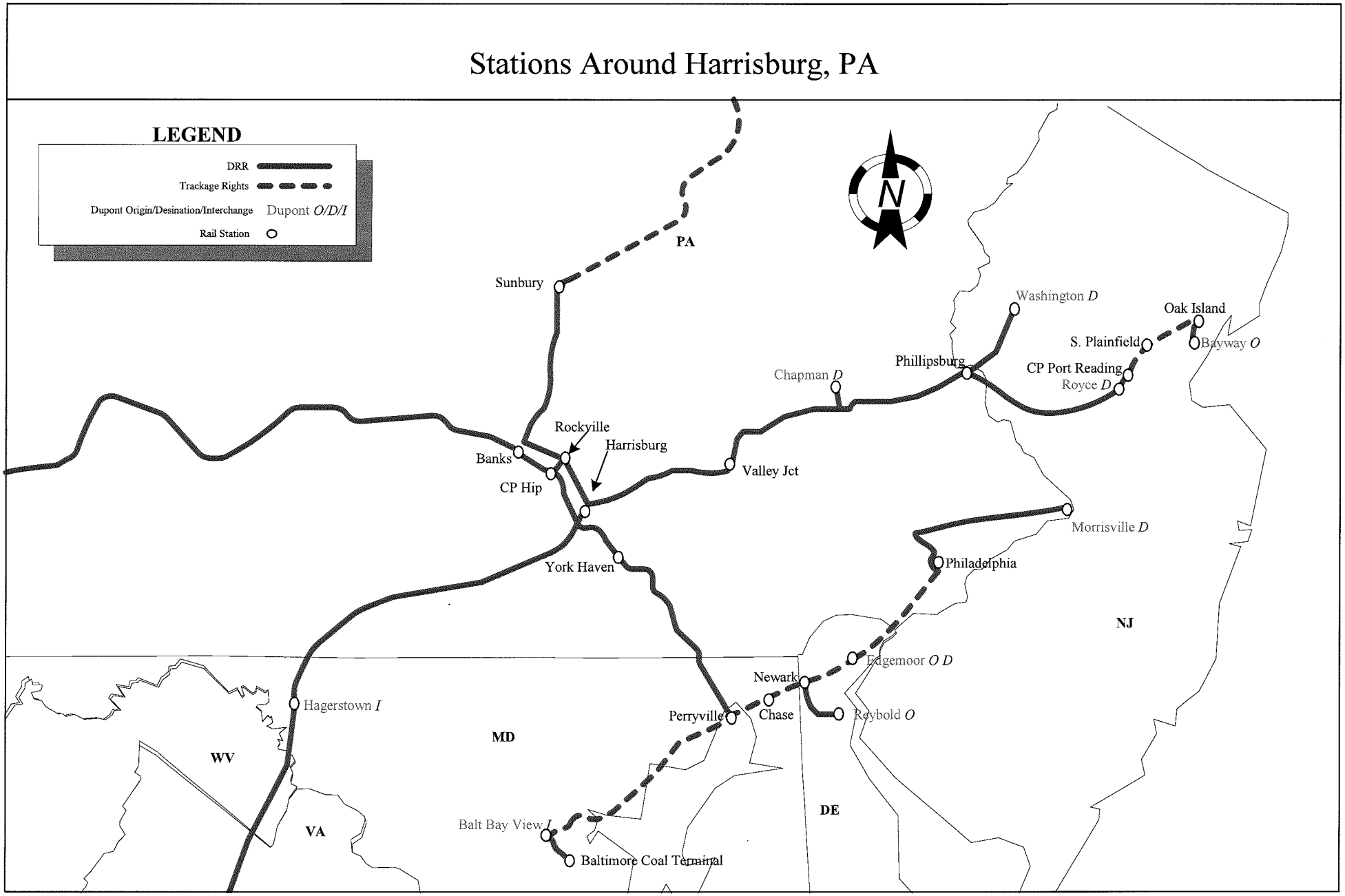


EXHIBIT NO. 2

Problems With NS Provided Traffic Data

The term "Traffic Data" is a catch-all for multiple, disparate electronic databases provided by NS[1] that must be joined, linked, and used together to: (1) evaluate traffic moving over the NS system; (2) identify movements traversing the SARR system; (3) quantify tons and revenues associated with those movements; (4) develop revenue divisions for cross-over traffic included in the SARR traffic group; and (5) develop inputs to the forecast, operating plan, construction, DCF, and MMM models used in the SAC analysis. Throughout the stand-alone railroad ("SARR") developmental process, it is critical to maintain data integrity and ensure that each of the data reports produced from the analytical models used to develop the various components of the SARR are directly traceable to the source data and are capable of being cross-linked for downstream analyses. Shippers must use the provided traffic data to develop many key elements of the stand-alone cost ("SAC") presentation. The format, robustness, and number of reliable links between data sets (i.e., data fields that are common to the many disparate data sets and that enable record(s) from one data set to be paired with its corresponding record(s) in the other provided data sets) dictate the level of accuracy and robustness of the SAC analysis.

Because imperfect data will never produce perfect results, the goal from the outset is always the same, i.e., to produce the most reliable SAC evidence possible using the provided data. The scope of SAC analysis generally, and the scale of this particular SARR configuration specifically, made it important for DuPont to let the data speak for itself whenever possible. Because DuPont processed multiple source data sets using dozens of intermediate links and dozens of sequential processing steps, the need for simple, repeatable, mechanical processes was evident from the start. DuPont developed and tested each of its links and processes on the

[1] Traffic data is a term of art that encompasses all NS databases needed to design, build and evaluate the SARR. These include waybill data, car movement data, intermodal unit movement data, train movement data, mileage data, haulage data, handling line data, switching data, TCS movement and revenue data, TDIS revenue and movement data, density data, and all information and decoders needed to link, understand, and utilize the data.

Problems With NS Provided Traffic Data

provided NS data sets and then let the processes run and the data outputs generated by each process flow forward through the model. In other words, DuPont did not manually adjust the NS data based on its judgment in developing intermediate reports and tables.

In response to DuPont's Request for Production No. 20 through No. 23 seeking traffic data in this case, NS provided dozens of files in multiple structures and formats, with each set of files containing portions of the critical data for the years 2009 and 2010. Upon placing the data into computer databases, DuPont immediately began to encounter issues with the various data sets. Each of the major issues and DuPont's method for dealing with them and moving its analysis forward is discussed below[2] under the following topics:

A. Incomplete Car Event Data Production

B. Incomplete Mileage Data Production

C. Missing Intermodal Event Data

D. Inconsistent Data Records (Field Contents)

E. Incorrect Linking Instructions Provided

F. Vague, Non-Specific and Inefficient Linking Instructions Provided

G. Linking Fields Were Not Provided And Surrogate Link Development Was Required

H. Inconsistent Data File Types And Record Layouts

I. Non-Linkable Critical Data Sets

J. Critical Intermediate Linking Files Produced Late

---

[2] We will not chronicle the myriad of minor data issues encountered in our analytical process. It is understandable that there should be some minor data issues to overcome and some reasonable learning curve associated with becoming familiar with a given railroads' internal traffic data format and contents. Here we are discussing only the major items we encountered through the process that were unexpected, that caused significant delays and that required DuPont to develop means to account for imperfect, incomplete, and incompatible data sets.

Problems With NS Provided Traffic Data

A. INCOMPLETE CAR EVENT DATA PRODUCTION

The initial NS production of car event data was incomplete. Only after thorough evaluation of the individual data sets, building links between the provided data sets, including correcting for incorrect linking instructions provided by NS (discussed in detail below), and testing the initial and corrected links, was DuPont able to determine that the provided car event data set was incomplete. DuPont requested and ultimately received replacement car event data nearly two months after the initial production.

After incorporating NS' second car event data production into its traffic data evaluation and selection models, DuPont determined that car event data were still missing for some waybill movements. DuPont overcame this deficiency using a two-pronged approach. In some cases, DuPont was able to link a waybill data record for which no car event data had been provided to an alternate car that moved in the same cut as the subject car in order to determine the route of movement for the car. As documented in work paper "DRR Traffic Selection Methodology v8 ADDED LANES.docx", DuPont labeled the surrogate car used for movement routing analyses a "Trace Unit." In other cases, DuPont was not able to link waybill data records with car event data records for either the subject car or an alternate Trace Unit car. In these cases, DuPont was forced to manually evaluate the movements to determine whether the traffic moved over the SARR system and should be included in the SARR traffic group. After evaluation of the lanes for which no car event data were provided, DuPont included some of the lanes based on the movements' origins, destinations, and commodity codes.[3]

[3] The manually included lanes are shown in work paper "DRR Traffic Summary Query Format v4 ADDED LANES.xlsx" at level "DRR Main Traffic Group ID" and are incorporated in Step 16 of the process outlined in work paper "DRR Traffic Selection Methodology v8 ADDED LANES.docx."

Problems With NS Provided Traffic Data

B. INCOMPLETE MILEAGE DATA PRODUCTION

The initial NS production of mileage data was incomplete. As with the car event data, DuPont only identified the problem after thoroughly evaluating the individual data sets, building links between the provided data sets, including correcting for incorrect linking instructions provided by NS, and testing the initial and corrected links. NS provided replacement mileage data nearly a month after its initial traffic data production.

C. MISSING INTERMODAL EVENT DATA

The initial NS traffic data production was devoid of intermodal event data. As with the car event and mileage data, DuPont discovered this deficiency only after thoroughly evaluating the individual data sets, building links between the provided data sets, including correcting for incorrect linking instructions provided by NS, and testing the initial and corrected links. DuPont requested and ultimately received intermodal event data two months after the initial NS traffic data production.

After incorporating NS' intermodal event data production into its traffic data evaluation and selection models, DuPont determined that event data were still missing for some waybill movements. DuPont overcame this deficiency using a two-pronged approach. In some cases, DuPont was able to link a waybill data record for which no intermodal event data had been provided to an alternate intermodal unit that moved in the same cut as the subject car in order to determine the route of movement for the car. As discussed above, DuPont labeled the surrogate unit used for movement routing analyses a "Trace Unit." In other cases, DuPont was not able to link waybill data records with car event data records for either the subject unit or an alternate Trace Unit. In these cases, DuPont was forced to manually evaluate the movements to determine

whether the traffic moved over the SARR system and should be included in the SARR traffic group. After evaluation of the lanes for which no intermodal event data were provided, DuPont manually included some of the lanes based on the movements' origins, destinations, and commodity codes.[4]

D. INCONSISTENT DATA RECORDS (FIELD CONTENTS)

NS provided (and presumably keeps in the normal course of business) its revenue waybill data in a very unique way. Specifically, NS reports volume and revenue data in its waybill data file in a way that makes evaluation of data records for individual carloads impossible, at least for purposes of developing SAC evidence. This is because NS inconsistently reports the revenue data associated with individual cars in multiple-car and unit train shipments. A summary of these NS inconsistencies follows:

1. NS sometimes records the revenue and revenue adjustment data for *each individual car* in a multiple-car/unit train shipment *on the individual waybill records* associated with each car;

2. NS sometimes records *all* of the revenue and revenue adjustment data for *all cars* in a multiple-car/unit train shipment *on the waybill record associated with the lead car* in the shipment, and records *zero* revenues and revenue adjustments *on the waybill records associated with the trailing cars*; and

3. NS sometimes records: (1) the revenue and revenue adjustment data for *some cars* in a multiple-car/unit train shipment *on the waybill record associated with the lead car* in the shipment; (2) the revenue and revenue adjustment data for *some individual trailing cars* in a multiple-car/unit train shipment *on the individual waybill records* associated with those cars; and (3) *zero* revenues and revenue adjustments *on the waybill records associated with some of the trailing cars.*

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[4] The manually included lanes are shown in work paper "DRR Traffic Summary Query Format v4 ADDED LANES.xlsx" at level "DRR Main Traffic Group ID."

Problems With NS Provided Traffic Data

NS did fully explain this data nuance in the materials accompanying its initial traffic data production. However, DuPont still needed to develop a method to account for the unusual record keeping. For instance, for waybill records where the revenue and revenue adjustments were set to zero (and the revenues for that particular car were included on the lead unit waybill record), there would be no way to determine the revenues associated with the movement for purposes of selecting traffic. Furthermore, assuming the movement was selected for inclusion in the SARR traffic group, there would be no way to develop revenue divisions using the average total cost ("ATC") methodology, or to develop a revenue to variable cost ("R/VC") ratio for inclusion of that particular carload movement in the maximum markup methodology ("MMM") model. Similarly, for lead unit waybill records where the revenue and revenue adjustments were reflective of multiple cars, there would be no way to develop accurate revenue divisions and R/VC ratios using the ATC/MMM methodologies for those particular carload movement records.

DuPont was forced to develop a new way of compiling the revenue waybill data before it could move forward with its traffic data analysis and traffic selection methodology. DuPont chose to compile all of the individual waybill records associated with a particular waybill serial number into a single data record which contained total cars, total tons, and total revenues and revenue adjustments for all cars in the shipment. After this data compilation was made, DuPont linked the compiled records to the other related data sets based on a single car's waybill serial number to determine route of movement, mileage, additional revenue adjustments, etc.[5]

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[5] DuPont's methodology is outlined in full at work paper "DRR Traffic Selection Methodology v8 ADDED LANES.docx."

Problems With NS Provided Traffic Data

E. INCORRECT LINKING INSTRUCTIONS PROVIDED

The initial NS traffic data production was accompanied by record layouts and field definitions for most of the provided data sets. A critical component of this part of the data production is the identification of the database links (the common data fields that can be used to link the various individual data tables). In key instances, the field descriptions NS provided for these linking fields were inaccurate. This led to the failure of DuPont's first efforts to build a complete set of traffic data with functioning links that would enable meaningful analysis. As a result, DuPont's initial efforts to develop data reports from the provided data produced illogical and puzzling results.

Specifically, NS' waybill data contains a field titled "WB_SN_URRWIN," which is defined only as "Waybill serial number." The car and intermodal event data sets and the NS mileage data set contain a field titled "WB_SN," which is defined in all three provided record layouts as "Waybill serial number. Use to join with waybill info from revenue accounting."[6] DuPont relied on these unambiguous field definitions to create direct links between these data sets as follows:

1. Waybill[WB_SN_URRWIN] = CarEvent[WB_SN]
2. Waybill[WB_SN_URRWIN] = IntermodalEvent[WB_SN]
3. Waybill[WB_SN_URRWIN] = NS_Miles[WB_SN]

DuPont then moved forward with its analyses. After completing several phases of data processing, DuPont determined that it was not linking a substantial percentage of waybill records to the corresponding event and mileage records. Upon evaluation of these preliminary results,

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[6] *See* work paper "NS_ELECTRONIC_DATA_SSI.xlsx" at levels "NS WAYBILL", "CAR EVENT", and "MILES."

Problems With NS Provided Traffic Data

DuPont was forced to retrace all the steps it took in building the traffic data sets, linking them, and processing them. Only after significant troubleshooting was DuPont able to uncover the reason for its initial failure, i.e., NS provided incorrect file linking information.

The car and intermodal event data sets and the NS mileage data contain another data field titled "TRANS_WB_SN," defined as:

> "Transportation WBSN. Created from WBSN. One waybill per car – e.g., a single unit train WB will be broken down into one Trans WBSN for each car in the train."

DuPont eventually determined that this is the field that must be used to "join with waybill info from revenue accounting." After the correct link was established, the processes were rerun and the outputs were evaluated once more. The results were logical and finally correct. The correct links are shown below.

1. Waybill[WB_SN_URRWIN] = CarEvent[TRANS_WB_SN]
2. Waybill[WB_SN_URRWIN] = IntermodalEvent[TRANS_WB_SN]
3. Waybill[WB_SN_URRWIN] = NS_Miles[TRANS_WB_SN]

This saga led to wasted time and money and reinforces the importance of correct and accurate data and data support production on the part of NS. Furthermore, as described above, the provided linking instructions for this particular set of links were simple and straight-forward and more importantly wrong. As discussed in more detail below, this experience led DuPont to question all other, less straight-forward linking instructions provided by NS.

F. VAGUE, NON-SPECIFIC, AND INEFFICIENT LINKING INSTRUCTIONS PROVIDED

DuPont's cautious approach following its discovery of the inaccurate linking information described in the preceding section would prove to be needed, as several provided linking

Problems With NS Provided Traffic Data

instructions were deceptive. As discussed in more detail below, several critical files were provided in data files and formats that are not conducive to efficiently processing and evaluating the massive volume of data that must be processed to develop SAC. To further complicate this hindrance, NS' guidance regarding the fields and parameters that should be used to link the various data sets was often vague and in several cases NS' instructions were not the most efficient or reliable way to make the necessary links. As with the exercise DuPont was forced to conduct to identify the correct links between waybill, event, and mileage data detailed in the preceding section, DuPont's determination of the most practical and efficient linking methods for other files required an iterative process of trial and error troubleshooting.

For example, NS provided switching data in several data files in five (5) different formats, each of which contains a different combination of data fields. The record layout associated with the largest (by data record count) switching file produced by NS included the following ambiguous instruction regarding the link between the provided switching data and the waybill data:

> Matching Criteria:
>
> 1. Match WB SERIAL, CAR INITIAL and CAR NUMBER from switching file to WBSN, EQINIT and EQNUM on large revenue file.
> 2. Match WB SERIAL, CAR INITIAL and CAR NUMBER from switching file to MCXREFSN, EQINIT and EQNUM on large revenue file.
> 3. Match CAR INITIAL, CAR NUMBER and WB DATE from switching file to EQINIT, EQNUM and WBDT on large revenue file. (Note: Need to use a date range for waybill date on step 3).[7]

The record layouts associated with the other four provided switching data file formats did not include linking instructions. DuPont tested the links between the large switching file and the

[7] *See* work paper "NS_ELECTRONIC_DATA_SSI.xlsx" at level "SWITCHING DATA."

Problems With NS Provided Traffic Data

waybill data using the provided instructions for the month of January 2010 and found that only 33% of switching data records could be linked to the waybill data file based on some combination of the provided linking instructions. Furthermore, a manual and very labor intensive verification process using commodity codes and shipper and consignee data was required to determine the validity of the positive links made using the suggested linking process. DuPont also tested the suggested linking process on the four (4) other data files for January 2010 and found that only a few dozen records could be linked using the suggested method.[8]

After thorough review and troubleshooting, DuPont discovered that there were several reasons for the low link rate it achieved following NS' instructions. First, the switching data records were generally associated with railcars. This meant that there were no direct links between the switching data and the waybill data for intermodal records. This problem and its solution are discussed in greater detail in the following sections of this Exhibit. For non-intermodal records, it became apparent to DuPont, after its manual review of individual data records in the relevant files, that NS' linking instructions were unnecessarily complicated and cumbersome, and still produced spotty results. DuPont eventually determined that it would need to use the car event data as a bridge between the switching data and the waybill data, keying on the WB_SERIAL field in the switching data and the TRANS_WB_SN field in the car event data that corresponded with the WB_SN_URRWIN data field in the waybill data.

Similarly, NS' instructions for linking its haulage receivables data records to the corresponding waybill data records were:

How to match receivable haulage amounts to waybills on revenue files:

---

[8] *See* work paper "Summary of NS Switching Mainframe.docx"

Problems With NS Provided Traffic Data

> Match car initial, car number and waybill date on haulage spreadsheets to haulage waybills (haulage indicator = F) on revenue files. (Note: Need to use a range for waybill date.[9])

As with the switching data, DuPont first tested the proposed linking method on January 2010 data. Using a combination of mechanical and manual data evaluation techniques, DuPont determined that the "date range" NS indicated would be necessary to make the required link was surprisingly long. Specifically, in order to make positive links between the tested January 2010 files using the suggested method and a date range, it would be necessary to go as far back as -25 days and as far forward as +29 days.[10] Stated differently, each haulage receivable data record evaluated would need to be tested against nearly two months of waybill and car event data in order to record all haulage receivables payments made to NS. Incorporating this scale of indexing into the linking structures required to process all of the NS traffic data is exceedingly cumbersome to the point of being impractical. In addition, as with the switching data discussed above, haulage receivable data records are generally associated with railcars, not intermodal units. As a result, DuPont was forced to develop a three-way link using car event data as an intermediate file between waybill data and haulage receivables data. Therefore, DuPont's ability to link haulage receivables data with corresponding waybill data records was hampered.

DuPont encountered identical problems when it attempted to use the NS' linking instructions to link handling line data to waybill data. As with the haulage receivables data, NS instructed DuPont to:

> Match CAR INITIAL, CAR NUMBER and INT DATE on handling line file to EQINIT, EQNUM and WBDT on large revenue file. (Note: Need to use a date range for waybill date/interchange date.)

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[9] *See* work paper "NS_ELECTRONIC_DATA_SSI.xlsx" at level "HAULAGE RECEIVE."

[10] *See* work papers "Summary of NS Haulage Receivables.docx" and "Haulage Receivables Jan 2010_Linked to Waybill.pdf."

Problems With NS Provided Traffic Data

> Additional note for cars with more than one record:
> If the values in the HANDLING LINE FSAC, CITY and STATE fields are different on records which have the same CAR INITIAL, CAR NUMBER, and INT DATE, the values on the P record (HANDLING LINE P/A/E/F) should be used instead of the values in the other records (A, E or F).

As with the haulage received and switching data, the handling line data records are generally associated with railcars, which required DuPont to develop a link using the car event data as an intermediate file between the waybill data and the handling line data.[11]

G. LINKING FIELDS WERE NOT PROVIDED AND SURROGATE LINK DEVELOPMENT WAS REQUIRED

In addition to the problems described above with the linking fields NS did identify in the supporting materials accompanying its traffic data production, DuPont also had to deal with a few instances where NS provided no specific linking instructions. Specifically, NS provided no concrete direction with respect to how waybill records for intermodal data could be linked to the provided NS mileage data, switching data, handling line data, and haulage data, as discussed in the preceding section. When NS finally provided intermodal event data in response to DuPont discovery requests, DuPont set about evaluating the data and checking the various links NS did identify. It quickly became apparent that NS did not provide a way to link intermodal waybill records directly to the miles associated with each move. When DuPont pointed this deficiency out to NS, the railroad responded that:

> In most cases, the intermodal event records NS has produced identify the specific flat car on which an individual container traveled. Thus, the miles for most intermodal container movements can be determined by linking the container movement to the corresponding flat car movement. [This

[11] The methodologies developed by DuPont to overcome these linking challenges are documented in work paper "DRR Traffic Selection Methodology v8 ADDED LANES.docx."

> linking procedure may not work for all intermodal containers. For example, for some container event records, data identifying the flat car on which the container moved is not available. And in a small number of instances a container may be associated with more than one flatcar (for instance, where a container moved in a double-stack on one flat car and was transferred to a different flat car because double-stack operations were not possible for the remainder of the movement). In all cases, NS has produced all data that it has available.][12]

DuPont did develop a means to link intermodal waybill records to mileage records via the intermodal event and car event records, which is outlined in work paper "DRR Traffic Selection Methodology v8 ADDED LANES.docx." Additionally, DuPont has developed work paper "Carload vs IM linking.xlsx" which shows through color coding the two sets of links that were needed to process intermodal and non-intermodal data contained in all of the disparate files included under the traffic data umbrella.

H. INCONSISTENT DATA FILE TYPES AND RECORD LAYOUTS

NS provided haulage receivables data in dozens of Excel spreadsheets (many of which comprised multiple levels of data). The haulage data were stored in multiple different formats within the various Excel spreadsheets. Also, as noted above, NS provided switching data in multiple files with five different record layouts which contained some common data fields and some data fields that were unique to the individual files. Before DuPont could incorporate the data stored in these files into its analytical framework, DuPont first had to convert and import the data to a database platform that would enable efficient programming. Even after the conversion process was completed, linking the various files was made difficult due to the inconsistent data content of the various files, as discussed in preceding sections.

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[12] *See* October 21, 2011 letter from Matthew Warren to Jeffrey Moreno, included as work paper "IM Miles Response eDSF4BE.pdf - Adobe Acrobat.pdf."

Problems With NS Provided Traffic Data

I. NON-LINKABLE CRITICAL DATA SETS

DuPont requested and NS provided TCS and TDIS revenue and drayage cost data for 2009 and 2010. Upon receipt and inspection of the provided data, DuPont determined that the provided data could not be linked on a movement-specific basis to the revenue waybill data because insufficient common fields were included. DuPont responded to NS' production asking for supplemental data and/or instruction regarding how the TCS/TDIS revenue records could be linked to specific waybill data records. NS responded that, "There is no direct way to link these files to those produced on EHD-002."[13]

However, the data included in the files are critical to DuPont's SAC analysis. As a result of the lack of provided links, DuPont was forced to develop an alternate means by which to incorporate the TCS/TDIS revenue data into its analysis. As documented in file "DRR Traffic Selection Methodology v8 ADDED LANES.docx", DuPont developed lane-specific monthly average net revenues (revenues less drayage costs) for both TCS and TDIS and applied those net revenues against the TCS/TDIS moves in the lanes for which TCS/TDIS waybill data had been provided on a month-by-month basis.

Specifically, DuPont:

(1) Calculated average net TCS/TDIS revenues between ramp pairs for each month in the study;

(2) Developed a crosswalk between the ramp codes in the provided TCS/TDIS data and the station names in the waybill data;

(3) Linked the waybill data to the provided TCS/TDIS revenue data based on origin ramp, destination ramp, year, and month; and

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[13] *See* September 30 letter from Matthew Warren to Jason Tutrone, pp. 10-11, included as work paper "September 30 Letter.pdf."

(4) Imported the monthly average net revenue per unit for TCS/TDIS units to the waybill file.

To avoid a revenue double count, the average net TCS/TDIS revenue was used in place of (not added to) the reported NS line-haul revenue for the movement.

J. CRITICAL INTERMEDIATE LINKING FILES PRODUCED LATE

One of the most critical NS databases DuPont needed to identify traffic moving over its system was provided by NS in a database titled "SPLC OS MP." This database was required to link the car event data, which included station information by alpha city and state, standard point location code ("SPLC"), and operating station ("OS") code, but not NS milepost, to specific NS mileposts. NS milepost data is a critical element for selecting traffic that moves over the SARR system because the milepost data is needed to link the traffic data to the engineering data that defines the NS and SARR system. The SPLC OS MP data set was also needed to link the car event data to the train event data, which included only milepost data to identify train station stops. This data set was provided by NS on November 21, 2011, more than 3 months after NS' initial traffic data production. Once the data were incorporated into DuPont's model, DuPont could finally link all needed files and run its traffic selection and revenue calculation procedures.

EXHIBIT NO. 3

PROBLEMS WITH NS PROVIDED TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

DuPont requested that NS produce many specific electronic traffic data files in order to calculate SARR revenues for cross-over traffic included in the DRR traffic group using the STB's Modified Average Total Cost ("ATC") method.[1] To make the specific calculations required by the ATC methodology, DuPont requested a number of specific inputs from NS which NS either provided electronically or that were developed by DuPont from the provided electronic data. The NS information needed to develop ATC inputs includes:

1. The actual route of movement for each NS historical shipment;
2. The actual NS mileage for each NS segment for each historical NS shipment;
3. The actual NS density on a net ton basis for each unique NS segment for each historical NS shipment;
4. The actual NS fixed cost per mile; and
5. The actual NS historical data for each shipment to develop the inputs required to calculate variable costs using the Board's URCS Phase III variable cost model.

This Exhibit outlines the problems DuPont encountered when attempting to use the NS supplied data needed to calculate revenue divisions based on the Board's ATC methodology.[2] The major problems that DuPont encountered with NS provided data as they relate to the ATC methodology are summarized in the remainder of this Exhibit under the following five topical

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[1] *See WFA/BASIN II* at 11-15.

[2] The problems with NS provided data are not limited to the ATC process. Exhibit III-A-2 identifies the myriad of problems DuPont encountered when attempting to utilize NS-produced traffic data and Exhibit III-C-1 identifies a myriad of problems DuPont encountered when attempting to utilize NS-produced train event data. The ATC calculations require certain data from each of these NS datasets and, to that extent, the same problems identified and explained in those Exhibits also affect the ATC calculations.

PROBLEMS WITH NS PROVIDED
TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

headings which match the five areas of inputs needed from NS in order to calculate revenue divisions using the ATC methodology:

A. NS Actual Route Of Movement
B. NS Mileage By NS Segment
C. NS Density By NS Segment
D. NS Fixed Cost Per NS Route Mile
E. NS Variable Cost Of Service

A. NS ACTUAL ROUTE OF MOVEMENT

One of the critical pieces of information required for the ATC calculations is the actual route of movement over the segments of NS track used by each historical NS shipment. NS produced two types of route-based information, i.e., train movement data and car/intermodal event data.[3] For purposes of determining the actual historical route of movement for individual NS revenue shipments, DuPont focused on the limited[4] car event data that was provided by the NS as the best source of general route information.

The Board's ATC methodology requires knowledge of the specific route of movement of NS revenue shipments in order to develop SARR/Non-SARR miles, SARR/Non-SARR fixed costs, and SARR/Non-SARR variable costs. Therefore, it was important to have this NS routing information on a segment by segment basis. However, the NS waybill and car event data was minimal and provided only a general indication of the actual geographic route of movement.

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[3] The deficiencies with the train event data are discussed in great detail in Exhibit III-C-1 and the deficiencies with the car event data are discussed in great detail in Exhibit III-A-2.

[4] Limited in terms of the number of events reported for each car handled by NS.

PROBLEMS WITH NS PROVIDED TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

The NS waybill data produced only a very general description of the route of movement.[5] The NS car event data provided more detail than the NS waybill data but it was still deficient for ATC purposes. For example, NS car event data for a movement from Chicago, IL to Norfolk, VA, the NS only produced car events for a few locations on the route of movement. Much more detail is needed for the ATC calculation in order to identify the ONSARR/OFFSARR interchange locations and to evaluate changes in density along the route, both integral parts of the ATC process. Also, in many instances, there were multiple routes between consecutive locations provided by NS in the car event data. This lack of routing detail in the NS car event records was a major problem to overcome prior to making the ATC calculations.

In light of these deficiencies, DuPont was forced to perform a special study to create a detailed geocoded routing for each selected movement using publicly available routing and location information plus the limited location data provided by NS in the car/intermodal event data. This special study was undertaken to overcome the limitations and deficiencies of the NS-provided data and in order to adhere, as closely as possible, to the STB's ATC methodology.[6]

B. NS MILEAGE BY NS SEGMENT

The second component of the ATC calculations is the specific mileage associated with the actual route of movement of each NS revenue shipment over the detailed segments of NS

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[5] NS waybill data included a field named "FULL_ROUTE" that indicated a general route such as "BNSFCHGO NS" for the route between Chicago, IL and Norfolk, VA. This routing information is no more descriptive than identifying the origin and destination endpoints provided elsewhere in the NS waybill data and not sufficient for ATC calculations.

[6] The special study initiated by DuPont to implement the Board's ATC methodology (including the detailed routing development) is outlined in DuPont Opening work paper "METHODOLOGY To Develop Detailed Routes And Best ONSARR/OFFSARR Locations For DRR Traffic."

PROBLEMS WITH NS PROVIDED
TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

track. For ATC calculations, this mileage must be identified and aggregated as SARR miles, residual NS miles, and total NS miles. NS produced mileage data files but none of this mileage information was particularly useful because each separate dataset produced by NS contained different pieces of location information and each dataset was lacking specific pieces of information that could be utilized to facilitate linking. For example, some NS datasets[7] provided specific NS mileposts but no station location name (station/city/state/SPLC) information. Other NS datasets[8] provided station location name information and/or SPLC information but no NS milepost information. These datasets could not be linked because the station location names were not spelled the same. The NS did provide electronic track charts that contained a great deal of information but these track charts were produced in a document format that DuPont could not utilize efficiently.[9] After multiple requests[10] from DuPont, NS did produce a file that contained information to facilitate the linking of disparate pieces of NS location information. This file was produced too late to be of use in the ATC calculations and, upon further review, did not provide the detailed linking information that DuPont required.[11]

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[7] *See*, for example, NS-produced electronic track chart data in files "t707_10", "t707_ns", "mgt_ns", "grd_ns", "curv_ns" and "spde_ns" (Bates No. NS-DP-C-DVD-004).

[8] *See,* for example, NS-provided car event data in file "REP20-Q22010.zip."

[9] NS did provide several files that they claimed included electronic data supporting the information presented in the NS track charts. Unfortunately, DuPont evaluated these files but determined that it could not link the data included in these files on any common fields to produce useful detailed geo-code information.

[10] *See* Exhibit III-A-2 at p 15.

[11] NS produced data file "SPLC OS MP" which provided some, but not all of the required linking information. This file was produced on November 21, 2011 (*See* Bates No. NS-DP-HC-DVD-046).

PROBLEMS WITH NS PROVIDED TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

In light of the above deficiencies in the NS-provided mileage data, DuPont was forced to expand its special study to create detailed mileage data based on the specific routes created from NS car event data and publicly available routing and location information.

C. NS DENSITY BY NS SEGMENT

NS density data by detailed track segment on a net ton basis is needed for the ATC calculations. In response to DuPont's request for density information, NS provided density data on a gross ton basis for various NS track segments. These segments were identified by operating station codes, NS milepost, NS line identifier and alpha location names. While this data could be linked to the car event data, it was deficient from an ATC calculation perspective for two primary reasons. First, as explained above, the NS car event data was not detailed enough to support the ATC calculations.[12] As a result, linking to this insufficient data was not useful for ATC purposes. Second, the density data was provided on a gross ton basis (including locomotives) and was not useful for the specific requirements of the ATC methodology.

In light of these deficiencies in the NS-provided density data, DuPont was forced to again expand its special study to create net density data on a detailed segment basis using the NS revenue traffic that historically moved over ONSARR and OFFSARR track segments. DuPont employed the STB accepted approach in *WFA/Basin*[13] which measured individual density segments.

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[12] Also, the data provided in the NS density data that is used to link to the NS car event data did not produce links for all of the information. Incomplete matching of NS density and car event data would result in inaccurate data for the ATC calculations.

[13] *See WFA/Basin* at 13.

PROBLEMS WITH NS PROVIDED
TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

PROBLEMS WITH NS PROVIDED TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

D. NS FIXED COST PER NS ROUTE MILE

The calculation of NS fixed cost per route mile is required by the STB's ATC methodology. In *WFA/Basin,*[14] the railroad fixed cost per route mile was calculated the following two ways: (1) a fixed cost per route mile for system owned track segments; and (2) a fixed cost per route mile for trackage rights segments.[15] In this case, NS failed to provide DuPont with reliable data that indicates whether a specific track segment is system owned or a trackage rights segment. As a result of the problems with NS-provided traffic data, DuPont was forced to develop the segments along each route of movement based upon publicly available data. This publicly available data did not indicate whether a segment of track was NS owned or trachage rights track. Without this trackage rights data, DuPont developed and utilized an average fixed cost per route mile for all NS segments (the sum of system owned and trackage rights miles).

Conceptually, the creation of fixed unit costs is an arbitrary exercise but one that the STB developed in an attempt to identify economics of density in the ATC calculation. In *WFA/Basin*,[16] the STB developed two fixed unit costs as part of the calculation of ATC, i.e., one for railroad owned track and one for joint facility track. This calculation resulted in more revenues being assigned to the residual incumbent (BNSF) than were allocated following the STB's initial proposal of one fixed unit cost based on all miles (owned plus trackage rights).

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[14] Id

[15] The Board has not settled on a specific methodology for allocating fixed costs that, by definition, are not allocable. In *WFA/Basin*, the Board accepted BNSF's proposed methodology that distinguished between owned track and trackage rights segments but offered future litigants an opportunity to explain why this approach should not be used.

[16] *See WFA/Basin* at 12-13.

PROBLEMS WITH NS PROVIDED TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

While the STB accepted the two fixed unit cost approach in *WFA/Basin* that approach contains a mathematical error which if corrected would mean the development of additional fixed unit costs. The mathematical error is demonstrated below. In calculating the fixed unit cost assignable to trackage rights miles, the STB added the aggregate fixed "above-the-rail" costs to the aggregate fixed costs related to general overheads. The sum of these aggregate fixed costs was divided by the sum of railroad owned miles plus trackage rights miles. In calculating the fixed unit cost assignable to railroad owned miles, the STB added the first fixed unit cost (described above) to the following fixed unit cost: aggregate fixed "below-the-wheel" costs divided by railroad owned miles.

The mathematical problem exists because the aggregate fixed "below-the-wheel" costs include joint facility costs[17] which based on the STB's logic in *WFA/Basin* should be assigned to joint facility miles not railroad owned miles. To correct this problem, additional fixed unit costs would need to be developed. As explained above, we were unable to develop and apply these fixed costs to the on-SARR and off-SARR segments because of the lack of joint facility data provided by NS.

E. NS VARIABLE COST OF SERVICE

The final piece of information needed to calculate revenue divisions using the ATC methodology is the variable cost of service for the movement of NS revenue traffic over the SARR segments and the residual NS segments. In order to be consistent with *WFA/Basin,* DuPont did not include interchange costs between the DRR and the NS in its ATC variable cost

[17] *See* URCS, Worktable D1, lines 129, 131, 133, 135 and Worktable D2, lines 129, 131, 133 and 135.

PROBLEMS WITH NS PROVIDED
TRAFFIC DATA NEEDED FOR ATC CALCULATIONS

calculations. In order to perform these calculations, DuPont developed, from NS-provided data, a unique set of nine (9) inputs used in the Board's URCS Phase III program. To develop these nine inputs for each movement, DuPont utilized the NS-provided waybill data and the routing/mileage data developed from the DuPont special study outlined above. The NS-provided waybill data was deficient in many respects for many of the revenue shipments included in the DRR traffic group. Specific examples of these deficiencies include certain records contained incomplete or incorrect data, missing mileage data (because there was no NS car event data to link to the revenue waybill data), missing STCC data, incorrect AAR car type data, and data that produced incorrect tons per car. DuPont developed averages to include in the data fields for each of these records that contained incomplete or incorrect NS provided data.

EXHIBIT III-C

EXHIBIT NO. 1

Problems With NS Provided Train Event Data

Train event data, also known as train movement data, plays a key role in stand-alone cost ("SAC") presentations. Shippers and railroads use train event data to develop many key inputs into the SAC presentation, including, but not limited to, identifying the revenue trains moving over the stand-alone railroad ("SARR") system and the routes taken by trains, identifying where those trains stop, switch cars or dwell, developing the peak period train lists used to simulate SARR operations, and developing the base year train statistics required to calculate the SARR's operating expenses. The accuracy and robustness of the train event data, therefore, will in many ways dictate the degree of accuracy and robustness of the SAC presentation.

In response to DuPont's Request for Production Nos. 21 and 22 seeking train event data in this case, Norfolk Southern Railway Company ("NS") provided eight text files that included limited train event data for the years 2009 and 2010. The provided files contained 11 data fields, which included the following information:

1. Train Symbol ("TRN")
2. Train Origin Date ("TRN_ORGN_DT")
3. Crew District ("TRN_CREW_DIST")
4. Train Section ("TRN_SECTION")
5. Event Date and Time ("TRN_EVENT_TS")
6. Train Event Type (Arrival or Departure) ("TRN_EVENT_TYPE")
7. Number of Loaded Railcars ("LOADS")
8. Number of Empty Railcars ("EMPTIES")
9. Train Tons ("TONS")
10. Train Length ("LENGTH")
11. Event Milepost ("MILEPOST")

According to the limited NS information provided describing the train event data, DuPont could identify a unique train by joining the train symbol (TRN), the train origin date

Problems With NS Provided Train Event Data

(TRN_ORGN_DT) and train section (TRN_SECTION). Linking these three key fields together allowed DuPont to identify a particular train's movements.

Upon placing the data into a computer database, DuPont immediately began to see problems and limitations with the NS-provided train event data. These problems permeated the data and limited its effectiveness and usefulness. DuPont lists these infirmities and their impacts below under the following headings:

A. Milepost Information
B. Station Information
C. Train Events
D. Train Statistics

A. MILEPOST INFORMATION

The NS provided train event dataset contained 5,577 distinct milepost names. The milepost name could include:

1) A letter prefix and a number;
2) A number by itself;
3) A number with a letter suffix or letter prefix; or
4) A number and letter suffix.

The "MILEPOST" field was the only field contained within the train event data that provided location information and NS provided no single decoder to completely document each provided milepost.[1]

[1] Given the importance of geographically locating the train events, DuPont used various additional files provided in discovery to attach stations, cities and states to the milepost information in the train event data.

Problems With NS Provided Train Event Data

After importing the provided text files into a relational database, DuPont found three (3) problems with the milepost data. First, the train event data included different geographic locations with duplicate mileposts. Second, certain train event records contained no milepost information. Third, the milepost information that was provided was erroneous. Each of these three problems is discussed below.

1. Duplicate Milepost

After augmenting the NS train event data with station and state information provided at different times in discovery, DuPont found that the train event data indicated trains were making unaccounted for geographic "jumps." For example, the NS train event data would show a train moving through stations in the state of Virginia, and then unaccountably jump to a station in Georgia, and then move immediately back to a station in Virginia. DuPont soon realized that these seemingly random geographic leaps were due to the inclusion of duplicate milepost information within the train event data.

DuPont found 171 mileposts within the NS train event data where the various NS data sources provided significantly different location information for the same milepost. Some of these occurrences are because the milepost name is associated with two different NS rail lines. As an example, Milepost "BS000.00" is located both at "BRADSHVA VA" and "BENCRKJT WV." Attachment No. 1 to this Exhibit III-C-1 contains the list of duplicate mileposts identified by DuPont.

These 171 duplicate milepost names are associated with 913,571 train events records. It is obvious that such a large number of duplicate milepost entries would wreak havoc in identifying locations along a train's route, especially if the duplicate occurred in the first or last

train event record. As has been the norm in prior SAC cases, shippers and railroads classify traffic and train movement data based upon the movement's origin and destination stations. An ambiguous initial milepost could incorrectly classify a train within the incorrect origin/destination categories, e.g., a Virginia to New York train could be incorrectly classified as a West Virginia to New York train.

While such an issue may be a manageable inconvenience in the case of a short SARR, with a SARR of over 8,000 miles as is the case here, the issue is substantial. DuPont assigned what it believes to be the proper stations where it noticed illogical geographic sequences caused by duplicate mileposts; however, with over 200,000 individual trains within the base and peak years, it could not manually inspect each train. The result of these duplicate mileposts could be train movement records included in the operating statistics and SARR simulation that deviate substantially from the real world routings.

2. Missing Milepost Information

There are 693,369 train event records with no milepost identified. Instead, the fields were blank. While the number of records with blank mileposts is relatively small, their mere presence create problems when attempting to use automated programming to work with data.

3. Erroneous Milepost Information

Finally, the supporting documents NS did provide which would link train event milepost information to other geographic information (station, state, etc.) appeared to provide erroneous information. For example, the file "SPLC OS MP.xlsx," provided by NS to link milepost with other operating station information, lists milepost "141.50H" as being in Crab Orchard, TN, a station west of Knoxville, TN. However, all other mileposts with "H" suffixes within this

milepost range (130-150) are located in the state of Georgia. Attachment No. 2 to this Exhibit III-C-1 lists other mileposts with apparently erroneous information.

As with the other milepost infirmities, erroneous location information causes problems when attempting to route trains and identify origin and destination locations. DuPont attempted to identify and fix these issues when found, but given the voluminous amount of data, not all corrections were likely made.

B. STATION INFORMATION

DuPont came upon two (2) issues with operating station or "station" information provided by NS. First, there were approximately 200 mileposts in which NS did not provide any station information. Second, there are over 1,000 stations included in the train event data that are covered by multiple mileposts.

1. No Station Information

In reviewing the NS train event data, DuPont identified 199 mileposts that could not be definitively linked to a station or state. While a seemingly innocuous number, these mileposts showed up in over half a million train event records.[2] Because of this missing information, DuPont had to manually impute station and state information for these 199 mileposts.

2. Multiple Mileposts Per Station

DuPont identified 1,673 stations in the NS supporting documents that had more than one milepost. More importantly, of these 1,673 stations with multiple mileposts, 1,101 were included in the train event data. In describing this phenomenon, NS stated:

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[2] NS' train event data shows 547,260 train events containing mileposts which DuPont could not link directly to a station or state.

Problems With NS Provided Train Event Data

> Typically there is only one milepost per operating station/SPLC, however in many cases there can be multiple mileposts per operating station. This most commonly occurs for one of two reasons. One reason for multiple mileposts is that milepost locations are more granular than operating stations. As a result, many specific locations along the line will map to a single, more general operating station. The second reason is that there are locations where lines cross, in which case that single point will have a milepost location on each line.[3]

The second reason cited by NS in its explanation (that a location may have two milepost identifiers where rail lines cross) causes significant issues in developing SAC evidence. Classifying whether any one particular location is "on-SARR" or "off-SARR" is critical in SAC cases, especially under the procedures adopted by the STB in *Major Issues*. One example of this is the calculation of SARR revenues. Prior to the STB's decision in *Major Issues*, the calculation of SARR revenues was a fairly straight-forward process that could be accomplished with a minimal amount of location information.[4] The STB's adoption of the Average Total Cost ("ATC") revenue division methodology in *Major Issues* made location information much more critical in developing SARR revenues. Not only do participants in SAC cases need to know the beginning and ending points of the SARR's and incumbent's movements, they also needed to know explicit locations along the route of movement in order to identify the proper traffic densities to calculate the average fixed cost component of ATC. This requires the accurate mapping of routes and route locations, which becomes a major issue when route locations are identified by multiple mileposts.

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[3] *See* November 21, 2011 letter from Matthew J. Warren to Jeffrey O. Moreno.

[4] Under the modified straight-mileage prorate method used prior to the *Major Issues* decision, parties in a SAC proceeding only needed to know whether the traffic originated and terminated on-SARR or off-SARR and the number of on-SARR and off-SARR miles.

Problems With NS Provided Train Event Data

Because of the fact that the same station could be identified by multiple mileposts, it was not possible without manually adjusting records and data to identify how many times a train went off and on-SARR.[5] This has clear implications for the routing used in revenue calculations and for the calculation of SARR operating costs.

C. TRAIN EVENTS

As indicated above, NS' train data contained in the field "TRN_EVENT_TYPE" consisted of either an arrival code ("ARIL") or a departure code ("DFLC"). There were three (3) problems with this limited data. First, there was an extreme imbalance in the arrival and departure events reported in the files. This imbalance was to such an extreme degree that many trains never reported any arrival events. Second, the arrival and departure were so out of chronological sequence in all cases as to make them nearly useless in accurately defining a train's location. Third, the train events were truncated or missing for many trains. These issues are discussed immediately below.

1. Arrival and Departure Imbalance

The 2009 and 2010 train event data provided by NS included approximately 34 million individual train events. Within these train events, 95.3 percent, or 32.4 million, were departure events and 4.7 percent, or 1.6 million, were arrival events. In other words, there was nearly a 20-to-1 imbalance between train departure events and train arrival events. Attachment No. 3 to

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[5] For example, a train movement may be local to the SARR, but move through a station with multiple milepost identifiers. If the milepost included in the train event data is different than the milepost identified in the SARR location database, the train event data would show this train exiting the SARR and then reentering the SARR. The only way to fix these issues is to manually correct the milepost location or manually enter the alternative milepost into the SARR location database.

Problems With NS Provided Train Event Data

this Exhibit contains an example of the imbalance in departure and arrival notices inherent in the NS train event data as demonstrated by the train event data for a sample train.

This fact had serious ramifications for the development of train dwell times used in the SAC analysis. In prior SAC presentations, parties had used the difference between train arrival and departure times to develop dwell times at particular locations. These dwell times were then used in various portions of the SAC presentation, including, but not limited to, establishing SARR service standards against actual incumbent operations and as inputs into the SARR simulation model. In this instance, however, because of the severe imbalance in the train event data reported (and due to other train event issues discussed further below), DuPont was unable to calculate actual NS dwell times using the train event data. Instead, DuPont was forced to rely upon other sources of dwell time data.

2. Out of Sequence Arrival and Departure Events

In addition to the ratio of arrival and departure codes being severely out of balance, an even more severe problem is the out of sequence nature of the arrival and departure information. Simple logic dictates that a train will arrive at a location prior to departing from the location (unless it is the first reported location). However, as shown in the sample train movement data shown in Attachment No. 3 to this Exhibit III-C-1, this logic does not hold with the NS train event data. As Attachment No. 3 shows, Train 407-3/13/09-0, an empty coal train with 91 empty railcars and no loaded railcars, departed milepost OY001.38, a station near Ashtabula Harbor, OH, on March 14 at 10:25 am. The train then moved south to Girard, OH based on the sequence of departure events indicated. Inexplicably, the train data next shows the train arriving at milepost OY001.38 six (6) hours after departing the same location. After showing the "arrival" at

Problems With NS Provided Train Event Data

milepost OY001.38, the train event data next shows the train departing Youngstown, OH at 19:13 hours. After moving through a logical sequence of stations, the train "arrives" once again at Youngstown, OH four (4) hours after it departed. The example shown in Attachment No. 3 to this Exhibit III-C-1 is not a single isolated example. Almost all the train event records produced by NS show this disconcerting mismatch in departure and arrival data. The only trains that do not have this arrival-departure issue are train records that do not show any arrival events at all.

In addition to the out of sequence nature of the arrival and departure events, many of the departure events were found to be out of sequence or included illogical time and date stamps. Attachment No. 4 to this Exhibit III-C-1 shows the train movements for a NS General Merchandise train moving between Kansas City, MO and Knoxville, TN.[6] The NS train movement data for this train shows the train departing milepost S271.89 (BLOCK222 MO) and milepost S274.83 (KANSASCI MO) at exactly the same time, even though they are three miles apart. The train data also shows the train departing repeatedly many times from the same location at different times. This could be due to pre-departure switching activity, but the nature of the train movement data limits an ability to clearly identify the train's actions.[7]

Because of the out-of-sequence nature of the NS train event data, it was impossible to use the train event data in any sort of automated process to identify routing without making certain assumptions and modifications. The assumptions made by DuPont include:

1. DuPont assumed that because of the mismatched nature of the arrival and departure information that the arrival data was irreparably damaged.

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[6] DuPont actually only assumes the train moves to Knoxville, TN as the train event data does not show an arrival at Knoxville, but instead a final departure from Webb, TN, which is the last station prior to NS' Debutts Yard in Knoxville.

[7] This train also shows the same infirmity discussed earlier for trains departing locations hours before they arrive at the location.

Problems With NS Provided Train Event Data

Therefore, in summarizing and using the NS train event data, DuPont ignored the arrival events in the train event data.

2. Because the arrival event information was obviously flawed, DuPont relied upon the first reported departure location to identify origin locations, and the last identified departure location to identify destination locations. This created an extreme problem in identifying origin and destination locations as the NS data that was reported for a particular TRN symbol was not always consistent.[8] To work around this issue, DuPont spent extensive time and effort developing normalized NS origin and destination locations and normalized DRR origin and destination information for the trains in the NS train event data. DuPont based its normalization on limited data provided by NS in discovery, and on assumptions made by DuPont. [9]

3. Because of the apparently random sequencing of the train event data, DuPont could not accurately know when a train stopped along a route to set out or pick up cars. Therefore, when modeling train operations in its SARR simulation, DuPont identified dwell locations for general merchandise trains based upon the two following criteria.[10]

    a. DuPont only dwelled trains where the train event information indicated a change in consist size. Those allowed DuPont to account for train dwells due to servicing customers along the route of movement.

    b. DuPont only stopped a train at the first instance of a specific location shown in the train event data. In other words, if the data showed a train moving between a location multiple times, DuPont only stopped at the location a single time.

The out of sequence train event information played particular havoc on local trains as these trains had many fewer reported train events than road trains, and therefore, much less

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[8] For example, the first reported departure location of the train shown in Attachment No. 3 to this Exhibit is milepost OY001.38 near Ashtabula, OH. NS train event data shows another train with TRN symbol 407 departing Ashtabula, OH six (6) days later, but this time the first departure milepost is milepost OY001.00.

[9] Specifically, DuPont relied upon NS produced file "Schedule.xls," which shows the scheduled operating stations for approximately 400 of the NS coal, general merchandise, intermodal and unit bulk trains, and file "Local Jobs.xls," which shows origin and destination points for local trains.

[10] In this instance "dwell locations" refer to locations along the route where the DRR may switch, set-out or pick-up cars. It does not include the time to change crews, service locomotives, inspect trains, etc., which are already accounted for in the simulation modeling.

information available to try to discern actual train operations.[11] To work around this flaw, DuPont undertook a separate analysis of car event information for local trains in an attempt to determine how these particular trains operated, including attempting to identify were local trains stopped along their routes to set-out and pick-up railcars.[12] DuPont began by separating local trains into "turn" trains, or trains that originated and terminated at the same location, and "straight-a-way" trains, or trains that originated at one station and terminated at a different station. For turn trains, DuPont manually inspected the data extracted from the car event data to identify the location a train completed its outbound journey and turned before returning to its origin station. For straight-a-way trains, DuPont manually inspected the stops along the route indicated by the car event data to identify the stops to include in the SARR simulation. Manual inspections were required in both instances since the car event data, like the train event data, contained many redundant entries for the same stations that made a purely programming solution impractical.[13]

3. Missing and Truncated Event Data

Even with this normalization effort, DuPont experienced significant difficulties in identifying the proper routing for many of the NS trains due to missing or truncated train event data. While not steadfastly uniform by any means, NS trains followed certain patterns and schedules. An example of this is shown by reviewing the train records for a particular train symbol. NS data provided in discovery indicated that TRN symbol 732 was a loaded coal train

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[11] The train movement data shown in Attachment Nos. 3 and 4 to this Exhibit III-C-1 provide an example. Attachment No. 3 contains 36 train event records while Attachment No. 4 contains 174 train event records. In contrast, most local trains would only report 9 or 10 train events.

[12] Exhibit III-A-2 describes the many issues DuPont had with the NS car event data, and the limitations these issues had on DuPont's car event analyses.

[13] *See* e-workpaper "Local Car Events.xlsx."

Problems With NS Provided Train Event Data

that operated between Memphis, TN and Georgia Power's Scherer Power Station. The NS train event data generally shows this pattern to hold true, but there were eight (8) times throughout 2009 when the data for this movement was either truncated, e.g., the train events only show the train moving part of the way to Scherer, GA, or the data was missing, e.g, no train event data for a known train. Once again, this was not an uncommon occurrence with the NS train event data. NS event data would show trains originating or terminating half-way along the route of movement based on the movement of comparable trains.

DuPont was required to make certain allowances for its inability to definitively identify each train's origin and destination (and indentify arrival and departure times due to the arrival/departure issues discussed above). One allowance was made in developing the peak period unit coal trains due to an inability to link unit trains at their origins and destinations. In prior SAC cases, parties linked the loaded and empty unit coal trains at the origin mines and destination plants served directly by the SARR. In this way when modeling the SARR system, a loaded coal train will not leave a mine served by the SARR before the preceding empty train arrives at the mine. The extreme limitations and flaws with the NS train movement data in this instance did not allow DuPont to link the trains in this usual way. Instead, DuPont looked at the number of peak period loaded and empty coal trains, and preformed a reconciliation analysis of the loaded and empty trains. It then added "balancing trains" to equalize the number of loaded and empty trains moving during the peak period. These balancing trains were in addition to the trains DuPont added to account for growth in future traffic, and were added by DuPont to account for the estimated number of trains moving over the system in the peak period.

D. TRAIN STATISTICS

Problems With NS Provided Train Event Data

The NS train event data reports the following four (4) operating statistics about each train:

1. Number of loaded railcars on the train;
2. Number of empty railcars on the train;
3. Train tons; and
4. Train length.

DuPont incurred two (2) major issues when trying to utilize this data. First, the train statistical information is not consistently reported or not reported at all on some trains. Second, much of the data that is reported is clearly erroneous.

1. Inconsistent or No Train Statistics

NS train event data does not consistently show train statistic data in its train movement records, but instead only shows train statistics a limited number of times for each train movement. This is clearly shown in Attachment Nos. 3 and 4 to this Exhibit III-C-1, which show train statistics reported sporadically for two different train movements. Analysis of all of the NS train event records shows that train statistics are not recorded in approximately 93.7 percent of the NS provided train event records.[14]

Even more troublesome was the number of trains that reported "no" statistics. This tended to occur mostly on local and coal shuttle trains, but examples could be found in all the NS train types. DuPont found that 17 percent of the trains as identified by the train symbol, train date and section number included in the train event data had no statistics reported with the train data.

[14] In other words, if a specific train identified by its train symbol, train date and section number had 100 train event records associated with its movements, on average only a little over 6 of those 100 records contained information on the number of loaded and empty railcars, train tons and train length.

Problems With NS Provided Train Event Data

For those trains included in NS' train event data that did not include train statistics, DuPont looked to other sources of statistical information. DuPont relied upon NS provided discovery data that provided average train statistics for certain train symbols. Specifically, DuPont used the NS produced file "Trainsize.xls," which included average statistics for 954 unique train symbols. Where average statistics for a particular train symbol were not included on NS' "Trainsize.xls" worksheet, DuPont developed its own averages for the train symbol based on base year train event data.

2. Erroneous Train Statistics

A greater issue than the inconsistent and missing train statistic data was train statistics that were erroneous. As indicated above, the NS train event data included only a limited set of train statistics, including total train tons and total train length.[15] DuPont initially intended to rely upon these statistics for identifying its peak operating period and for developing the characteristics for the trains included in its SARR simulation. However, it eventually realized that the statistics as reported in the train event data, were so erroneous as to make the original analysis unusable.

The first indication of the extremely flawed nature of the train statistical data came in using the train statistic data to identify the SARR's peak operating period. As has been the norm in prior SAC cases, DuPont applied its forecasted growth in SARR traffic to base year train movements to identify the peak operating week in the peak operating year. DuPont began by dividing its traffic between coal movements and non-coal movements. Since coal movements on

[15] The NS document provided with the NS train event data did not indicate whether the train tons and train length included in the train event data reflected total tons and length or trailing tons and length. However, based on observations of the data which showed no loaded or empty railcars, but included tons and train length consistent with average locomotive dimensions, DuPont assumed the statistics reflected total train statistics and not trailing statistics.

Problems With NS Provided Train Event Data

modern railroads move almost uniformly in unit train service, DuPont developed its future number of coal trains by applying the forecasted growth rate in coal by identifiable destination to the current number of trains operating to those destinations.[16] In simple terms, DuPont used the forecasted growth rates to determine the number of complete coal trains that would be needed in the future. This approach is consistent with real world railroad operations which move coal in relatively uniform unit train sizes to destinations.

DuPont used a different methodology (which was used in prior SAC cases) for non-coal traffic. It is generally accepted that railroads will grow the size of existing trains before adding a new train to their traffic mix. Running longer trains where practicable leads to greater overall productivity by maximizing crew production and minimizing traffic congestion. In order to increase the SARR's non-coal trains to their maximum efficient sizes, DuPont needed to identify the largest trains currently operated by NS based upon operating train symbol. DuPont therefore looked at NS' train movement data to identify the largest trains currently operated by NS by train type and symbol. DuPont then planned to increase the size of the existing trains before adding additional trains to its network to account for future growth in DRR traffic.

DuPont began this process by identifying the largest train operated by NS by train ("TRN") symbol. It soon became apparent, though, that many of the train sizes included in the NS train event data were clearly erroneous. Table 1 below shows the 10 largest trains by train length and train symbol included in the base year train data.

Exhibit III-C-1
Table 1
NS Train Event Data Maximum Train Lengths

[16] As indicated above, DuPont could not always accurately identify a coal trains' origin and destination. In those instances were a destination could not be accurately identified, DuPont applied an average DRR coal growth rate.

Problems With NS Provided Train Event Data

	Train Symbol (1)	Train Type (2)	Maximum Length In Train Event Data-Feet (3)
1.	262	Triple Crown	75,007
2.	336	General Merchandise	65,565
3.	H3W	Local-Harrisburg Division	58,327
4.	170	General Merchandise	52,958
5.	11R	General Merchandise	37,701
6.	15M	General Merchandise	36,218
7.	331	General Merchandise	34,692
8.	28Z	Multilevel	31,885
9.	V06	Local-Virginia Division	18,780
10.	236	Intermodal	17,984

Source: *See* e-workpaper "Non-Copal List – March 1.xlsx"

As shown in Table 1 above, NS train event data indicated some trains reached over 75,000 feet in length.[17]

This clearly erroneous data required DuPont to undertake a manual examination of the train event lengths, and make adjustments based on individual assessments of each train length. [18] After making manual adjustments to correct for the exceedingly large train sizes, DuPont then applied its growth rates to what it believed to be corrected train lengths to develop the SARR's peak year train count and indentified its peak operating week.[19]

DuPont next began developing the train statistics for the individual trains that were to be modeled in the SARR simulation. The Rail Traffic Controller ("RTC") simulation software used to model the SARR requires the input of each train's trailing tons and length. This required that DuPont develop trailing train statistics because, as indicated above, NS' train movement data included only total train statistics. DuPont developed trailing length and tons consistent with the approach used in prior SAC cases by multiplying the aggregate number of railcars by average car

[17] The above list is not exhaustive and showing only the maximum by train symbol type masks the number of other erroneous long trains with the same train symbol.

[18] Like the train length data, NS train event data indicated extremely large numbers of cars on some trains. In some cases the number of cars on train exceeded 300 railcars.

[19] *See* e-workpapers "Non-Coal List.xlsx" and "Coal Train List.xlsx."

Problems With NS Provided Train Event Data

lengths, by multiplying the number of loaded railcars by average gross weights by train type and by multiplying the number of empty railcars by average tare weights by train type. The resultant train statistics were then entered into the SARR RTC simulation model.

Upon entering the statistics into the RTC model however, DuPont came upon a significant issue. A significant number of trains included in the RTC model exceeded the size of the current NS yards, which serve as a basis for the SARR yard specifications. In simple terms, the train sizes inferred in the NS train event data would not fit in the NS yards. To determine the source of this issue, DuPont compared the number of cars indicated in the NS train event data on each train to the number of cars included on the train as referenced in the NS car event data. The NS car event data was produced in a separate database from the NS train event data, and therefore served as a check on the NS train event data. A comparison of the two databases showed that the NS train event data consistently overstated the number of railcars on the NS non-coal trains.[20]

To resolve this issue, DuPont was forced to make two (2) modifications to its already-completed peak period analyses. First, DuPont adjusted its peak period number of trains to account for a smaller number of trains to be added in the peak period. As described above, DuPont increased the size of existing trains to the maximum current train size operated by NS prior to adding additional trains. Because the train sizes based on the car event data were smaller than the train sizes indicated in the train event data, the car event trains had more room to grow to their maximum size, which meant DuPont had to reduce the number of peak year trains it

[20] *See* e-workpaper "Non-Coal List.xls," worksheet "Growth Determination," Columns AR to AW.

added. DuPont made this adjustment based upon an application of the percentage change in growth trains produced under the car event and train event data.[21]

Second, DuPont adjusted the statistics for the trains included in the RTC model.[22] These adjustments corrected the vast majority of the train length issues encountered in the RTC model.

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[21] Specifically, DuPont compared the number of trains to be added using the train event train sizes (49,788 peak year trains) to the number of trains to be added using the car event train sizes (41,338 peak year trains). The 17 percent reduction was then applied to the number of growth trains indicated in the peak period non-coal train lists produced based on the train event data. This approach was necessary because the different train sizes based on the two different data sets meant that trains would be added at different rates and different times. DuPont had at that point spent considerable time developing a peak period list of trains based on its earlier analyses based on flawed NS data. In order to meet the required deadlines, DuPont made the reasonable adjustment by making pro-rata adjustments to its already completed RTC train lists. DuPont identified the trains to be removed using a process that randomly picked growth trains as to not bias the remaining train lists. See DuPont Opening e-workpapers "General Freight Peak Period RTC List (With adjusted growth).xlsx," "Intermodal and Auto Peak Period RTC List (With adjusted growth).xlsx," and "Local Peak Period RTC List (With adjusted growth).xlsx."

[22] *See* e-workpapers "General Freight Peak Period RTC List (With adjusted growth).xlsx," "Intermodal and Auto Peak Period RTC List (With adjusted growth).xlsx," and "Local Peak Period RTC List (With adjusted growth).xlsx."

Highly Confidential Information

Redacted

EXHIBIT NO. 2

Highly Confidential Information

Redacted

EXHIBIT NO. 3

DRR CREW DISTRICTS AND ASSIGNMENTS

North Region		
Assignment Locations	**Away Locations**	**Turn Crews**
(1)	(2)	(3)
Kansas City, MO	Hannibal, MO	
	Moberly, MO	
Decatur, IL	Hannibal, MO	Bement, IL
	Lafayette, IN	Springfield, IL
	Peru, IN	
	Kankakee, IL	
	Ft. Wayne, IN	
East St. Louis, IL	Princeton, IN	Decatur, IL
Chicago, IL	Decatur, IL	Streator, IL
	Elkhart, IN	Kankakee, IL
	Ft. Wayne, IN	Pine Yard, IL
	Toledo, OH*	
	Goshen, IN	
Ft. Wayne, IN		Roanoke, IN
Danville, IL	Peru, IN	
	Ft. Wayne, IN	
Danville, KY	Princeton, IN	Louisville, KY
	Chattanooga, TN	Georgetown, KY
	Emory Gap, TN	Lexington, KY
	Columbus, OH	
	Cincinnati, OH	
	Ft. Wayne, IN	
Columbus, OH	Fairlane, OH	Cincinnati, OH
	Ft. Wayne, IN	Chillicothe, OH
	Sandusky, OH	
	Cleveland, OH	
	Dickinson, WV	
	River Rouge, MI	
Cleveland, OH	Ft. Wayne, IN	Avon Lake, OH
	River Rouge, MI	

*Intermodal and Multi-level only.

DRR CREW DISTRICTS AND ASSIGNMENTS

Assignment Locations	Away Locations	Turn Crews
(1)	(2)	(3)
Bellevue, OH	Chillicothe, OH	
	Cincinnati, OH	Columbus, OH
	Peru, IN	Cleveland, OH
	River Rouge, MI	Toledo, OH
	Sharonville, OH	Fairland, OH
	Ft. Wayne, IN	Monroe, MI
River Rouge, MI	Alliance, OH	
Sandusky	Alliance, OH	
	Chillicothe, OH	
Toledo, OH	Columbus, OH	Butler, OH
	Cleveland, OH	
Elkhart, IN	Toledo, OH	Goshen, IN
	Bellevue, OH	Burns Harbor, IN
	Sandusky, OH	
	River Rouge, MI	
	Monroe, MI	
Conway, PA	Sandusky, OH	Pittsburgh, PA
	River Rouge, MI	Homewood Jct., PA
	Bellevue, OH	
	Cleveland, OH	
	Altoona, PA	
	Harrisburg, PA*	
	Toledo, OH*	
	Fairlane, OH	
	Enola, PA*	
	Rockville, PA*	
	Rutherford, PA*	
Cincinnati, OH	Chillicothe, OH	Middletown, OH
Peru, IN		Ft. Wayne, IN
		Lafayette, IN

*Intermodal and Multi-level only.

DRR CREW DISTRICTS AND ASSIGNMENTS

Assignment Locations	Away Locations	Turn Crews
(1)	(2)	(3)
Princeton, IN	Louisville, KY	CB Jct., IN
	Baltimore, MD	Huntingburg, IN
		Browns, IN
		Gibson, IN
Harrisburg, PA	Altoona, PA	Reading, PA
	Shenandoah, VA	Hagerstown, MD
	South Bound Brook, NJ	Wago, PA
	Allentown, PA	Kase, PA
	Binghamton, NY	
	Morrisville, PA	
	Perryville, MD	
	Bethlehem, PA	
Enola, PA	Altoona, PA	Wago, PA
	Baltimore, MD	
	Edgemoor, MD	
	Porter, DE	
	Binghamton, NY	
	Shenandoah, VA	
Rutherford, PA	Shenandoah, VA	
	Altoona, PA	
	South Bound Brook, NJ	
Rockville, PA	Altoona, PA	Sunbury, PA
	Binghamton, NY	
Binghamton, NY	Buffalo, NY	Waverly, NY
	Sarasota, Springs, NY	
	Rouse Point, NY	
	(from Sarasota Springs)	
Norris, PA		Morrisville, PA
Altoona, PA	Pittsburgh, PA	South Forks, PA
Edgemoor, DE		Baltimore, MD
Allentown, PA		Reading, PA
		South Bound Brook, NJ

DRR CREW DISTRICTS AND ASSIGNMENTS

Louisville, KY		Huntingburg, PA

DRR CREW DISTRICTS AND ASSIGNMENTS

South Region		
Assignment Locations	**Away Locations**	**Turn Crews**
(1)	(2)	(3)
Birmingham, AL	Meridian, MS	Selma, AL
	Atlanta, GA	Boligee, MS
	Jackson, AL	Vance, GA
	McIntosh, AL	Henryellen, AL
	Yates, GA	
Mobile, AL	Selma, AL	
Meridian, MS		Hattisburg, MS
Chattanooga, TN	Birmingham, AL	Emory Gap, TN
	Sheffield, AL	
	Atlanta, GA	
	Bulls Gap, TN	
	Knoxville, TN	
New Orleans, LA	Meridian, MS	
Memphis, TN	Sheffield, AL	
Atlanta, GA	Macon, GA	Scherer, GA
	Millen, GA	Baldwin, GA
	Greenville, SC	Wansley, GA
	Spartanburg, SC	Bremen, GA
	Cleveland, TN	Morrow, GA
Augusta, GA	Atlanta, GA	Millen, GA
Cleveland, TN	Bulls Gap, TN	
	Wensley, GA	
	Yates, GA	
	Bremen, GA	
Macon, GA	Augusta, GA	
	Millen, GA	
Greenville, SC	Salisbury, NC	Baldwin, GA
	Charlotte, NC	

DRR CREW DISTRICTS AND ASSIGNMENTS

Assignment Locations	Away Locations	Turn Crews
(1)	(2)	(3)
Spartanburg, SC	Columbia, SC	
	Salisburg, NC	
	Pregnall, SC	
Linwood, NC	Greenville, SC	Charlotte, NC
	Spartanburg, SC	Greensboro, NC
	Altavista, VA	Ft. Mill, SC
	Lynchburg, VA	Belmont, GA
		Salisburg, NC
Altavista, VA	Petersburg, VA	
Roanoke, VA	Linwood, NC	PD Jct. WV
	Petersburg, VA	Vabrook, VA
	Crewe, VA	
	Shenandoah, VA	
	Bristol, TN	
	Elmore, WV	
	Greensboro, NC	
	Bulls Gap, TN	
Dickinson, WV	Elmore, WV	Alloy, WV
	Columbus, OH	
Bulls Gap, TN		Asheville, NC
		Bristol, TN
Knoxville, TN	Bristol, TN	Bulls Gap, TN
(Sevier Yard)	Asheville, NC	Cleveland, TN
	Fairbanks Jct., GA	Loudon, TN
Asheville, NC		Douglas, NC
Elmore, WV		Beggs, WV

EXHIBIT NO. 4

DRR HELPER SERVICE

On Location (1)	Off Location (2)	Helper Service Miles (3)	Helper Direction (4)	Number of Helper Locomotive (5)	Peak Period Trains Helped Per Day (6)
1. Louisville, KY	Duncan, IN	10.37	West	1	3.4
2. Bulls Gap, TN	Knoxville, TN	46.80	South	2	5.8
3. Cincinnati, OH	Erlanger, KY	7.57	South	1	15
4. Altoona, PA	Johnstown, PA	37.90	West	2	33.4
5. Johnstown, PA	Altoona, PA	37.90	East	2	30.3

Source: *See* e-workpaper "Train Summary From TRAIN FILE.xlsx".

EXHIBIT NO. 5

DRR RTC MODELING PROCEDURES AND RESULTS

The DuPont Stand-Alone Railroad ("DRR") utilized the Rail Traffic Controller ("RTC") model[1] to optimize the DRR's system track configuration and provide the basis for many of the DRR's annual operating metrics. The RTC model has been relied upon by the STB in numerous prior maximum rate reasonableness cases[2] to evaluate the feasibility of the SARR's operating plan and to demonstrate the maximization of the SARR's infrastructure.

The process followed to develop the needed metrics for DRR's rail operations based on the RTC model simulation is discussed in the remainder of this Exhibit under the following topical headings:

A. Development of The DRR System

B. Operating Inputs Used in The RTC Model

C. Development of The Peak Train List

D. Other RTC Related Issues

A. DEVELOPMENT OF THE DRR SYSTEM

The DRR system is made up of over 8,000 route miles. This is the largest stand-alone system yet constructed and presented to the STB, and, as far as DuPont is aware, the largest system ever simulated in the RTC model.

B. OPERATING INPUTS USED IN THE RTC MODEL

The following elements of the DRR's operating plan were developed by Mr. McDonald and input into the RTC Model by Messrs. Fapp and Humphrey for purposes of simulating the DRR's peak-period operations and developing train transit times:

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[1] Version 64K.

[2] *See*, e.g., *AEPCO* at 28, *WFA/Basin* at 16, *PSCo/Xcel* at 27 and *Otter Tail* at 24.

DRR RTC MODELING PROCEDURES AND RESULTS

1. Road Locomotives
2. Train size
3. Helpers
4. Maximum train speeds
5. Dwell times
6. Time required to interchange trains with other railroads
7. Crew-change locations/times
8. Time for a train to reverse direction
9. Track inspections and maintenance windows
10. Time for random outages

Each of these elements is discussed below.

1. Road Locomotives

The RTC simulation demonstrated that most road trains can operate over the DRR system (other than the helper districts described below) with two ES44AC locomotives in a 1/1 DP configuration, except some heavy trains needing additional power at certain locations. The additional locomotives were generally placed on the head-end of the train, usually at crew-change locations, during crew-change time.[3]

The DRR will operate its local trains with a single GP38 locomotive where possible. Where this is not possible due to local train sizes or topography, the DRR adds a second GP38 locomotive or instead uses ES44AC locomotives on the local trains. In addition, DRR worktrains will utilize GP38 locomotives. Finally, the DRR will use SW1500 in its yards to perform its switching operations.

The base year locomotive requirements, which were developed from the RTC simulation statistics of the DRR are shown in Table 1 below.

[3] In some cases, additional locomotives were added to the rear of the train as to equalize power and minimize train slack.

DRR RTC MODELING PROCEDURES AND RESULTS

Table 1
DRR Base Year Locomotive Requirements

Unit Type (1)	Number of Units (2)
1. ES44AC	483
2. GP38	101
3. SW1500	80
4. Total Units	664

Source: *See* e-workpaper "DRR Operating Statistics_ Errata.xls"

2. Train Size

The peak period forecast trains for the RTC simulation are based on corresponding actual 2009-2010 trains. The maximum train size is equal to the largest trains by train type and symbol currently operated by NS. All growth trains are limited to the same size and weight of actual 2009-2010 trains, and no growth train has more than six (6) locomotives (excluding helpers).

3. Helpers

DRR's helper districts were determined in a two-step process. First, information provided by NS in discovery was used to identify locations on the DRR network where NS currently provides helper service. Second, additional helper service requirements were determined by running the RTC model and adding helper service as needed. A summary of the helper locations and locomotives required at each location is shown in Table 2 below.

DRR RTC MODELING PROCEDURES AND RESULTS

Table 2
DRR Helper Districts And Locomotive Requirements

Helper District (1)	Distance Helped (2)	Helper Locomotives (3)
1. Louisville, KY to Duncan, IN	15.0	1
2. Bulls Gap, TN to Knoxville, TN	48.4	2
3. Cincinnati, OH to Erlanger, KY	7.2	1
4. Altoona, PA to Johnstown, PA	38.9	2
5. Johnstown, PA to Altoona, PA	38.9	2

Source: *See* e-workpaper "Train Summary from TRAIN file.xlsx."

Mr. McDonald instructed Messrs. Fapp and Humphrey to allow twenty (20) minutes for each train requiring helper assistance, to add helper locomotives at the beginning of the helper district and to allow fifteen (15) minutes to detach the helper locomotives at the end of the helper district.

The coupling and uncoupling of helper locomotives is a straight-forward process that takes a few minutes in terms of the physical operations. The allotted twenty (20) minutes for adding helper locomotives provided sufficient time to perform a brake test after the lead helper locomotive was coupled to the train. Modern technology permits helpers to be removed without stopping the train, but Mr. McDonald has conservatively assumed the train will stop for the removal of helpers and has allotted fifteen (15) minutes for this process. This includes the time the helper crew needs to verify that the brakes on the distributed power ("DP") road locomotive at the rear of the train have been released.

After being detached from a train (regardless of direction), each 2-unit helper consist returns light to its point of origin. Light helper movements follow trains moving in the same direction, on the same block, with dispatcher authority (unless there is a long interval between trains, in which case they move on a separate block). This is consistent with real-world railroad

practices based on Mr. McDonald's personal observation and experience. Light helper movements are not treated as separate trains for purposes of the RTC simulation.

4. Maximum Train Speeds

The maximum permissible train speeds input into the RTC Model are 60 mph (50 mph for loaded coal and bulk grain trains) on the DRR's main lines. All trains are limited to a maximum speed of 40 mph on the DRR's branch lines except where existing NS timetable speeds are higher. These maximum speeds are consistent with NS's real-world practice on the lines being replicated by the DRR.

Maximum train speeds are reduced below those specified above where a speed restriction is required by NS's operating timetables for the divisions and subdivisions in question. These restrictions exist for safety reasons (such as to maintain a safe braking distance), to reduce underbalance in curve super elevation per FRA track safety regulations and reduce track/curve wear, and to avoid high-speed gage separation on curves exceeding 3 degrees. In addition, trains do not reach maximum authorized speed in some areas due to grades and curves. All of these restrictions and limitations have been incorporated into the RTC Model for application to the DRR's peak-period operations.

5. Dwell Times

Dwell times have been allotted for trains at the DRR's yards based on the kinds of activities being performed. These activities include 1,000/1,500-mile car inspections and associated bad-order car switching, locomotive fueling and 92-day inspections, and crew changes.

Mr. McDonald has allotted a total of five (5) hours of dwell time at each yard for through coal trains requiring an inspection. This includes time for the inspection itself (three hours) and removal of any bad order cars from the train and addition of spare or repaired cars (one hour).

DRR RTC MODELING PROCEDURES AND RESULTS

Locomotives requiring FRA-mandated 92-day inspections are removed from the train upon arrival and replaced with fresh locomotives when the inspection and bad-order switching processes are completed. If locomotives that are not removed for a 92-day inspection require fueling, it is performed while the car inspection is taking place and the train is "blue-flagged." Another hour of dwell time has been allotted for these procedures, as well as for train staging time and contingencies.

All intermodal and general freight trains that move at least 750 miles on the DRR also receive an inspection at one of the DRR's yards (assumed to be a 1,000-mile inspection[4]). Non-coal trains that move less than 750 miles on the DRR do not require an inspection because they are interchanged with NS or another railroad at either the on-SARR or off-SARR point (or both), and are inspected while on the connecting railroad.

Mr. McDonald has allotted five (5) hours of dwell time at the DRR's yards for non-coal trains requiring a 1,000-mile inspection.[5]

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[4] Some of these trains are intermodal or auto trains that qualify for extended-haul status, thus permitting a 1,500-mile interval between inspections, but to be conservative Mr. McDonald has assumed a 1,000-mile inspection is required.

[5] Six hours of yard dwell time was allotted for empty coal trains to be consistent with the dwell time allotted for empty coal trains in the *WFA/Basin* case. Less dwell time would be needed to inspect and service the DRR's non-coal trains because they tend to be shorter, there is less need to remove bad-order cars and replace them with spare cars, and no need to swap all locomotives on each train for new locomotives, which was the procedure used for empty SARR coal trains in *WFA/Basin*. See "Opening Evidence of Complainants Western Fuels Association, Inc. and Basin Electric Power Cooperative (Public Version)" filed April 19, 2005 at III-C-41 and *WFA/Basin* at 17.

DRR RTC MODELING PROCEDURES AND RESULTS

Since the RTC model simulation is a snapshot of the DRR's operations over a ten (10)-day simulation period, there is no way to tell in advance which road locomotives on which trains require a 92-day inspection or fueling upon arrival at one of the DRR's yards during that period. Based on Mr. McDonald's experience, it is likely that trains received in interchange from NS or another railroad will have locomotives with full fuel tanks and that do not require a 92-day inspection while on the DRR. However, to be conservative, for all empty coal trains (and certain loaded coal trains as described earlier) and for all non-coal trains that move at least 750 miles on the DRR, Mr. McDonald has assumed that the locomotives on the train will need fueling and or a 92-day inspection at one of the DRR's yards, as well as a 1,000-mile or 1,500-mile car inspection. These inspections occur at one of the following yards: Elkhart, Conway, Chattanooga, Roanoke, Atlanta or Bellevue.

6. Time Required to Interchange Trains With Other Railroads

As described above, the DRR interchanges complete trains, including locomotives, with six Class I railroads (BNSF, CSXT, NS, KCS, CN and UP) as well as over 40 regional or short-line railroads.[6]

Mr. McDonald has allotted 30 minutes for the interchange of trains at all of these points. All that is required for the interchange of run-through trains is a change of crews, a brake set/release and a roll-by inspection, which can easily be accomplished within 30 minutes. The same 30 minutes of SARR interchange time were accepted by the Board in *WFA/Basin*.[7]

A train received in interchange may have more locomotives than the DRR needs to move the train over its system, or may not have the locomotives arranged in a DP configuration. The

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[6] *See* e-workpaper "DRR Interchanges.xlsx." for a complete list of DRR interchange locations and the railroads involved.

[7] *See WFA/Basin II* at 16.

inbound DRR road crew removes any extra locomotives and leaves them on the setout track at the interchange point during the time allotted for the interchange, and the outbound DRR crew rearranges locomotives into a DP configuration if necessary during the interchange time.[8]

7. Crew-Change Locations/Times

At DRR crew-change points where the change of crews is the only function performed, Mr. McDonald has allotted 15 minutes for this function. Again, this is consistent with the time allotted for SARR crew changes in *WFA/Basin*.[9]

The RTC simulation confirms that the distance for each crew assignment, as well as the allotted time at mines or other points served by turn crews, can be covered by a single tour of duty including an allowance of one hour for crew preparation/taxi time. A few crews expire under the Hours of Service law and need to be taxied to their next terminal, while some trains are able to skip a crew change point and the crew can run through to the next crew-change point. Since the DRR is a new, start-up, non-unionized operation, its crew districts can be, and have been, designed for maximum efficiency.

8. Time for a Train to Reverse Direction

The DRR's track configuration is such that certain of the DRR's trains must reverse direction. This primarily occurs with local "turn trains" that reverse direction at the terminus of their outbound movement. The reversal of direction at these locations is facilitated by the DRR's use of DP locomotives on all trains.

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[8] The Class I railroads are converting to DP at a rapid pace; for example, Union Pacific reported at a recent RTC Model users' conference that 70 to 75 percent of its road trains now have a DP locomotive configuration. With the peak RTC simulation period ten years hence, it is reasonable to assume that the DRR will have in place run-through agreements that specify trains are to be received with DP power and that foreign-road locomotives will be equipped for DP operation.

[9] See *WFA/Basin* Opening Evidence of Complainants (Public Version) at page III-C-30.

DRR RTC MODELING PROCEDURES AND RESULTS

Mr. McDonald has allotted 45 minutes of dwell time to reverse direction for trains that do not change crews at the reverse-direction point. This accounted for any switching occurring at the turn location and the time needed for the crew to walk to the other end of the train and board the locomotive on that end. No additional time is allotted for reversing direction if the procedure occurs at a location where the train is interchanged with another railroad or otherwise undergoes a crew change. At these locations, the outbound DRR crew boards the locomotives at the opposite end of the train from the locomotive where the inbound crew leaves the train. No extra time is needed beyond the normal 30 minutes allotted for interchange or 15 minutes allotted for crew changes at non-interchange locations.

9. Track Inspections and Maintenance Windows

FRA rules require twice-weekly inspections for Class 4 track, which is the classification for the DRR's main tracks. As described in Part III-D (which describes the DRR's maintenance-of-way plan), the DRR's main and branch lines are inspected twice a week by the railroad's Track Inspectors using hi-rail vehicles (SUV-type vehicles equipped with retractable flanged wheels so they can operate either on highways or on railroad tracks). These inspections have to be performed during the peak traffic (RTC simulation) period. However, they can be performed between train movements, and during periods of heavy traffic or the hi-rail vehicle can follow a train on the same block (with the dispatcher's approval). Accordingly, there is no need to allot separate time for FRA-prescribed track inspection in the RTC Model.

Consistent with the STB's decision in *AEPCO*, Messrs. Fapp and Humphrey have included delay times in the RTC simulation to account for maintenance being performed on the DRR's line. Specifically, they identified the times that NS trains were delayed due to

maintenance activity based on train delay time data provided in discovery by NS.[10] This includes delays due to bridge gangs, maintenance of way gangs, rail gangs, and T&S gangs.

10. Time for Random Outages

Random events that affect track, signals and equipment are a part of everyday railroading. It is unrealistic to expect that no such events would occur during the DRR's peak traffic period used for the RTC simulation, or that such events would not affect train operations during that period. Accordingly, time for random outages has been input into the RTC Model.

Track capacity is also impacted by program maintenance performed by the SARR. The STB indicated in its *AEPCO* decision that while parties in prior SAC proceedings had not included track delays caused by program maintenance in their SARR simulations, such maintenance was common in the "real world" and therefore should be reflected in a SARR's hypothetical world.[11]

It is impossible to determine exactly what events would impact train operations during the June 1, 2018 through May 31, 2019 peak year, or when they will occur. NS provided data in discovery on events of an unexpected or "random" nature that affected train operations on the lines being replicated by the DRR in 2009 and 2010, including train-related, track-related and signal-related events. It also identified delays caused by maintenance of way, and bridge gangs.[12]

Mr. McDonald identified the outages and delays that occurred on NS track replicated by the DRR during the peak period's comparable time in the base year, e.g., November 12 through November 21. He then provided them to Messrs. Fapp and Humphrey for input into the RTC Model during the 10-day simulation period.

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[10] *See* e-workpaper "2009_Delay (on-sarr).xlsx".

[11] *See AEPCO* at 28.

[12] *See* e-workpaper "2009_Delay (on-sarr).xlsx".

DRR RTC MODELING PROCEDURES AND RESULTS

Mr. McDonald selected the kinds of outages that he deemed most likely to occur including operational outages, such as a broken knuckle or drawbar, a train going into emergency braking mode, or a broken rail. Mr. McDonald excluded, however, those outages experienced by NS that would not be incurred by the DRR due to differences in the two railroads' operations. For example, Mr. McDonald excluded delays caused by Amtrak operating on the DRR's line, since, unlike the NS, Amtrak would not be a DRR tenant railroad. Similarly, Mr. McDonald also excluded outages caused by NS' traditional signaling system as the DRR would operate from the beginning with a purposely built PTC system in place of traditional signals. In another example, Mr. McDonald designed the DRR operating plan so that all road trains would operate with at least two (2) locomotives, meaning a failure in one locomotive would not leave the train stranded and blocking track. Instead, DRR trains would move under the remaining operational power on the train to the next yard, where the inoperative locomotive would be replaced.

Consistent with the STB's decision in *AEPCO*, Mr. McDonald also identified program maintenance work performed by NS that would cause train delays. This includes delays caused by maintenance of way gangs, bridge gangs, rail gangs and T&S gangs. These delays are in addition to the random maintenance outages caused by such things as broken rails and power switch failures.

Mr. McDonald also assumed an average duration for each outage indicated in NS train delay data would occur in the peak year operations. In other words, if NS experienced an one hour delay in its 2009 operation at a particular location, then the DRR would experience a one hour delay in 2019 at the same location. Mr. McDonald then instructed Messrs. Fapp and

Humphrey to include the outages on the DRR's lines (including the date and time for each outage) at the same location where NS experienced the outage.[13]

The end result of the analysis was to include 177 operational and maintenance outages as inputs to the RTC Model. The 177 total outages included in the RTC simulation are shown, by date and time, location and type in DuPont's workpapers.[14]

C. DEVELOPMENT OF THE PEAK TRAIN LIST

Once the DRR network was developed and tested in the RTC model and the operating inputs were identified, the next step in the process was to identify the peak period trains that would be included for evaluation in the RTC model.

1. Peak Trains

The modeling period included a two-day warm-up, the peak week and a one-day cool down.[15] Messrs. Fapp and Humphrey were able to use a shorter warm-up period than in prior cases because the peak period train list includes all trains moving from the beginning of the simulation.

SARR's presented in prior maximum reasonable rate cases have been primarily coal railroads that transport unit coal train traffic between mines and generating stations. In those cases, the SARR simulation usually began with either all the loaded coal trains beginning at the mines and moving loaded to the generating stations, or all the empty coal trains beginning at the generating stations and cycling back to the mines. In either case, additional warm-up time was

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[13] The NS delay data provided in discovery indicated the date, location and duration of the delays, but not the time of day the delay occurred. Messrs. Fapp and Humphrey assigned a delay time using a random number generator to develop random delay times.

[14] *See* e-workpaper "2009_Delay (on-sarr).xlsx".

[15] The trains included in the RTC train list consist of trains originated within a 10-day period. Because many train take more than 24 hours to reach their destination, the model actually simulated an 11-day period to allow trains dispatched on Day 10, the cool down day, to reach their destination.

needed to allow the loaded and empty trains to make a complete cycle to reflect the congestion of loaded and empty coal trains meeting along their respective routes.

In this case, DuPont did not begin with only loaded or empty coal trains, but instead began by moving all trains, including loaded and empty unit traffic simultaneously. DuPont was able to do this by identifying both loaded and empty unit trains as part of its peak period process. This meant loaded and empty unit trains were meeting along their routes from the beginning of the simulation. In this way, DuPont could shorten the warm-up period since much of the operational congestion was in place from the start of the simulation.

The peak period was developed based on the peak volume of trainload traffic selected for inclusion in the DRR's traffic group. The peak period train lists were then developed from NS car and train movement data provided in discovery for the June 2009 to May 2010 time period. In particular, Messrs. Fapp and Humphrey matched the DRR's revenue carloads to the NS trains that moved the relevant cars (including corresponding empty cars). NS's peak traffic period in the base year was November 12 through November 21. The trains that the DRR will transport during the peak period and corresponding study period for the RTC simulation are shown in DuPont's workpapers.

Messrs. Fapp and Humphrey then determined the number of DRR trains that would transport the general freight, coal and intermodal traffic included in the DRR traffic group in the comparable period of June 1, 2018 through May 31, 2019, which is the peak volume year during the DCF period. They did this by applying the percentage increase in the DRR's traffic for the Base Year to June 1, 2018 to May 31, 2019 for each movement to the car/train movement data provided by NS in discovery. The "growth" trains thus developed were added to the trains that moved during the peak week on a random basis. The 10-day study period used in the RTC

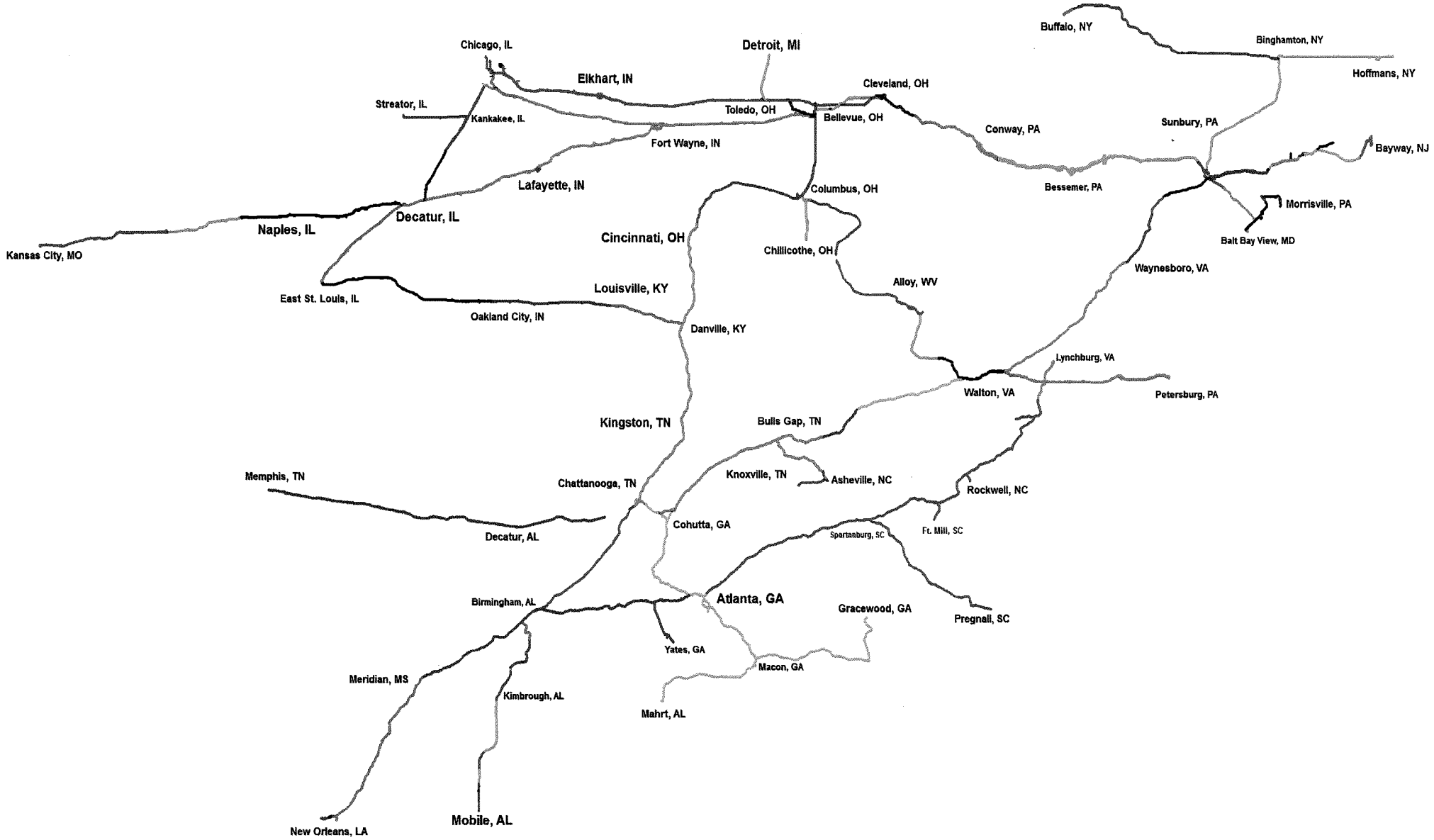
simulation was November 12 through November 21, 2018.[16] A total of 7,210 trains were analyzed during this period, of which 5,087 operated in the peak week.[17]

[16] The 10-day period includes a 2-day warm-up period based on preliminary modeling that indicated this would be the maximum time any train would spend on the DRR.

[17] The list of peak period trains is included in DuPont's Opening workpapers.

EXHIBIT NO. 6

DRR RTC Network



***NOTE:** Segments colored by subdivision.

EXHIBIT III-D

EXHIBIT NO. 1

DRR OPERATING PERSONNEL

The DRR has a traffic group that moves primarily in trainload quantities. Consistent with the stand-alone concept of identifying the least-cost, most-efficient, feasible hypothetical alternative to the incumbent, the DRR is a non-union railroad that is built from the ground-up to handle a defined traffic group.[1]

DuPont's experts have developed a staffing plan and associated personnel for the DRR to handle its projected peak traffic volume safely and efficiently by taking full advantage of modern technology. This staffing plan also permits the railroad to maintain its facilities in good condition while minimizing cost.

A. STAFFING REQUIREMENTS

The DRR's operating personnel include train crew, line supervisory and field employees in Transportation, Engineering/Maintenance-of-Way and Mechanical departments. The senior Operations staff (headquartered at Roanoke, VA) report directly to the Vice Presidents of Transportation, Engineering and Mechanical. For the most part, they are not included as operating personnel but are included in the DRR's General & Administrative ("G&A") staff, which is described in Part III-D-4. The DRR's operating personnel requirements are discussed below.

1. Train/Switch Crew Personnel

The DRR requires a total of 3,166 Train & Engine ("T&E") crew members to transport its Base Year trains. This count, which includes helper crews and switch crews based at the DRR's yards, is based on the number of trains moving over the various parts of the DRR system during the Base Year; the crew assignments developed by Mr. McDonald (as described in Part

[1] The Board has accepted the concept of a non-unionized SARR. *See TMPA* at 687; *PSCo/Xcel* at 68, 69.

III-C-1), and the switch assignments at the DRR's yards. The RTC Model simulation performed by Mr. Fapp was used to confirm that train crews operating in these crew districts generally could complete each tour of duty within twelve (12) hours and otherwise comply with the federal Hours of Service law, as amended.[2]

Consistent with Board precedent, T&E crews were developed using the total number of crew starts as determined by the actual train counts over an entire year.[3] In this instance, crews were determined for all trains moving in the Base Year. The total crew starts from each crew base were then adjusted upward to reflect the 0.38 percent re-crewing requirements based on the results of the RTC simulation indicating the number of crews whose on-duty time expired under the Hours of Service law. The adjusted crew count was then used to determine the total number of T&E crews required using the standard formula employed by the Board to determine how many crews are required to cover the number of crew starts assuming that each crew member is available 270 days a year. *Id.*[4]

2. Non-Train Operating Personnel

The DRR's staffing requirements for operating personnel other than train and switch crews and maintenance-of-way ("MOW") personnel are summarized in Table 1 below. MOW personnel are discussed separately in Part III-D-5.

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[2] *See* e-workpaper "Base Year Trains_Statistics_Open_Errata.xlsx."

[3] *See PSCo/Xcel* at 62.

[4] This number is not affected by the hours-of-service provisions of RSIA.

DRR OPERATING PERSONNEL

Exhibit III-D-1
Table 1
DRR Non-Train Operating Personnel

Operations Department Position (1)	No. of Employees (2)
Vice President Operations	1
Administrative Assistant	1
Administrative pool (secretaries)	4
Director – Budgets	1
Analyst – Budgets	2
Director – Rules, Safety & Training	1
Managers – Rules, Safety & Training	10
1. Transportation Department	
Vice President Transportation	1
Director – Operations Planning and Joint Facilities	1
Analyst – Operations Planning	2
Analyst – Joint Facilities	2
Director – Operations Control	1
Managers – Operations control (1 mgr north region and 1 mgr south region 24/7)	9
Chief Dispatcher (North region and south region)	2
Dispatchers (25 desks manned 24/7)	110
Director – Crew Management	2
Crew callers (4 desks manned 24/7)	18
General Managers (North and South Regions)	2
Directors – Field Operations	10
Managers – Field Operations	56
Managers – Locomotive Operations	11
Managers – Yard Operations (six major yards)	6
Assistant Managers – Yard Operations	48
2. Mechanical Department	
Vice President – Equipment Management	1
Administrative Assistant	1
Manager – Budgets	1
Directors – Locomotive Services (North region and South region)	2
Managers – Testing and Environmental	1
Managers – Car Distribution (North region and South region)	2
Car Distributor	7
Directors – Car Services (North region and South region)	2
Car Inspectors	269
3. Engineering Department	
Vice President – Engineering	1
Administrative Assistant	1
Director – Environmental Operations	1
Environmental Engineer	1
Total Non-Train Operating Personnel	**591**

Source: "DRR Operating Expense_Errata.xlsx."

DRR OPERATING PERSONNEL

A description of each operating position is provided below.[5]

a. Vice President – Operations – This position reports to the President-CEO, is a member of the DRR Board of Directors, and is responsible for all operating functions. Reporting to the Vice President – Operations are the Vice President – Transportation, Vice President – Equipment Management and Vice President – Engineering. Also reporting to the Vice President – Operations are the Director – Budgets and the Director – Rules, Safety and Training.

b. Director – Budgets – This position is responsible for preparation of the budget for the office of the VP – Operations as well as the entire Transportation Department, headed by the VP – Transportation. There are two Analyst positions assigned to assist the Director – Budgets.

c. Director – Rules, Safety and Training – The Director – Rules, Safety and Training is responsible for safety, rules and training on the DRR system. This position is also responsible for the operating timetable, rules, and related instructions and for interfacing with the FRA and other government agencies in matters pertaining to rules and operating practices.

d. Managers – Rules, Safety and Training – Reporting to the Director are ten Managers – Rules Safety and Training who monitor safety and conduct rules and training classes of transportation, maintenance, and mechanical operating personnel in their respective territories, and assist the Director in the performance of his duties.

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[5] In *WFA/Basin* the Board treated Customer Service personnel as Operating personnel and Marketing personnel as G&A staff. Mr. McDonald believes all of these personnel are more appropriately considered G&A personnel (discussed below). This is how they were treated in *AEP Texas* at 51, 54.

DRR OPERATING PERSONNEL

e. Vice President – Transportation – The Vice President – Transportation is responsible for all transportation functions on the DRR. Reporting to him are the Director – Operations Planning and Joint Facilities and the Director – Operations Control and the General Managers for the North and South Regions.

f. Director – Operations Planning and Joint Facilities – This position is responsible for designing the most efficient routings and scheduling of car and train movements on the DRR system. In addition, the position is responsible for preparing and monitoring all joint facility and industry contracts. There are four Analyst positions assigned to assist the Director – Operations and Joint Facilities, two analysts assist with operations planning and two analysts assist with joint facilities.

g. Director of Operations Control – The Director of Operations Control is responsible for all locomotive assignments on the DRR. This individual also coordinates and maintains records of run-thru operations with other railroads; and, in concert with the Mechanical Department, handles the timely dispatch of locomotive power due required inspections.

h. Managers – Operations Control – The Managers – Operations Control assist the Director Operations Control in performance of his duties. There two Managers of Operations Control positions, one for each Region and these positions are on duty 24 hours a day.

i. Chief Dispatchers – There are two Chief Dispatcher positions on the DRR, one each for the North and South Regions. The Chief Dispatchers are responsible for managing the Dispatching staff and ultimately responsible for dispatching trains, track inspections vehicles and work equipment on the DRR.

DRR OPERATING PERSONNEL

j. Dispatchers – The DRR has 25 dispatching desks located at the DRR's Roanoke headquarters. Eleven (11) Dispatcher desks are responsible for dispatching trains, track inspection vehicles and work equipment on the North Region and 14 desks are responsible for dispatching trains and equipment on the South Region. Each desk is manned by one (1) dispatcher three (3) shifts per day, seven (7) days per week. A total of 110 employees are required to man the 25 dispatcher positions on a 24/7 basis.

k. Directors – Crew Management and Crew Callers – The DRR utilizes an automated crew-management system[6]. Although the automated crew-management system is designed to handle virtually all basic crew interactions via automated calling and response systems (including identifying the proper crews for the proper jobs and automatically routing calls from crews to the appropriate dispatcher), the system requires some augmentation by human personnel. Accordingly, Mr. McDonald has staffed the DRR with two Directors – Crew Management (one each for the North and South Regions) and four Crew Caller positions (two each for the North and South Regions). All of these positions are based at the Roanoke headquarters.

The Directors – Crew Management manage the crew-calling system, supervise and assist the crew callers as needed, handle exceptions and assign crew vacations. They also interface with the DRR's IT personnel as needed. The four crew caller positions (two for each Region) are on duty on a 24/7 basis to augment the automated crew-management system. The crew callers' principal duties are to define the necessary jobs, assure the proper operation of the

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[6] *See* Exhibit III-D-2, Section D-2.

automated crew-calling system, and answer questions. The 24/7 staffing for these positions means a total of nine employees are required to man them.[7]

l. General Managers – Transportation – The General Managers – Transportation for the North and South Regions are responsible for all transportation field operations and supervise the DRR's Directors - Field Operations on their respective territories.

m. Directors Field – Operations – The Directors – Field Operations and Managers – Field Operations are responsible for train operations in their respective territories and for supervising train crews. They also perform FRA-mandated and other appropriate testing, and respond to and investigate accidents and day-to-day operating problems encountered by any busy railroad each reporting to his respective General Manager.

The DRR has 10 Directors – Field Operations with the positions split evenly among the two operating divisions which are of relatively equal length. This position is the equivalent of Transportation Superintendent on a Class I railroad. The Directors – Field Operations on the North Region are stationed at Chicago, Toledo, Conway, Enola and Cincinnati. The Directors – Field Operations on the South Region are stationed at St. Louis, Birmingham, Greenville, Roanoke and Chattanooga.

n. Manager – Field Operations – The DRR also has 56 Managers – Field Operations positions. Twenty-nine (29) being stationed at major terminals and 27 at outlying points. All managers report to their respective Directors – Field Operations. These positions are

[7] *See* e-workpaper "Personnel Counts.xls."

equivalent to a Trainmaster on a Class I railroad. The specific locations and number of Managers – Field Operations at each location are included in our workpapers.[8]

o. Managers -- Locomotive Operations – The DRR has 11 Managers – Locomotive Operations ("MLO"), who are responsible for the safe and efficient handling of locomotives and trains by the DRR's engineers. The MLOs are assigned to various locations throughout the DRR. The specific locations are shown in our workpapers.[9] Their duties are similar to those of a Road Foreman of Engines or Traveling Engineer on a Class I railroad. They are FRA-certified locomotive engineers and qualified on their respective territories. They perform FRA-mandated training and observation of engineers in train handling, efficiency testing, and other assistance as needed.

p. Managers and Assistant Managers – Yard Operations – One Manager – Yard Operations is assigned to and based at each of DRR's six major yards. Assistant Managers – Yard Operations are assigned at these and other locations where traffic volumes warrant. These positions direct the movement of trains and other equipment within the yard limits. All Managers and Assistant Managers – Yard Operations report to the Managers – Field Operations. At small yards where there is no Assistant Manager – Yard Operations, a designated crew member, acting as a footboard Yardmaster, will receive instructions directly from Customer Service.[10]

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[8] *See* e-workpaper "DRR Non-Train Operating Personnel.docx."

[9] *See* e-workpaper "DRR Non-Train Operating Personnel.docx."

[10] *See* e-workpaper "DRR Non-Train Operating Personnel.docx." for assignment locations for Managers and Assistant Managers – Yard Operations.

DRR OPERATING PERSONNEL

q. Vice President – Engineering – The Vice President – Engineering is responsible for all engineering matters on the DRR. This primarily involves MOW since the DRR does not need to construct any new facilities during the 10-year DCF period. In addition to supervising the MOW function and personnel (described in detail in Exhbit III-D-3), the Vice President – Engineering is responsible for the annual MOW capital and operating budgets, and for interfacing with the contractors involved in program and other maintenance-of-way work. This Vice President has one (1) assistant who is chiefly responsible for engineering administration and secretarial duties.

r. Vice President – Equipment Management – This Vice President supervises the DRR's mechanical function, which largely involves overseeing the acquisition and maintenance of the DRR's equipment (including rolling stock) as well as administration of the AAR Interchange Rules with respect to the DRR's use of other railroads' locomotives and equipment on trains that operate in interline service. The Vice President – Equipment Management is also responsible for interfacing with the DRR's locomotive and car maintenance contractors. Like the other Vice Presidents, he has an Assistant, who is responsible for mechanical and departmental secretarial work as needed. Also reporting to the VP – Equipment Management are two (2) Managers – Budgets who are responsible for working with the VP – Equipment Management and preparing budgets for the Mechanical department.

s. Directors – Locomotive Services – There are two Directors – Locomotive Services, one each for the North Region and the South Region. The Directors – Locomotive Services are responsible for maintenance of the locomotive fleet and ensuring the correct

complement of power and locomotive consists are available as requested by the Operations Control Department.

t. Manager – Testing & Environmental – The DRR has one (1) Manager – Testing & Environmental who report to the Directors – Locomotive Services. One Manager is assigned to each of the DRR's two Regions. These individuals are responsible for testing of materials and environmental compliance, including investigation of any problems involving cars containing hazardous commodities while on the DRR (and related federal reporting requirements).

u. Managers – Car Distribution – There are two Managers – Car Distribution, one each for the North Region and the South Region on duty five days per week. These positions are responsible for interacting with customers and field personnel to ensure equipment needs are met on a real time basis.

v. Car Distributors – There are two (2) car distribution desks, one assigned to each Region on duty 24/7 working with the Manager to provide equipment. A Manager – Car Distribution is assigned to the desk during the day shift and car distributors are assigned the two other shifts each day.

w. Directors – Car Services – There are two (2) Directors – Car Services with one assigned to each Region. These positions, report to the Vice President – Equipment Management, and are responsible for equipment repairs and for supervision of the Equipment Inspectors at the DRR's yards. These individuals are also responsible for the day-to-day interface with the DRR's locomotive and car maintenance contractors, as well as contract administration.

DRR OPERATING PERSONNEL

x. Equipment (Car) Inspectors – The DRR's Equipment Inspectors have duties similar to those of Carmen on a Class I railroad. They are located at the DRR's yards where the railroad performs 1,000-mile/1,500-mile car inspections.[11] The number of Equipment Inspector positions (which are manned 24/7) is based on the number of daily trains requiring inspection that move through the DRR's inspection points during the peak week. Equipment inspectors are also assigned at all yard locations where more than three trains per day originate. In yards where less than three trains per day originate, the train crews perform the necessary equipment inspections on trains prior to departure. Car inspection procedures are described in Part III-C-3.

The Inspectors at each of the DRR's six (6) locations where high volumes of trains are inspected, are divided into four-person crews, with each crew assigned two (2) small ATV-type vehicles which can travel on the roadways between the inspection tracks during the inspection process. This enhances the productivity of the crews, and the DRR has invested capital for roadways between the inspection tracks to achieve these savings. The inspection vehicles are equipped with tools and parts (such as brake shoes) needed for performing light car repairs. At locations where only originating trains are inspected, the inspection teams are comprised of two man crews, each crew is assigned two (2) small ATV vehicles, each team member inspects one side of the train.

A total of 269 employees are required to man the inspection crews on a 24/7 basis. The number of crews at each location is based on the maximum number of trains per day requiring

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[11] The DRR's coal trains operate as unit trains from initial origin to final destination and thus qualify for 1,500-mile "extended haul" inspections. It is assumed that the DRR trains carrying non-coal traffic will not operate as unit trains from initial origin to final destination, and thus do not qualify as extended-haul trains and require inspections at intervals of 1,000 miles or less.

inspection that operate through that location during the DRR's peak period included in the RTC simulation.[12]

B. COMPENSATION

Compensation for the T&E personnel and other non-train operating personnel is derived from NS's 2009 Wage Forms A&B and is established at the same levels as those paid by NS for comparable positions. The wages for the 3,166 T&E personnel are based on the average amount paid by NS to its T&E personnel including all constructive allowances paid by NS to its train and enginemen. In 2009 NS paid its engineers and conductors an average of { } and { }, excluding fringes, respectively. Based on these amounts the DRR pays its T&E personnel a total of { } million in the Base Year. Salaries and total compensation for the DRR's for non-train operating personnel are shown in Table 2 below.

[12] *See* "Inspection Crews.xlsx."

DRR OPERATING PERSONNEL

Exhibit III-D-1
Table 2
DRR Non-Train Operating Personnel

Operations Department

Position (1)	No. of Employees (2)	Annual Salary (3)	Total Salary (4)
Vice President Operations	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
Administrative pool (secretaries)	4	{ }	{ }
Director – Budgets	1	{ }	{ }
Analyst – Budgets	2	{ }	{ }
Director – Rules, Safety & Training	1	{ }	{ }
Managers – Rules, Safety & Training	10	{ }	{ }
4. Transportation Department			
Vice President Transportation	1	{ }	{ }
Director – Operations Planning and Joint Facilities	1	{ }	{ }
Analyst – Operations Planning	2	{ }	{ }
Analyst – Joint Facilities	2	{ }	{ }
Director – Operations Control	1	{ }	{ }
Managers – Operations control (1 mgr north region and 1 mgr south region 24/7)	9	{ }	{ }
Chief Dispatcher (North region and south region)	2	{ }	{ }
Dispatchers (25 desks manned 24/7)	110	{ }	{ }
Director – Crew Management	2	{ }	{ }
Crew callers (4 desks manned 24/7)	18	{ }	{ }
General Managers (North and South Region)	2	{ }	{ }
Directors – Field Operations	10	{ }	{ }
Managers – Field Operations	56	{ }	{ }
Managers – Locomotive Operations	11	{ }	{ }
Manager Yard Operations	6	{ }	{ }
Assistant Manager Yard Operations	48	{ }	{ }
5. Mechanical Department			
Vice President – Equipment Management	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
Manager – Budgets	1	{ }	{ }
Directors – Locomotive Services (North region and South region)	2	{ }	{ }
Managers – Testing and Environmental	1	{ }	{ }
Managers – Car Distribution (North region and South region)	2	{ }	{ }
Car Distributor	7	{ }	{ }
Directors – Car Services (North region and South region)	2	{ }	{ }
Car Inspectors	269	{ }	{ }
6. Engineering Department			
Vice President – Engineering	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
Total Non-Train Operating Personnel	589		38,843,482

Source: "DRR Operating Expense_Errata.xlsx"

Fringe benefits for all DRR employees are based on 37.5 percent of wages. This number is based on the average ratio of fringe benefits to total wages paid in 2009 to all operating employees in the states in which the DRR operates as reported by the Association of American

Railroads. [13] This method of determining the fringe benefit ratio was approved by the Board in *WFA/Basin* at 66. In addition, it is the same method used by Complainants and accepted by both Defendants and the Board in *AEPCO*.[14]

The DRR also incurs taxi and overnight expenses for train crews. The number of taxi trips required, the cost per trip, the number of overnight stays and the cost per stay were identified for each crew.[15]

Consistent with Board precedent, taxi trips and overnight stays were developed using the actual train counts (and the crews' related taxi and hotel requirements) over an entire peak year.[16] The requirements for each service type were developed.

The DRR's unit cost for taxi trips is estimated based on current rates for taxi service at each location. The cost per overnight stay ranges from $29.99 to $89.95 and is based on hotel room rates throughout the DRR system.[17]

C. MATERIALS, SUPPLIES AND EQUIPMENT

Materials, supplies and equipment for operating personnel (other than maintenance-of-way personnel) include office furniture and equipment, office supplies, safety equipment, EOTDs, motor vehicles including railcar inspection vehicles, and tools and supplies. The total

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[13] *See* e-workpaper "III-D-3 Salaries.pdf."

[14] The Public Version of AEPCO's Opening Evidence shows the derivation of the fringe benefit ratio in that proceeding, see AEPCO's January 25, 2010 Opening Evidence, Public Version, page III-D-25. Review of Defendants Reply evidence shows that they did not object to this fringe benefit ratio. *See* Defendants Reply Evidence dated May 7, 2010, pp. III.D-29 to 30. Moreover the STB accepted this evidence without comment in *AEPCO*.

[15] Details are provided in e-workpaper "DRR Operating Expense_Errata.xls."

[16] *See WFA/Basin* at 48 and *PSCo/Xcel* at 69.

[17] *See*e-workpaper DRR_Overnight Hotel and Taxi Costs.xlsx.

annual operating expense for these items equals $3.8 million in the Base Year.[18] The transportation materials, supplies and equipment expense includes the cost of 51 Ford Explorers, 19 4WD pick-up trucks for car inspection teams and 60 ATV vehicles for car inspection teams.

Information Technology ("IT") requirements, including computers and software, are described in Exhibit III-D-2. Maintenance-of-way equipment requirements are described in Exhibit III-D-3.

[18] *See* e-workpaper "DRR Materials and Supplies.xls."

EXHIBIT NO. 2

GENERAL & ADMINISTRATIVE EXPENSE

The General & Administrative ("G&A") expenses for the DRR include its headquarters (corporate) management and administrative staff, buildings and equipment, and other expenses, including information technology ("IT") requirements, training and recruiting expense, and outsourced expenses. These expenses have been developed on the basis of the experience of DuPont's Witnesses McDonald and Burris. Mr. McDonald in particular has held a number of senior management positions at a Class I railroad. Mr. Burris developed G&A personnel salaries based on salaries paid to comparable NS or (where appropriate) other railroad personnel. DuPont's IT expert, Joseph Kruzich, developed the DRR's IT requirements and costs including computer hardware, systems, software, and support personnel as well as out-sourcing needs.

The DRR's engineering staff was developed by DuPont's engineering witness, Harvey Crouch, in consultation with Mr. McDonald. As the engineering function principally involves maintenance-of-way, the DRR's engineering personnel are discussed in Exhibit III-D-3.

A. STAFFING REQUIREMENTS

The DRR's personnel have all been designated as operating personnel or as non-operating personnel. The DRR operating personnel are discussed in Exhibit III-D-1, the maintenance-of-way employees, while considered operating personnel, are discussed separately in Exhibit III-D-3. Employees considered non-operating personnel on a Class I railroad are included in the G&A staff discussed below. The DRR's G&A staff is consistent with the G&A staffing for the SARRs approved by the Board in recent SAC cases, including *PSCo/Xcel*, *AEP Texas*, *WFA/Basin* and *AEPCO*, taking into account the DRR's larger geographic scope, traffic volumes and train flows, and the diversity of commodities handled. It should be noted, however, that many G&A functions do not vary with the number of route-miles or the traffic volume. The

GENERAL & ADMINISTRATIVE EXPENSE

nature of most G&A functions means that a railroad the size of the DRR can achieve greater staffing economies of scale than a smaller railroad.

The G&A staff is based at Roanoke, VA, where the DRR's corporate headquarters building is located. This staff covers all executive and administrative functions including marketing, legal services, accounting and bookkeeping, budgeting, financial reporting, payroll, information systems, human resources, secretarial and clerical services, and supervising contractors in the performance of some out-sourced functions.

The DRR's G&A staff is summarized in Table 1 below. This table does not include the operating and MOW employees located at the Roanoke headquarters, who are discussed elsewhere in Exhibit III-D-1 and Exhibit III-D-3, respectively.

GENERAL & ADMINISTRATIVE EXPENSE

Exhibit III-D-2
Table 1
DRR GENERAL & ADMINISTRATIVE
PERSONNEL REQUIREMENTS

Position (1)	Personnel (2)
Executive Office	
Outside Directors	5
President/CEO[1/]	1
Administrative Assistant	1
Directors - Corporate Relations	2
Executive Dept. Total	**9**
Marketing and Customer Service	
Vice President – Traffic	1
Administrative Assistant	1
Director Marketing and Sales	1
Marketing Manager	18
Director Customer Service	1
Customer Service Managers	28
Traffic Dept. Total	**50**
Finance & Accounting	
1. Executive/Treasury Function	
VP Finance & Accounting/CFO	1
Administrative Assistant	1
Treasurer	1
Assistant Treasurer	1
Cash manager	1
Director Internal Auditing	1
2. Controller Function	
Controller	1
Asst. Controller – Revenue	1
Revenue Analysts/Clerks	2
Revenue Accounting Managers	2
Managers – Rail Billing & Collections	3
Customer Billing & Collections Specialists	14
Asst. Controller – Disbursements	1
Manager – Accounts Payable	1
Accounts Payable Clerical Staff	4
Payroll Manager	1
Asst. Controller – Taxes	1
Tax Accountants	4
Manager Property Accounting	3
Asst. Controller – Financial Reporting	1
Analyst/Clerk	2
Staff Accountants	2
3. Budget/Purchasing Function	
Director Budgets	1
Manager – Budgets	1
Managers – Equipment Accounting	2
Managers – Car Accounting	2
Car Accounting Analysts	2
Director Expenditure Recovery	1
Expenditure Recovery Managers	2
Director Purchasing	1
Buyers	2

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4. Cost and Economic Analysis	
Director of Costs and Economic Analysis	1
Manager – Cost and Economic Analysis	2
Finance & Accounting Dept. Total	**66**
Legal & Administration	
1. Law Department	
Vice President Law	1
Administrative Assistant	1
General Solicitors	3
General Attorneys	3
Paralegals	3
2. Real Estate	
Directors – Real Estate (North Region and South Region)	2
Managers – Real Estate (North Region and South Region)	2
Real Estate Attorney	1
3. Claims Function	
Director – Claims	1
Manager – Claims	2
4. Security Function	
Police Chief	1
District Commanders (North Region and South Region)	2
Special Agents	12
5. Human Resources Function	
Director of Human Resources	1
Compensation & Benefits Mgr.	1
Manager of Compliance	2
Compliance/Benefits Specialists	2
Staffing & Recruiting Mgrs.	2
Legal & Administration Total	**42**
Information Technology	
VP of Information Technology	1
Director Information Technology – Transportation	1
RMI Technicians	6
Interface Support Manager	2
Director IT Security	1
Security Technician	2
Programmers/Development	7
Director Information Technology – Applications	1
Help Desk PC Technicians	10
Exchange 2007 Engineer	3
Programmers/PC Technicians	5
Data Base Manager	2
Server Manager	3
Network Engineers	2
IT Total	46
Total General & Administrative	**213**

Source: *See* e-workpapers "DRR Operating Expense_Errata.xls."

1. Executive Department

The DRR's Executive department consists of the President's Office, as well as the DRR's Board of Directors. The President's office consists of four (4) people: the President, two

GENERAL & ADMINISTRATIVE EXPENSE

(2) Directors – Corporate Relations, and an Administrative Assistant. The DRR has a ten-person Board of Directors, with five (5) inside and five (5) outside directors.

a. President's Office – The President serves as the railroad's CEO, and the other department heads (*i.e.*, the Vice Presidents) report to him. The President is also responsible for the DRR's external relations (other than marketing of its transportation services). This includes community and government relations other than those involving operating, legal and financial matters. These are the responsibility of each of the Vice Presidents having jurisdiction over that function. The President does not need a large staff to assist him with these functions because the company is not publicly-owned/traded and does not have to compete for business with other railroads or modes of transportation.

The two (2) Directors – Corporate Relations report directly to the President and are responsible for community and government relations. They interface with state and local governments. Two (2) Corporate Relations positions are required because the DRR operates in 20 states. The Executive Department's Administrative Assistant is also available to assist with corporate relations in addition to assisting the President.

b. Board of Directors – The President is also a member of the DRR's Board of Directors, and serves as its Chairman. The DRR is not a publicly-owned company, so it does not need the kind of large board of directors with numerous outside directors that is typical of such companies. Rather, it has a ten-person Board, consisting of the President, the Vice President-Operations, the Vice President Finance and Accounting/CFO, Vice President – Traffic, Vice President Law and five (5) outside directors. The outside directors would likely include two (2) representatives of the DRR's customer group, two (2) representatives of its investors and an independent director with no other connection to the DRR.

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c. Marketing and Customer Service

i. Vice President – Traffic – The DRR's Marketing and Customer Service function reports to the Vice President – Traffic (who is also located at the Roanoke headquarters). The Vice President – Traffic has an administrative assistant.

ii. Director Marketing and Sales – This position is responsible for the DRR's marketing functions, which include communications with the railroad's customers and the operators of the coal mines served by the DRR. The Director supervises a staff of 18 Marketing Managers.

The great majority of DRR's traffic does not originate or terminate on the DRR, rather it is interchange received or forwarded from or to other carriers interchange operations. Therefore the DRR has minimal direct customer contacts, as these are customers of DRR's connecting carriers. Thus, the DRR needs only a small internal staff of 18 Marketing Managers who supervise and interface with the marketing contractor as well as the railroad's customers as described below.[1]

iii. Marketing Managers – The 18 Marketing Manager positions are divided along commodity lines. Three (3) Managers are responsible for coal and petcoke traffic, three (3) are responsible for intermodal traffic, and three (3) managers are responsible for the general freight commodities handled by the DRR. In addition, there are two (2) managers each for grain and grain products, chemicals and fertilizer, automotive traffic and paper and forest products. Finally, there is one (1) manager for e-commerce.

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[1] The concept of out-sourcing part of a SARR's marketing function with supervision/supplementation by a small in-house marketing staff was accepted by the Board in *WFA/Basin* at 45-46 and *AEP Texas* at 54.

GENERAL & ADMINISTRATIVE EXPENSE

Three (3) Marketing Manager positions are sufficient to interface with the DRR's coal customers because of the relatively small number of mine origins served by the DRR and its relatively small number of coal movements. The DRR directly serves only three (3) mines or loadouts facilities and 29 coal destinations. The DRR handles local coal movements where it serves both the mine origin and the power plant destination, and various interline movements where it serves either the origin or the destination but not both, as well as overhead movements. Based on Mr. McDonald's personal knowledge, three (3) Marketing Managers can service this relatively small number of coal accounts.

Three (3) Marketing Managers are responsible for the DRR's intermodal movements. The DRR's intermodal traffic moves in a few discrete flows, and most of this traffic is interlined with NS, which means the NS marketing personnel will be actively involved in the marketing activity for most of the DRR's intermodal movements.

Three (3) Marketing Managers are also needed to handle the DRR's general freight business (although most of it is also interlined with NS and various short lines, whose marketing personnel will also be involved with this traffic). The DRR's general freight traffic consists of commodities moving in six (6) groups between various O/D pairs.[2] General freight traffic constitutes 33.6 percent of the DRR's total volume in 2010 based on carloads.

iv. Director Customer Service – The Director Customer Service is responsible for the Customer Service department which monitors train locations and maintains contact with the DRR's customers regarding the status of their shipments.

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[2] The traffic and corresponding NS commodity code groupings include: Agricultural (10), Chemicals (40), Automotive (60), and General Merchandise, consisting of Metals (20), Construction (25) and Paper (30). *See* e-workpapers "2010 GEN Mrech.xlsx", "2010 IM.xlsx", "2010 COAL 80-Chem 40 - AUTO 60.xlsx" and "2010 AG 10.xlsx."

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v. **Customer Service Managers** – The 28 Customer Service Managers cover six (6) positions which are staffed around the clock seven days a week, and three (3) additional positions which are on duty during normal business hours on weekdays. These personnel are responsible for monitoring train locations, maintaining contact with origin mine operators and destination facilities, answering customers' questions concerning the locations of specific trains and cars, and responding to customers' requests for diversion of trains/cars to different origins or destinations.

This level of staffing is appropriate for the DRR's large and diverse traffic group. Most customer contacts occur during the second shift which includes normal business hours, which is why three additional Customer Service positions have been added during those hours.

2. Finance and Accounting Department

The Finance and Accounting Department is responsible for the DRR's basic financial and accounting functions, including treasury, taxation, revenue collection, disbursements for accounts payable, financial reporting, and budgeting and analysis. It consists of 66 employees and is headed by the Vice President – Finance & Accounting who (like the other vice presidents) has an Administrative Assistant/Secretary. The Department has a Treasurer, a Controller, a Director of Budgets and Purchasing, a Director of Cost Analysis and a Director of Internal Auditing with various support positions reporting to these sub-department heads. The Vice President – Finance & Accounting is also the DRR's Chief Financial Officer.

Many of the DRR's accounting and finance functions are performed using computerized packages and programs now common in the railroad industry, rather than being performed manually by in-house staff employees. These functions and the related programs are described in more detail below, in the discussion of the IT function. Given the advances in financial

technology and the DRR's well-defined customer group, the DRR has designed its finance and accounting staff to handle these functions. The personnel described below are consistent with those accepted by the Board in recent SAC cases including *WFA/Basin* and *AEP Texas*, and reflect several additions due to the DRR's more varied traffic base and larger number of carload transactions.

a. Treasury Function – The Treasury function is headed by the DRR's Treasurer, who is responsible for managing the company's cash and investments and interfaces with the outside investment company that manages the DRR's 401K retirement plan.

The Treasurer is assisted by an Assistant Treasurer and a Cash Manager. The Assistant Treasurer advises the Controller's Office on the receipt of funds from customers and the DRR's connecting carriers, monitors and supervises debt payment requirements, and assists the Treasurer in the performance of his functions. The Cash Manager is responsible for day-to-day management of the company's cash.

b. Internal Auditing Function – Although the DRR employs an outside auditing firm, DuPont's experts have added a Director of Internal Auditing to ensure adequate oversight of the company's various financial and accounting functions. [3] The Director Internal Auditing reports directly to the Vice President Finance & Accounting.

c. Controller Function – This function is headed by the DRR's Controller who is responsible for all accounting functions, including direction of all billing, vendor payment processing, payroll, budgeting, and auditing. As the railroad's chief accounting officer, he advises the Vice President - Finance & Accounting on all accounting issues. The Controller is

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[3] *See AEP Texas* at 56-57.

GENERAL & ADMINISTRATIVE EXPENSE

assisted by four (4) Assistant Controllers and two (2) staff accountants. These positions and their functions are as follows:

i. **Assistant Controller – Revenue** – The Assistant Controller - Revenue oversees all customers and interline freight billing and collection, and is also responsible for supervising billing for demurrage, storage, and easements and utility crossings, as well as inputting contract and tariff rate and payment terms into the DRR's billing system. Reporting to the Assistant Controller – Revenue are two (2) Revenue Analyst/Clerks, two (2) Revenue Accounting Managers, three (3) Managers – Billing and Collecting, and 14 Customer Billing and Collections specialists.

ii. **Assistant Controller – Disbursements** – The Assistant Controller – Disbursements is responsible for overseeing all accounts payable and payroll processing, issuing vendor payments, advising the Vice President and Treasurer on cash requirements, and reviewing all contracts with outside suppliers. The Assistant Controller – Disbursements is supported by one (1) Manager – Accounts Payable and four (4) Accounts Payable Clerical staff personnel.

iii. **Assistant Controller – Taxes** – The Assistant Controller - Taxes manages the preparation of the DRR's federal and state income tax returns, state sales and use tax returns, and ad valorem property tax returns. He is the advisor to the Vice President - Finance & Accounting on all tax matters. Actual tax returns are prepared by an outside accounting firm with property and payroll tax specialists. A financial accounting computer is used to track all of the DRR's physical assets and asset replacements. The Assistant Controller – Taxes is supported by four (4) tax accountants and three (3) Managers of Property Accounting.

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iv. **Assistant Controller – Financial Reporting** – The Assistant Controller - Financial Reporting is responsible for overseeing monthly accounting, closing of the books, preparation of monthly, quarterly and annual reporting packages for review by the Controller and senior management, and maintenance of the company's chart of accounts. One individual is sufficient to perform the DRR's accounting reporting functions (with assistance from two (2) Analyst/Clerks), largely because the DRR is not a publicly-held company and does not need to prepare reports to the SEC or the equity-investment community.

The four (4) Assistant Controllers are assisted by two (2) Staff Accountants.

d. Budgeting and Purchasing Function – The DRR's budgeting and purchasing function has been centralized within the Finance and Accounting Department.[4] The function has three (3) Directors: a Director Budgets, a Director Expenditure Recovery and a Director Purchasing. The Director Budgets is responsible for preparation of the annual budget and for the company-wide purchasing function. He is assisted by one (1) Manager Budgets, two (2) Managers Equipment Accounting and two (2) Managers Car Accounting.

i. **Managers** – The two (2) Managers of Budgets work primarily on budgeting and preparation of the annual company budget, monitor monthly performance against plan, and prepare forecasts and cost and revenue analyses. The two (2) Managers Equipment Accounting are responsible for managing car hire and receivable issues. The two (2) Managers Car Accounting interface with the DRR's equipment repair contractors, and oversee outsourced transactions such as locomotive and freight car repairs and are supported by two (2) car accounting analysts.

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[4] *See AEP Texas* at 56-57, *WFA/Basin* at 44 and *AEPCO at* 58-59.

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ii. **Director Expenditure Recovery** – The Director Expenditure Recovery and the two (2) Expenditure Recovery Managers handle issues associated with expenditure recovery such as billing for DOT crossing projects, damage to railroad property, scrap billings, pool billings, and other miscellaneous billings, and ensure that billings are issued in compliance with federal and state regulations.

iii. **Director of Purchasing** – The Director of Purchasing is assisted by two (2) Buyers who are responsible for purchasing materials, supplies and equipment for the DRR. The DRR is a new railroad, with new track and bridges and new locomotives, cars and other equipment, so equipment and track-material purchases should be limited during the first five years of its existence. Purchases are limited on a daily basis, and the DRR does not have anything remotely approaching the purchasing demand of a major railroad like NS. The two will handle the railroad's ongoing fuel, material and small-equipment purchases.

e. **Cost and Economic Analysis Function** – The DRR has a Director of Costs and Economic Analysis who is assisted by two (2) Managers – Cost and Economic Analysis. These individuals are responsible for determining the DRR's cost of providing service to its customers and performing economic analyses of various operations and opportunities for the DRR.

3. **Legal and Administration Department**

The Legal and Administration Department consists of 42 employees. It is headed by the Vice President – Law and Administration (with assistance from an Administrative Assistant) who is responsible for the DRR's legal affairs including litigation control, risk management and claims, and regulatory compliance. This Vice President is also responsible for other administrative functions including training, human resources and information technology.

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a. Legal Department – The Vice President - Law & Administration is an attorney and serves as the company's General Counsel. Much of the railroad's legal work is handled by outside counsel, who is supervised by the Vice President with the assistance of three (3) General Solicitors and three (3) in-house General Attorneys. The Law Department is divided into three (3) basic practice groups, commerce (regulatory), litigation (mostly FELA and crossing accidents) and contracts/finance. Each practice group has one General Solicitor and one General Attorney. In addition, the Real Estate Group is assigned one General Attorney. The legal department is also assisted by three (3) Paralegal/Administrative Assistants, who also handle departmental secretarial duties.

b. Real Estate – The Real Estate function is responsible for sales, acquisitions and easements of real estate on the DRR. This department is staffed by two Directors – Real Estate, one each for the North Region and the South Region. Each Director is assisted by a Manager – Real Estate. As stated previously the Real Estate function is also assigned one General Attorney.

c. Claims Function – The legal side of the department is also staffed by a small claims sub-department, consisting of a Director of Claims who is responsible for the administration of claims on a system-wide basis (including supervision of the out-sourced risk and claims management contractor), and two (2) Managers – Claims who are primarily responsible for claims involving the DRR's North Region and South Region, respectively. These two (2) Managers provide assistance in investigating claims, and are also responsible for government safety reporting and representing the DRR in industry associations and safety forums.

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d. Security Function – DRR's security needs can be met with a single Police Chief, two (2) District Commanders (one each for the North Region and the South Region) and 12 Special Agents with six (6) assigned to the North Region and six (6) assigned to the South Region. This staffing would be sufficient to cover the DRR's system. The Police Chief, District Commanders or a Special Agent can also call in local public police forces, should additional assistance to handle a particular incident be required. This is common practice for Class I railroads which rely increasingly on local police.

e. Human Resources and Training Function – The DRR's start-up and training needs are met largely by out-sourcing. This means that the primary responsibility of the in-house human resources staff is to interface with the outside contractor and assure that the DRR has a pool of employees that enable it to engage in ongoing operations.

Human Resources lends itself well to out-sourcing, and plenty of external resources exist that will support a small in-house human resources department. Accordingly, the appropriate staffing for the human resources function is a Director of Human Resources a Compensation and Benefits Manager, two (2) Managers of Compliance, two (2) Compliance/Benefits Specialists and two (2) Staffing and Recruiting Managers.[5] This staff is sufficient to manage recruiting, compliance, compensation and benefits, employee relations, and training since most of these functions will be out-sourced.

4. Information Technology Department

The DRR's IT systems and associated personnel were developed by DuPont Witness Kruzich, who has considerable experience with the IT function at Class I and other railroads.

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[5] These staff Managers interface with the line Managers of Safety & Training who are Operating employees that report to the Vice President – Transportation, as discussed earlier.

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The IT system is administered by a staff consisting of a Vice President Information Technology, three Directors of Information Technology and 42 IT Specialists. As discussed in more detail in the next section, the DRR does not have a main-frame environment, but rather a NT/PC-based system. This means far less IT effort is required than a typical Class I railroad due to the relative simplicity of a NT/PC-based system and the fact that much of the IT requirements will be outsourced to RMI (i.e., Transportation, Revenue, Intermodal and Car Hire functions).

A staff of 46 people (including the Vice President - IT) is adequate to provide 24/7 coverage with at least four people on duty each shift seven days a week, and 30 full-time specialists on duty five days per week during normal business hours. As most of the DRR's application software is available off-the-shelf, very little development and maintenance effort is required.

The primary IT staff function is to trouble-shoot various problems with vendors, coordinate the transportation software applications with the outside vendor (RMI, Oracle, Scat, Alstom) and the business users, and monitor the network infrastructure and critical security systems. There will also be occasions when enhancements will be required to the crew-calling, accounting, human resources and dispatching systems. The DRR's staff of management and IT specialists will be active participants in this effort.

a. **Vice President – Information Technology** – The Vice President assisted by three (3) Directors, oversees the IT department's daily activities, provides senior management with updates on new technology, and advises as to the future strategic direction of the department. This includes formulation of the logical and physical computer architecture plans and assessment of the cost and feasibility of all user requests. The Directors include the Director IT – Transportation, Director IT – Security and Director IT – Applications.

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b. Director IT – Technology Support – The Director IT – Technology Support will be responsible for coordinating daily activities for the staff, processing equipment orders, managing staff travel, and assisting with infrastructure needs.

c. Director IT – Security – The Director IT – Security is responsible for defining the security model to protect against cyber security vulnerabilities, protecting internal and external railroad data from malicious attack and managing a staff of two security technicians.

d. Director IT – Applications - The Director IT - Applications will interface with the DRR's business teams to analyze strategic business requirements and will work with software vendors as necessary to resolve issues with DRR applications.

The 42 IT Specialists perform the following specific functions:

i. RMI Technicians - Six (6) Lead RMI Technicians - responsible for all RMI applications (RMI is the DRR's principal software vendor/contractor, as described in the next section) and serve as liaisons to RMI and the user Departments. These positions ensure that all the users' needs are met in an efficient and timely manner.

ii. Help Deck PC Technicians - Ten (10) Help Desk PC Technicians, (two (2) 24/7 positions) take incoming calls from the various users and reroute the calls to a Programmer Technician for immediate handling. These positions follow-up with the user to make sure the problem has been resolved.

iii. Programmer/PC Technicians - Five (5) Programmer/PC Technicians (a 24/7 position) provide user support in the day-to-day operation of the DRR's operating system and applications, software and computers. These employees provide technical support, including configuring desktops and maintaining network connectivity and printing capability.

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iv. Network Engineer and Security Technicians - Two (2) Network Engineers and two (2) Security Technicians are responsible for overseeing network security matters and local area network ("LAN") and wide area network (WAN) functionality. These four (4) positions will monitor and implement solutions to protect against cyber-attacks, homeland security threats, and system lock down; provide terrorist intrusion protection; support new user access; terminate employee access; and provide support and direction for activities associated with the ISO 17799 standard for IT security best practices. These four positions are also responsible for planning, designing and managing transmission facilities and cabling and communications devices, and also handle any telecommunications issues that may occur.

v. Programmers/Development – Seven (7) Programmers/ Development (including a 24/7 position) are responsible for maintaining and upgrading the crew calling and dispatching systems. These employees help manage the crew calling, accounting, human resources dispatching and accounting systems, and they also are responsible for developing a corporate information web site. The DRR's web site will be elaborate enough to make it easier for DRR's customers to do business online efficiently.

vi. Exchange 2007 Engineers and Server Managers – Three (3) Exchange 2007 Engineers and three (3) Server Managers are responsible for messaging design and implementation of the Windows 2007 Exchange (server) environment. These positions are also responsible for email server support, Windows operating system support, operating system patching for servers, building and configuring new servers, refreshing existing hardware and software on servers, capacity management, performance tuning of the server base, and coordinating the scheduling, ordering and installation of all server equipment and ancillaries.

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vii. Database Managers -- Two (2) Database Managers are responsible for the design, configuration, and implementation of database system performance, and configuration of the database for optimal performance.

viii. Interface Support Manager – Two (2) Interface support Managers manage DRR's various programs and software systems that will need to share information. These employees ensure that in-house systems can communicate with other in-house and external systems.

B. COMPENSATION

The salaries and benefits for the DRR's G&A personnel described above are based on comparable and competitive compensation packages presently available in the railroad industry (and in other service industries).

Specifically, annual salaries for the G&A personnel are based on data contained in NS's Wage Forms A and B, with several exceptions. Salaries for the President and Vice Presidents included in the G&A staff are based on the salaries, including bonuses, paid for similar positions by the Kansas City Southern Lines ("KCS") a holding company which owns and operates the Kansas City Southern Railway, the Kansas City Southern de Mexico and the Texas Mexican Railway Company. According to the KCS' website, the three (3) major lines comprising the KCS operate 7,075 route miles of railroad, which is nearly the same as the 8,093 route miles operated by the DRR, which includes 819 route miles operated over rail lines owned by other carriers. This is far smaller than NS which operates over 20,623 miles and is also substantially small than the other Class I railroads.

As shown previously, fringe benefits for all employees are based on 37.5 percent of wages based on information available from the AAR for railroads operating in the states where

GENERAL & ADMINISTRATIVE EXPENSE

the DRR is located. The fringe benefit ratio includes expenses related to health and welfare benefits, railroad retirement, supplemental annuities, unemployment insurance and other programs.

The G&A staff salaries are summarized in Table 2 below.

Exhibit III-D-2
Table 2
DRR General & Administrative Personnel Requirements

Position (1)	Personnel (2)	Annual Salary (3)	Total Salary (4)
Executive Office			
Outside Directors	5	{ }	{ }
President/CEO[1/]	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
Directors - Corporate Relations	2	{ }	{ }
Executive Dept. Total	**9**		**$1,146,051**
Marketing and Customer Service			
Vice President – Traffic	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
Director Marketing and Sales	1	{ }	{ }
Marketing Manager	18	{ }	{ }
Director Customer Service	1	{ }	{ }
Customer Service Managers	28	{ }	{ }
Traffic Dept. Total	**50**		**$4,777,105**
Finance & Accounting			
1. Executive/Treasury Function			
VP Finance & Accounting/CFO	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
Treasurer	1	{ }	{ }
Assistant Treasurer	1	{ }	{ }
Cash manager	1	{ }	{ }
Director Internal Auditing	1	{ }	{ }
2. Controller Function			
Controller	1	{ }	{ }
Asst. Controller – Revenue	1	{ }	{ }
Revenue Analysts/Clerks	2	{ }	{ }
Revenue Accounting Managers	2	{ }	{ }
Managers – Rail Billing & Collections	3	{ }	{ }
Customer Billing & Collections Specialists	14	{ }	{ }
Asst. Controller – Disbursements	1	{ }	{ }
Manager – Accounts Payable	1	{ }	{ }
Accounts Payable Clerical Staff	4	{ }	{ }
Payroll Manager	1	{ }	{ }
Asst. Controller – Taxes	1	{ }	{ }
Tax Accountants	4	{ }	{ }
Manager Property Accounting	3	{ }	{ }
Asst. Controller – Financial Reporting	1	{ }	{ }
Analyst/Clerk	2	{ }	{ }
Staff Accountants	2	{ }	{ }
3. Budget/Purchasing Function			
Director Budgets	1	{ }	{ }
Manager – Budgets	1	{ }	{ }
Managers – Equipment Accounting	2	{ }	{ }

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Managers – Car Accounting	2	{ }	{ }
Car Accounting Analysts	2	{ }	{ }
Director Expenditure Recovery	1	{ }	{ }
Expenditure Recovery Managers	2	{ }	{ }
Director Purchasing	1	{ }	{ }
Buyers	2	{ }	{ }
4. Cost and Economic Analysis			
Director of Costs and Economic Analysis	1	{ }	{ }
Manager – Cost and Economic Analysis	2	{ }	{ }
Finance & Accounting Dept. Total	**66**		**$5,786,121**
Legal & Administration			
Vice President Law	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
General Solicitors	3	{ }	{ }
General Attorneys	3	{ }	{ }
Paralegals	3	{ }	{ }
2. Real Estate			
Directors – Real Estate (North region and South Region)	2	{ }	{ }
Managers – Real Estate (North region and South Region)	2	{ }	{ }
Real Estate Attorney	1	{ }	{ }
3. Claims Function			
Director – Claims	1	{ }	{ }
Manager – Claims	2	{ }	{ }
4. Security Function			
Police Chief	1	{ }	{ }
District Commanders (North Region and South Region)	2	{ }	{ }
Special Agents	12	{ }	{ }
5. Human Resources Function			
Director of Human Resources	1	{ }	{ }
Compensation & Benefits Mgr.	1	{$88,185{	{ }
Manager of Compliance	2	{ }	{ }
Compliance/Benefits Specialists	2	{ }	{ }
Staffing & Recruiting Mgrs.	2	{ }	{ }
Legal & Administration Total	**42**		**$3,755,484**
Information Technology			
VP of Information Technology	1	{ }	{ }
Director Information Technology – Transportation	1	{ }	{ }
RMI Technicians	6	{ }	{ }
Interface Support Manager	2	{ }	{ }
Director IT Security	1	{ }	{ }
Security Technician	2	{ }	{ }
Programmers/Development	7	{ }	{ }
Director Information Technology – Applications	1	{ }	{ }
Help Desk PC Technicians	10	{ }	{ }
Exchange 2007 Engineer	3	{ }	{ }
Programmers/PC Technicians	5	{ }	{ }
Data Base Manager	2	{ }	{ }
Server Manager	3	{ }	{ }
Network Engineers	2	{ }	{ }
IT Total	**46**		**$3,679,139**
Total General & Administrative	**213**		**$19,143,900**

C. MATERIAL, SUPPLIES AND EQUIPMENT

Consistent with the stand-alone principles of unlimited resources and barrier-free entry, the ready availability of materials and equipment is assumed.

GENERAL & ADMINISTRATIVE EXPENSE

The DRR owns or leases various types of vehicles and equipment used by its Operating and G&A staffs. Costs for this equipment have been included in the calculation of the DRR's annual operating expenses.[6]

Company vehicles are needed at the DRR's Roanoke, VA headquarters and by field operating personnel. A pool of Ford Explorers (a small SUV with all-wheel drive) is maintained at headquarters for use primarily by the headquarters G&A, Operating and Engineering staffs and Security personnel while traveling to the field on DRR business. Twenty-six (26) Ford Explorers are included as G&A vehicles. These are in addition to the 51 Ford Explorers and 19 Pick-up trucks and 60 ATV vehicles included in the materials, supplies and equipment expense in the Operations Department.

The DRR also needs miscellaneous office equipment and supplies including desks, telephones and janitorial supplies.[7]

D. OTHER

1. IT Systems

The DRR does not require a data center facility such as those that Class 1 railroads typically have to house mainframe computer systems and associated peripheral equipment. Since the DRR IT system design is NT/PC based, this system can be housed in a room approximately 40' X 50', with normal office environment heating and air condition accommodations. This room would be located in the DRR headquarters at Roanoke, VA. It should be further noted, that most of DRR's computer requirements will be outsourced to RMI in Atlanta.

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[6] *See* e-workpapers "DRR Operating Expense_Errata.xl0073" and "DRR Materials and Supplies.xls".

[7] *See* e-workpaper "DRR Materials and Supplies.xls."

GENERAL & ADMINISTRATIVE EXPENSE

The DRR's information technology systems have been developed by DuPont Witness Joseph Kruzich, its experienced railroad IT expert. Mr. Kruzich has worked for Class I railroads reviewing various work procedures and providing recommendations on how the work processes could be improved to achieve a high degree of efficiency. This position provided him an opportunity to become very familiar with various work processes involved in running a railroad. Mr. Kruzich also served as IT Vice President of the Kansas City Sothern Railroad and was instrumental in directing the development of KCS new computer systems in the late 1990's. A more detailed description of Mr. Kruzich's qualifications is contained in Part IV of this opening evidence.

Mr. Kruzich reviewed the DRR's operating plan and G&A requirements to determine the railroad's basic computer and communications needs and the kind of support needed by its staff. The IT systems described below enable the DRR to operate safely and efficiently and to perform all administrative functions.

The DRR has an average of 758 train movements per day in the peak week, as well as a limited number of local customers and interchange points. It also handles primarily trainload movements, with multiple-car billing (using the RMI Revenue System to allocate revenues), rather than billing for individual railcars. This reduces the complexity of the computer and communication systems required to support operations, and renders unnecessary the colossally expensive mainframe systems that large carriers such as NS use. Thus, the DRR does not require a large data facility to house a mainframe computer system and associated peripheral equipment. Based on the DRR operating plan and G&A staff departments, the capital requirements for IT and communications systems equal $10.7 million and the annual annuitized capital costs are $1.8

million.[8] The annual operating cost for IT and related communications equals $25.6 million at 2009 price levels.[9] Table 3 below shows the capital and annual operating expenses separately for information technology and related communications systems.

Exhibit III-D-2
Table 3
Capital And Operating Costs For
DRR It And Communications Systems

Item (1)	Capital Cost (2)	Operating Expense (3)
1. Information Technology	$10,624,960	$24,883,951
2.Communications	$67,168	$760,338
3.Total	**$10,692,18**	**$25,644,290**

See e-worpapers "DRR-Capital Budgets.xls" and "DRR-Operating Budgets.xls"

The DRR's computer and IT communications systems are described below. They have been designed to meet the company's mission-critical technology needs to achieve operating efficiencies, customer satisfaction, optimum staffing,[10] maximum productivity, and safe train operations. The costs shown in the workpapers are based on the DRR's highest daily train counts and number of annual carload transactions.

a. Transportation System – The key item in the DRR information technology architecture is RMI's Transportation Management Services ("TMS") package. TMS is an integrated system for managing day-to-day rail operations that is currently used by several

[8] *See* e-workpaper "DRR-Capital Budget.xls."

[9] *See* e-workpaper file "DRR-Operating Budget.xls."

[10] The DRR's IT personnel requirements are described above in the discussion of G&A personnel. The IT staff size is largely a function of the systems described in this section.

regional railroads, such as Genesee & Wyoming, Inc., the second largest operator of short line and regional railroads in North America. It includes modules for yard and inventory control, waybilling, train operations, switching settlements, demurrage, EDI consists, waybills, bills of lading, blocking instructions, work orders, switch instructions, and many other features. This system is outsourced to RMI using frame relay communications from Roanoke (where the major transaction reporting occurs) to Atlanta, GA, where RMI is located. Field personnel access the RMI system via the Internet. The annual operating expense equals $23.4 million for the RMI system.[11]

b. Crew Management System – A crew management system is needed to efficiently manage the DRR train crews and equipment. The DRR will purchase a license from PS Technology for the SCAT Client Server system, and related equipment and software (Oracle Data Base). This system provides the capacity needed to schedule crew requirements involving approximately 3,200 train/engine/yard employees (Base Year) and 84 crew-change points over the DRR system. It also minimizes the need for a large staff of crew callers or other crew management personnel. Total costs for the crew management system equal $3.1 million.[12]

c. Dispatching System – A computerized dispatching system, assisted by 25 human dispatchers on a 24/7 basis, monitors the movement of trains and other equipment at all times, and distributes traffic efficiently across the railroad. The DRR will purchase and implement a PTC system for train control and communications. The IT system requirements of the PTC system are include in the signal and communications investment account.

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[11] *See* e-workpaper "DRR-Operating Budget.xls"

[12] *See* e-workpaper "DRR-Capital Budget.xls."

GENERAL & ADMINISTRATIVE EXPENSE

d. Revenue Accounting – The DRR needs a revenue system to handle interline settlements for all the trainload transactions and the multiple-car transactions (the smallest revenue block of cars handled by the DRR in a single transaction is a single car). RMI has a revenue system that meets the DRR's requirements. In particular, the RMI Revenue Management Services ("RMS") is a full-function revenue management system that has been certified by the AAR for Interline Settlement System ("ISS") processing. This certification allows railroads using ISS/Connect to participate in the ISS. ISS/Connect provides complex rate management, EDI management, freight billing, support for industry reference files, revenue protection, and additional functionality. The RMS costs are based on the total monthly settlements. The DRR has an estimated 6.2 million carloads annually that are processed through the revenue management system at a cost of $5.0 million.[13]

e. Car Accounting – The DRR needs a receipt and payable car hire system, because the DRR owns some railcars and uses some railcars provided by its connecting carriers. RMI has a car hire system for receipts and payables that provides the necessary features needed by the DRR to keep track of its cars off-line and foreign cars on-line. This system computes charges due DRR from foreign railroads and the DRR's payables to foreign roads. The system separates car earnings by designated owner groups, issues remittance and settlement summaries, flags non-moving cars and missing junctions, and helps keep track of assets with on-line access to car movement data. The annual operating expense for this system $1.9 million is based on the number of non-private interchange cars handled per month.[14]

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[13] *See* e-workpaper "DRR-Operating Budget.xls."

[14] Id.

GENERAL & ADMINISTRATIVE EXPENSE

f. General Accounting – The DRR uses the Oracle Solutions package for its general accounting system. Oracle "PeopleSoft" offers fully automated solutions to support the complete Financial Control and Reporting process – from establishing and managing controls, creating and interfacing transactions from operational sources, transforming ledger balances to account for enterprise allocations and re-measurement to consolidating and reporting results. Built-in best practices provide strong internal controls, save time and money, and allow for strategic analysis of the business. The software is designed to run on Windows 7 and Windows NT operating systems. The total operating and capital costs for this system, including hardware and training, is $1.3 million, which includes a Dell OptiPlex 380 PC, cables, HP LaserJet P4015n printer and Dell PowerEdge T710 Servers. The CSXT is currently using this system for many of their accounting functions.[15]

g. Human Resource Management – The DRR also uses Oracle Solutions package "Peoplesoft" for its Human Resources System. Oracle's PeopleSoft Enterprise Human Resources delivers comprehensive HR capabilities, from workforce management to compensation and talent management. Extensive business process automation and rich self-service capabilities free HR teams to perform value-added services while reducing operational costs. This system covers the DRR's human resource data needs at an affordable cost. The software package includes all basic employee reporting features, employee profile tracking, attendance reports, benefit, insurance and COBRA reports, compensation/job history reports, EEO and citizenship reports, organizational reports, and all OSHA and workers' compensation reports. This system is currently being used by CSXT for all their Human Resource functions. The system uses a Dell OptiPlex GX280 PC, cables, an HP Laser Jet 4250tn printer and a Dell

[15] *See* e-workpaper "DRR-Capital Budget.xls."

PowerEdge 1800 Server. The total operating and capital cost for this system, including hardware and training, is $4.4 million.[16]

h. Network and Router Equipment – The DRR needs networking capability and routers because it has a number of computers in multiple locations. Networking and router equipment permit these computers to communicate with one another. The DRR needs one router at each field reporting location and two at its headquarters. In addition to Networking, the DRR will need several severs to accommodate various other functions such as, Identity & Access Server, Internet IDS/IPS Server, FTP/EDI Interface Support, File Server, MailServer, Corporate Web Site Server, Anti-Virus and Anti-Spyware, Security Network Server, Vulnerability Patch Management and Auxiliary Mail Server. There is also a test and development system for system software fixes/upgrades and application software fixes/upgrades. The DRR will need e-mail capabilities for most of its employees to communicate among themselves on various issues which is provided using Microsoft Cloud, the most efficient method. The DRR will also need a an Uninterruptible Power Supply ("UPS") system as backup in case of a major power outage. A Northern Diesel Power Generator is provided to meet this need. The total number of servers, UPS and software costs are shown in detail in the Capital and Operating Budgets Statements. The DRR's communications network consists of a microwave and commercial telephone system. The costs for these items are included in the network infrastructure costs discussed in Part III-F. The IT operating-expense budget includes a network computer system for LAN and WAN, routers at various locations, and internet access for headquarters and field locations.[17]

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[16] Id.

[17] *See* e-workpaper "DRR-Operating Budget.xls."

GENERAL & ADMINISTRATIVE EXPENSE

i. **Workstations and Printers** – Both desktop and laptop PC's are provided, and included in the DRR's IT costs, with a high-end configuration to run a state-of-the-art operating system while avoiding the need to purchase other applications. One PC is provided for each G&A employee as well as for operating personnel located at headquarters. Additionally, one PC is provided at each crew change point and the major yard locations where employees are assigned. Laptops are provided for use by employees who are required to travel a considerable amount of their time. The total capital cost for desktop and laptop computers equals $828,039.[18]

The DRR needs a variety of printers for work orders, safety bulletins and normal office work such as printing contracts, correspondence and reports. A color printer is needed for various maps, charts and diagrams. Printers are also needed in the field and at major interchange locations to print information relating to the work performed there. The equipment needs include a desktop laser printer for each desktop PC, a printer for laptop PCs where needed, one color and two line printers at headquarters, and one line printer at each of the DRR's yards. The total capital cost for printers for the DRR equals $181,327.[19]

j. **Voice and Data Communications** – The DRR needs a telephone system and telephone service to handle external and internal telephone activity. Jive Communications provides this service for a monthly fee of $21.95 per telephone. Jive service includes industry leading reliability, free unlimited long-distance calling and straightforward microwave interface to Jive's PBX system. The Jive PBX system allows unlimited virtual extensions and unlimited voice mail boxes. Jive provides free installation of its system with a two year contract.

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[18] *See* e-workpaper "DRR-Capital Budget.xls."

[19] Id.

GENERAL & ADMINISTRATIVE EXPENSE

Data telecommunications to support the RMI transportation system from Roanoke to Atlanta, GA is provided by AT&T. This is a frame relay system that is based on estimated transactions. The Internet is used for data communications for all the field offices. The field offices also have Internet access to the RMI transportation system in Atlanta. Cellular phones and pagers are provided for employees who need them to perform their work efficiently. The capital costs for this system equals $67,168[20] and the annual operating expenses equal $760,339.[21]

k. Automatic Equipment Identification – Automatic equipment identification ("AEI") includes a track-side scanner that reads information from each car (car number and initial) in a manner similar to reading a bar code. That information is accumulated on a PC while the train passes a specific site where the scanner is installed. These readings are then compared to the train consist residing on a computer to determine if there are any discrepancies. If discrepancies exist, the consist record is adjusted to agree with the reading from the scanner.

The DRR's AEI scanner locations are discussed in Part III-F-6. The capital costs for AEI scanners are included in the DRR's road property investment costs.

l. Software Maintenance – Software products such as PC accounting packages that run on a server, and tools such as security software and monitoring software, require payment of annual maintenance fees for support and upgrades. Some of these fees are included in the licensing agreement, such as that for the Oracle Products, which has an annual fee payable for the use of its product. Other providers have a flat charge for the package with no annual fees,

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[20] Id.

[21] *See* e-workpaper "DRR-Operating Budget.xls."

but they will have enhancement upgrade announcements from time to time with a specified charge for the upgrade. The annual fees payable by the DRR equal $288,336.[22]

m. Railinc Services – The DRR requires some Railinc services to pass and receive car location information to/from NS and its other interchange partners for the various interchange locations. The annual cost for Railinc service equal $245,748.[23]

n. Network Security – The DRR also needs security software to protect its network from exterior intrusion due to the large amount of data that is transmitted to Atlanta and other parts of the railroad. The system to be used is the Watchguard Firebox X6500e UTM Software Suite. The Watchguard suite offers comprehensive Unified Threat Management and is an easily managed firewall and AV/IPS security appliance for mid-size businesses requiring a secure, private network. [24]

2. Other Out-Sourced Functions

As described earlier, several functions customarily provided in-house by large Class I railroads can be efficiently out-sourced by the DRR. Consistent with the stand-alone concept of an efficient, least-cost railroad, out-sourcing is used wherever the economics so justify without sacrificing the SARR's feasibility or service quality.

Out-sourced functions, in addition to those described in the preceding section, include initial training of operating employees (discussed in more detail below), several finance and accounting functions, including preparation of income, property and payroll tax returns and

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[22] Id.

[23] Id.

[24] *See* e-workpapers "DRR-Capital Budget.xls" and "DRR-Operating Budget.xls."

financial/account auditing, legal services, including claims administration and investigation, and administration of the company's retirement plan.[25]

A number of independent accounting, payroll service and other firms have the experience and systems to perform these functions. For example, the payroll service firm Paychex has experience in complying with Railroad Retirement and other railroad-specific tax and regulatory reporting requirements. In the human resources area, regional and industry employers' associations are available as a resource for the DRR's internal human resources staff.

Estimated annual costs of $2,123,550 have been developed for outsourcing all of the functions described above.[26]

3. Start-Up and Training Costs

The DRR's start-up and training costs have been calculated using the procedures approved by the Board in *WFA/Basin* at 51-54. Initial training costs for the DRR's train crew personnel equal $101.2 million. Training for the T&E employees is based on information provided by NS in discovery as to the actual expense it incurs for training engineers and conductors.

The duration of training for conductors is based on information provided by NS in discovery. Conductors and engineers are compensated during classroom training at a rate of { } per week and { } per week, respectively. The duration of training for conductors is also based on information provided by NS in discovery and equals { } weeks of classroom training and { } weeks of on the job training for a total of { } weeks. The duration of training for engineers is { } for classroom training and { } weeks for on the job

[25] *See* e-workpaper "DRR GA Outsourcing.xls."

[26] Id.

training, also based on information provided by NS in discovery.[27] The average training cost for train and enginemen is { } per individual, including tuition and salary as appropriate.[28]

Training for the DRR's dispatchers is based on information provided by NS in discovery and { } weeks of classroom training and { } weeks of field training. According to NS's data, dispatchers are paid a salary of { } per week during training. The total cost of training for dispatchers equals { } including the wages and the cost of training.

Training costs for the DRR's MOW employees are based on the training costs incurred by NS. The training cost for all MOW field employees (except welders and signal maintainers) equals ${ } for technical training and two (2) week's pay equal to 54 percent of their salary.[29] Training cost for welders and signal maintainers equals salary of { }, respectively, plus the { } for technical training. Salaries are increased to reflect fringe benefits and the training costs includes wages, fringes, training cost and room and board – *i.e.*, this is an all-inclusive training cost paid by NS to train MOW employees.[30]

IT Specialists are paid five (5) weeks' salary to set up the DRR's computer system.[31]

Recruiting costs have been added at { } per employee based on information provided by NS in discovery. The amounts provided by NS in discovery include NS expenditures for advertising, outside professional and consulting services, communications,

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[27] *See* e-workpaper "Training cost.xls."

[28] *See* e-workpaper "DRR Operating Expense_Errata.xls," tab "T&E Training,"

[29] The 54 percent of salary for MOW field employee wages is based on the percent of salary paid to other trainee employees as calculated from data in NS discovery e-workpaper "Training Cost.xls" tab "Program Summary." The version of this e-workpaper provide in DuPont's submission shows the calculation of the 54 percent.

[30] See e-workpaper "DRR Operating Expense_Errata.xls" tab T&E Training.

[31] The public version of AEPCO's Opening Evidence in Docket No. 42113, AEPCO proposal four (4) weeks of entry cost for IT Specialists to set-up the SARR's computer systems. *AEPCO* at 63-64 shows Defendants and the Board accepted this cost which is only 80 percent of that provide for herein.

temporary services, college funding, testing, travel and meetings. The expenses provided by NS cannot be distinguished between rank and file and managerial and executive employees and as a result one amount per employee is calculated for all employees.[32] Subsequent annual recruitment and training expenses are based on a 1.8 percent average annual attrition rate, which was determined from the Report of Dr. Robert Topel, PhD., submitted to the Emergency Board No. 243 on behalf of the Railroads Represented by the National Carriers' Conference before in National Mediation Board Case Nos. A-13569; A-13570; A-13572; A-13573; A-13574; A-13575; A-13592 on October 10, 2011.[33]

A total amount of $112.4 million has been provided for initial DRR training and recruiting costs.[34] Consistent with *WFA/Basin*, start-up training and recruitment costs are treated as operating expense in the DRR's first year of operations.

Travel expenses have been included for all DRR employees at the Manager level and higher (except for the Customer Service Managers and the Assistant Controllers, as these positions do not require travel) and for the five (5) outside members of the Board of Directors. Annual travel expenses of $9,751 per employee are included. This amount is based on the most recent available annual survey of corporate travel managers performed by Runzheimer International, which estimates the annual cost of corporate business travel.[35] The DRR's other start-up costs, road property investment costs including construction of fixed facilities, which are included in the DRR's capital costs, and equipment acquisition are discussed in other sections of Part III.

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[32] *See* e-workpaper "Recruiting Costs 2006-2010.xls.

[33] A copy of the pertinent pages from Dr. Topel's report are attached in e-workpaper "Attrition rate.pdf."

[34] Details are provided in e-workpaper "DRR Operating Expense_Errata.xls," tab "Training."

[35] *See* e-workpapers "DRR Operating Expense_Errata.xls" and "III-D-3 Material and Supplies.pdf."

EXHIBIT NO. 3

MAINTENANCE OF WAY

The MOW plan for the DRR was developed by DuPont's expert railroad engineering witness, Harvey Crouch.[1] It was also reviewed and approved by Richard McDonald, DuPont's rail operations expert, who has engineering and operating experience with NS's predecessors.

Mr. Crouch served in the Southern Railway's and then NS's Engineering Department from 1977 to 1987, including service as a Project Engineer and Track Supervisor in the Maintenance of Way & Structures Department. His duties in these positions are detailed in his Statement of Qualifications in Part IV. As Track Supervisor, Mr. Crouch was responsible for the inspection and maintenance of a portion of NS's mainline trackage in Virginia, including track inspection, day-to-day supervision of work gangs, ordering material, budgeting and planning, as well as management of rehabilitation and maintenance of track and inspection of bridges. As Project Engineer, Mr. Crouch was responsible for engineering design and plan review, and the bid and construction engineering phases for major capital track and bridge construction and rehabilitation projects in the geographic areas served by the DRR.

Mr. Crouch considered the kinds of terrain and climate in which the various portions of the DRR are located in developing the DRR's MOW plan and incorporated the significant aspects of the variations in terrain and climate into the MOW plan and staffing.

Consistent with *WFA/Basin*, Mr. Crouch's MOW plan has a substantial field staff to perform day-to-day inspection and maintenance activities, supported by a managerial/office engineering and support staff that reports to the DRR's Vice President-Engineering & Mechanical. Capital maintenance programs are also required during the 10-year DCF period to renew/replace the fixed facilities and in particular the principal elements of the track structure.

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[1] Mr. Crouch is also sponsoring DuPont's evidence on the DRR's construction costs in Part III-F. The staffing for the DRR's MOW Communications & Signals Department is also sponsored by DuPont's communications and signals expert, Victor Grappone, PE.

MAINTENANCE OF WAY

The DRR's MOW staff has been structured to include planning, budgeting and contracting related to annual capital programs.

Also consistent with *WFA/Basin*, all of the DRR's program work (including rail grinding and crossing paving) is performed by contractors. It is more efficient to contract out program work, rather than hiring large seasonal gangs to perform most of this work as most Class I railroads have done until recently.[2] Using contractors is more efficient, in part, because contractors are not subject to internal railroad union craft work-rules (which can be exacerbated for large railroads like NS that are the product of numerous mergers and consolidations among predecessor railroads) or the Railroad Retirement program, which makes internal railroad labor very expensive. In addition, it is not cost-effective to hire and equip large mechanized gangs consisting of DRR employees because most program work is performed on an as-needed basis each year, in different geographic areas and gangs simply are not needed throughout the entire year. In addition, winter work is not feasible on parts of the DRR due to roadbed freezing and the potential for ballast cars to freeze en route to construction areas.[3]

In developing the DRR's MOW plan, Mr. Crouch started by considering the maintenance functions that need to be performed, and then developed an appropriate field organization and supervisory/support staff for each function, given the railroad's geographic scope, terrain, number of trains and gross tonnages. The basic functions include track inspection and routine

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[2] Consistent with the treatment of program renewal work in other rate cases such as *AEP Texas* and *WFA/Basin*, the cost of capital programs is accounted for in the DCF model. In addition, CSX uses Hulcher for ballast train supply and unloading; all the Class 1's use contractors for vegetation control, rail defect testing, geometry car testing, and to some extent, inspection using hi-rail truck mounted equipment. Regional and Short Line Railroads routinely use contract services for all capital work. For example, the Central Florida Rail Corridor uses contractors for all inspection, maintenance and capital program work.

[3] Because the DRR starts operations with a newly-constructed physical plant, there should be no need for significant program work (and thus large mechanized forces) during the first 10 years of its operations – notwithstanding the way program maintenance is treated under the DCF model, in which a portion of the DRR's fixed assets are assumed to be renewed each year.

maintenance, communication and signal inspections, testing and maintenance, bridge inspection and minor building maintenance, and budgeting and administrative support. Mr. Crouch also considered the equipment needs for each function, as well as the maintenance work (other than capital program maintenance) that appropriately could be contracted. Each of these categories of MOW expense are discussed below and detailed in Mr. Crouch's supporting e-workpapers.

A. DRR Operating Staff

The DRR MOW personnel are organized into the Track, Communications & Signals, Building & Bridges and Miscellaneous Administrative Support Departments. The staffing and compensation for each of these departments is summarized in Table 1 below and a discussion of the personnel requirements by department follows.

Exhibit III-D-3
Table 1
DRR Base Year MOW Personnel Costs

Item	No. of Employees	Total Compensation
(1)	(2)	(3)
1. Track	725	$42,988,362
2. Comm. & Signals	219	$14,595,350
3. Bridge & Bldgs.	46	$2,703,683
4. Misc./Admin Support	16	$1,141,955
5. Total	**1,006**	**$61,429,350**

Source: "Exhibit III-D-3 DRR MOW errata.xlsx"

Salaries for the DRR's MOW personnel are based on the salaries paid by NS to MOW personnel as shown in NS's 2009 Wage Forms A and B.[4] The total annual compensation for

[4] *See* e-workpaper "DRR Salaries.xlsx."

these MOW personnel in the base year (excluding fringe benefits) equals $61.3 million as summarized in Table 1 above.

1. Track Department

The DRR's Track Department consists of 725 employees, organized into the positions shown in Table 2 below. The annual compensation for each position, by employee and in total, is also shown.[5] The DRR Track Department has been divided into four (4) maintenance-of-way divisions of approximately 1,800 route miles per division. There are two (2) MOW divisions in the North Region, hereinafter referred to as "Northeast" division and "Northwest" division; and, two (2) MOW divisions in the South Region, hereinafter referred to as "Southeast" division and "Southwest" division. The MOW regions do not correlate to any existing NS Operating Divisions.

[5] Compensation is salaries excluding fringe benefits from NS's 2009 Wage Form A & B, *See* e-workpaper "III-D-3 Salaries.pdf."

MAINTENANCE OF WAY

Exhibit III-D-3
Table 2
DRR Base Year Track Employees And Compensation

	Position (1)	No. of Employees (2)	Annual Salary (3)	Total Salary (4)
1.	General Office Staff			
	a. Engineer – MOW	4	{ }	{ }
	b. Manager of Welding & Grinding	2	{ }	{ }
	c. Supervisor of Work Equipment	2	{ }	{ }
	d. Administrative Assistant/Clerk	5	{ }	{ }
2.	Field Staff			
	a. Asst. Engineer - MOW (Field Production)	8	{ }	{ }
	b. Roadmaster	36	{ }	{ }
	c. Asst. Roadmaster	72	{ }	{ }
	d. Track Crew Foreman	90	{ }	{ }
	e. Track Crew Member	270	{ }	{ }
	f. Roadway Machine Operator	42	{ }	{ }
	g. Welder/Helper/Grinder	72	{ }	{ }
	h. Rail Lubricator Repairman	18	{ }	{ }
	i. Roadway Equipment Mechanic	18	{ }	{ }
	j. Ditching Crew Foreman	16	{ }	{ }
	k. Ditching Crew Member	16	{ }	{ }
	l. Smoothing Crew Foreman	18	{ }	{ }
	m. Smoothing Crew / Machine Operator	36	{ }	{ }
3.	Total	725		**$42,988,362**

Source: "Exhibit III-D-3 DRR MOW errata.xlsx"

a. General Office Staff – On each of the four (4) MOW Divisions, the Track Department is headed by the Engineer - MOW. Each Engineer - MOW is responsible for maintenance of all the DRR's track within its division, preparing the annual track budget, and arranging for contractor performance of track maintenance (capital) programs.

There are a number of positions that report to the Engineer - MOW, including a Manager of Welding & Grinding and a Supervisor of Work Equipment. Each of these individuals covers the entire DRR system within his area of responsibility, as described further below.

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One Administrative Assistant/Clerk is assigned to the Track Department (and to each of the other MOW sub-departments) to perform administrative and secretarial duties.

b. Field Staff – The Track Department's field staff is headed by eight (8) Assistant Engineers - MOW (Field Production) who report to the four (4) Engineers - MOW. The Assistant Engineers - MOW (Field Production) are based at each division Headquarters, and one other location on each division to enable them to efficiently cover all of the DRR's territory. They oversee routine contract work (such as weed spraying, use of rail detector and track geometry cars and rail grinding), maintenance programs, and track maintenance by the DRR's field track forces. They also work with the Roadmasters in their assigned territory in defining annual programs and overseeing contractor performance.

i. Roadmasters and Assistant Roadmasters – The Roadmasters (equivalent to the Field Maintenance Supervisors described in *WFA/Basin*) are responsible for day-to-day track maintenance in assigned geographic districts. There are thirty-six (36) Roadmaster districts, each headed by a Roadmaster, averaging about 200 route miles each. The specific territories each Roadmaster is responsible for, by Subdivision and milepost, are included in the workpapers accompanying this opening evidence.[6]

The Roadmasters are assisted by 2 Assistant Roadmasters. Each Assistant Roadmaster has an assigned territory of about 100 miles. These individuals conduct track inspections in accordance with all applicable FRA regulations, and are trained and certified by the DRR. They are responsible for track inspections and for routine field supervision of the track crews. Each Assistant Roadmaster inspects approximately 50 miles of track per day, four (4) days per week

[6] *See* e-workpaper "MOW Roadmaster Territories.xls."

(Monday, Tuesday, Thursday and Friday).[7] They also assist the Roadmasters in other activities, and on Wednesdays they perform activities such as routine switch inspections, vehicle maintenance, working with the local track crews, checking quality behind the track crews, and other light maintenance, as well as additional track inspections as dictated by temperature, weather conditions or emergency situations.

It is common in the railroad industry for Assistant Roadmasters to perform track inspections. The Assistant Roadmaster position on the DRR is roughly equivalent to the NS Assistant Track Supervisor position. The NS Assistant Track Supervisors have the track inspection responsibilities outlined above. This means there is no need for separate Track Inspector positions. When an Assistant Roadmaster is on vacation or otherwise unavailable, the Roadmaster or one of the Track Crew Foremen, who are cross-trained for this purpose, perform the routine track inspections.

ii. Track Crews – The DRR has a total of 90 field track crews, each consisting of a Foreman and three Crew Members (track laborers). Each crew is responsible for day-to-day maintenance of the track in a defined territory averaging 80 route miles.[8] They perform various tasks in connection with routine track maintenance, such as correcting track geometry defects (surface, line and gauge), repairing detected rail defects, replacing missing/broken joint bars and bolts, replacing failed tie plates/insulators/clips, replacing occasional defective ties at critical locations such as joints, switch points and frogs, removing snow/ice from switches, and replacing/repairing damaged signs.

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[7] The frequency of track inspections is dictated by the FRA track class involved. The DRR has mostly FRA Class IV track, which requires inspection twice per week.

[8] The track crews' territories are described in e-workpaper "MOW Roadmaster Territories.xls."

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The territory assigned to each field track maintenance crew, the four-person crew size, and the tasks they are expected to perform are all consistent with the modern practice of Class I railroads (including CSXT and NS) and regional railroads, as well as the approach approved by the Board in *WFA/Basin*. These parameters also reflect the concept that some work traditionally handled by large in-house track gangs at a Class I railroad is contracted out (as described further below). It also should be noted that each Roadmaster has a backhoe and dump truck available for his territory, which limits the need for additional track and other field personnel.

iii. Roadway Machine Operators – Mr. Crouch has provided for a total of 42 Roadway Machine Operators, with one Operator assigned to each of the 36 backhoes (one backhoe is assigned to each Roadmaster district) and six (6) additional Operators assigned to the six (6) dozers available system-wide. Other Machine Operators are assigned under other classifications, such as Tamper and Regulator Operators and Ditching Crew Members or Foremen. (The Track Crew members operate the Hi-Rail Boom Trucks assigned to each Track Crew, and are not considered machine operators.)

iv. Welder/Helper/Grinders – The DRR has 36 Welder/Helper/Grinder crews, one for each Roadmaster District, each consisting of a two-person welding and grinding crew with a welder and a welder helper. There are very few turnouts in each district compared to the real-world NS, and very few joints to maintain, so there will not be a need for much welding repair on the new DRR. However, welding/grinding crews are needed to Thermite-weld joints where replacement rail is installed; repair engine wheel burns, chipped rail ends or localized rail flow problems; and maintain turnout and rail crossing frogs and switch points without removing

them from the track.[9] Although all of the DRR's main track has continuous welded rail (CWR), there are some joints, and rail ends must be maintained and joints slotted regularly to prevent joint failure and premature rail removal/replacement caused by significant rail-end batter and chipping. In addition, the welding crews can provide backup support on larger jobs such as contracted flash butt/Thermite welding programs and rail detector car/rail grinding operations. Each welding crew is assigned a hi-rail flatbed truck equipped with a self-contained, diesel-driven electric welding generator, winches for handling molds, oxygen and acetylene tanks, and the necessary hand tools and other welding equipment.

v. **Rail Lubricator Repairmen** – The DRR needs 18 Rail Lubricator Repairmen, each covering approximately 400 route miles. The Rail Lubricator Repairmen inspect and repair the DRR's 364 rail lubricators on a regular basis. The number of lubricators is based on ten (10) miles of carry per lubricator in each direction as recommended by the manufacturer (Portec).

vi. **Roadway Equipment Mechanics** – The DRR also needs 18 Roadway Equipment Mechanics, which are assigned as needed among the 36 Roadmaster territories. These individuals are responsible for maintaining and performing routine repairs to the DRR's field equipment, including tampers, regulators, backhoes, and the other specialized equipment assigned to the field MOW forces. The Machine Operators perform simple daily maintenance tasks on their machines. Trucks are maintained at dealerships and local mechanics are used for most auto or truck-related repairs and maintenance.

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[9] It is much more efficient to do the welding in place rather than remove the defective frog, install a replacement, and transport the defective frog to a shop for repairs.

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vii. Ditching Crews – The DRR has sixteen (16) two-person ditching crews, with four (4) crews assigned to each MOW division. Each ditching crew consists of a Foreman and a Ditching Crew Member. The primary function of each of these crews is to keep the DRR's ditches free flowing and to clean culverts periodically. Each crew is assigned a Gradall or excavator, a hi-rail rotary three dump truck and a conventional pickup truck. The Foreman serves as the machine operator, and the other crew member serves as the dump truck driver. Each crew also has a normal complement of hand tools.

Where ditching is needed, it is performed by the DRR's field Ditching Crews using Gradalls and backhoes.[10] Ditching crews can be shifted to other territories as needed to handle work based on field conditions each year.

viii. Smoothing Crews – The DRR has eighteen (18) three-person smoothing crews, which perform spot surfacing and lining of the track as needed to correct any significant surface irregularities noted in geometry test car data, or as directed by the Assistant Engineer - MOW (Field Production). Each crew will cover an average of approximately 400 route miles. Given the DRR's newly-constructed status, and the absence of roadbed failures at former joint locations common to railroads caused by previous use of jointed rail, it is highly unlikely that there will be many surface or line irregularities within the first ten years of the

[10] Each Roadmaster is assigned a small rubber-tired backhoe and a dump truck which can also be used by the ditching crews for work in that Roadmaster's territory, as needed. In addition, one large backhoe is assigned to each division. It should be noted that most of the NS roadbed for the lines being replicated by the DRR that was observed during field inspections by Mr. Crouch's team is perched, meaning the roadbed is on fill or embankment with no parallel ditches except in cut sections. Thus, most of the DRR's route does not have any ditches that need cleaning or repairing. Some ditching is anticipated in cuts. Divisions share equipment as needed based upon field conditions.

railroad's existence.[11] Most of the surfacing will take place in the areas with the highest number of curves. Each smoothing crew consists of a Foreman and two Smoothing Crew Members (Machine Operators), and each crew is assigned a Tamper and a Ballast Regulator. The Tamper is used to surface and line track. The Ballast regulator is used to move ballast, restore the roadbed section and shoulder ballast, fill the tie cribs, and sweep the track following surfacing and lining. These crews also assist the field track forces and contractors with derailments or other problems requiring surfacing work. If additional labor is needed to assist a Smoothing Crew in unusual circumstances, it can be taken from the local Track Crew.

2. Communications & Signals Department

The DRR's Communications & Signals ("C&S") Department consists of 214 employees. The specific positions and compensation levels for this department are shown in Table 3 below.

[11] Even where existing railroads have continuous welded rail or CWR, it usually has replaced older, jointed rail. Old roadbed damaged by trains running over jointed rail for many years will not be a factor on the DRR.

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Exhibit III-D-3
Table 3
DRR Base Year C&S Employees And Compensation

Position (1)	No. of Employees (2)	Annual Salary (3)	Total Salary (4)
1. General Office Staff			
a. Communications & Signals Engineer	1	{ }	{ }
b. Asst. Engineer – Signals	2	{ }	{ }
c. Asst. Engineer – Communications	1	{ }	{ }
d. Administrative Assistant/Clerk	1	{ }	{ }
2. Field Staff			
a. C&S Supervisors	16	{ }	{ }
b. Signal Maintainers	180	{ }	{ }
c. Communications Technicians	18	{ }	{ }
3. Total	219		**$14,595,350**

Source: "Exhibit III-D-3 DRR MOW errata.xlsx."

a. General Office Staff – The C&S Department is headed by the Communications & Signals Engineer. This Engineer position is responsible for the communications and signals functions, for assuring the proper tests are conducted, and that the necessary maintenance is being performed. He is also responsible for developing the necessary capital programs to keep the signal and communication equipment functioning reliably, and supervising the outside contractors who maintain the communications equipment including microwave towers and associated equipment and radios.

Three (3) Assistant Engineers report to the Communications & Signals Engineer, two in charge of supervising the signals function and the associated field personnel and one in charge of supervising the communications function and associated personnel. This department also has an Administrative Assistant/Clerk who handles secretarial and administrative duties.

supervising the communications function and associated personnel. This department also has an Administrative Assistant/Clerk who handles secretarial and administrative duties.

b. Field Staff – The field staff is led by sixteen (16) C&S Supervisors. The C&S Supervisor position is responsible for field supervision of the Signal Maintainers and Communications Technicians. C&S Supervisors are located in each Division office, and various Roadmaster locations as necessary to supervise the maintainers in their territories.

i. Signal Maintainers – The DRR has 180 Signal Maintainers. This position is responsible for scheduled inspections and routine testing and maintenance of the DRR's signal system. The Signal Maintainers repair defective trackside signals that govern train movements and grade-crossing protection devices, and change out broken signal bulbs. The number of Signal Maintainers required is a function of the number of AAR signal units involved.[12] Based on input from DuPont Witness Victor Grappone, DuPont's Signals & Communications expert, Mr. Crouch has provided one signal maintainer per 2,000 signal units. This is consistent with Mr. Grappone's experience with signal design and maintenance as an employee of the Long Island Railroad.

ii. Communications Technicians – The DRR has eighteen (18) Communications Technicians. These employees are primarily responsible for maintaining train crew radios and other communications devices. Sixteen (16) of them are based at the DRR's yards. Two (2) are a "roving" position and also available to cover for one of the other Communications Technicians during vacations, etc. The Technician based at Roanoke Yard (as

[12] An AAR signal unit is a measure of the difficulty of maintaining a particular signal device, therefore there are more AAR signal units than there are individual signals.

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3. Bridge & Building Department

The DRR's Bridge & Building (B&B) Department consists of 46 employees. The specific positions and compensation levels for this department are shown in Table 4 below.

Exhibit III-D-3
Table 4
DRR Base Year B&B Employees And Compensation

Position (1)	No. of Employees (2)	Annual Salary (3)	Total Salary (4)
1. General Office Staff			
a. Bridge Engineer	1	{ }	{ }
b. Administrative Assistant/Clerk	1	{ }	{ }
2. Field Staff			
a. B&B Supervisor	4	{ }	{ }
b. B&B Inspector	4	{ }	{ }
c. B&B Machine Operator	4	{ }	{ }
d. B&B Foreman	8	{ }	{ }
e. B&B Carpenter/Welder/Helper	24	{ }	{ }
3. Total	46		**$2,703,683**

Source: "Exhibit III-D-3 DRR MOW errata.xlsx"

a. General Office Staff – The DRR's B&B Department is headed by the Bridge Engineer. This Engineer is responsible for inspections and maintenance of the DRR's bridges, and for minor building inspections and repairs. He is also responsible for preparing the annual bridge repair budget and for supervising the contractors who perform periodic bridge maintenance and major structural repairs, as well as periodic building maintenance. Like the other MOW sub-departments, the B&B Department also has an Administrative Assistant/Clerk.

b. Field Staff – The B&B field staff is not large, reflecting the fact that all of the DRR's bridges will be constructed using concrete and steel components, resulting in virtually

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b. Field Staff – The B&B field staff is not large, reflecting the fact that all of the DRR's bridges will be constructed using concrete and steel components, resulting in virtually no annual maintenance to the structures – unlike older bridges, and bridges with timber components which are common on existing Class I railroads, including NS.

i. B&B Supervisors – The DRR has four (4) B&B Supervisors, who report to the Bridge Engineer. These individuals are headquartered at the headquarters building at each MOW Division office. They are responsible for performing regular bridge, culvert and tunnel inspections on their division, and for conducting periodic inspections of the DRR's other buildings. They also recommend minor bridge repairs/maintenance to the B&B Crews or, on occasion, the appropriate Roadmaster, to the extent the repairs (such as tightening or restoring missing bolts, clearing drift from bridge piers and cleaning debris from culvert inlets, etc.) are within the capability of the field Track Crews. Major bridge, tunnel and culvert repairs are contracted out, as are periodic detailed, extraordinary inspections of bridges.

ii. Bridge Inspectors and other field B&B employees – The B&B Department's field employees include four (4) Bridge Inspectors, who perform annual bridge inspections as a part of their daily routine, four (4) B&B Machine Operators (one for each Division), and eight (8) B&B Crews, two (2) per Division, that perform routine bridge, tunnel and culvert maintenance in assigned territories averaging about 900 miles each. Each of the B&B Machine Operators is equipped with a bridge hoist/crane. Each B&B Crew consists of a Foreman, a Welder, a Helper, and a Carpenter. These crews perform bridge and tunnel repairs to the extent they do not involve major pier or superstructure repairs, which are contracted out.

4. Misc. Administrative/Support Personnel

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Engineering, develop and administer the annual MOW budget (including the capital or program budget), interface with contractors performing both program and day-to-day work and with governmental agencies involved in public projects that affect the railroad, and deal with other MOW administrative matters including environmental, safety and training. These positions and their salary requirements are summarized in Table 5 below.

Exhibit III-D-3
Table 5
DRR Base Year Admin/Support Employees And Compensation

Position (1)	No. of Employees (2)	Annual Salary (3)	Total Salary (4)
1. Engineer of Programs and Contracts	1	{ }	{ }
2. Public Project Engineer	4	{ }	{ }
3. Manager of Administration and Budgets	1	{ }	{ }
4. Manager of Environmental/Safety/Training	2	{ }	{ }
5. Manager of Mechanical Operations	1	{ }	{ }
6. Administrative Assistant/Clerk	1	{ }	{ }
7. Water Plant and Fueling Technician	6	{ }	{ }
8. Total	16		{ }

Source: "Exhibit III-D-3 DRR MOW errata.xlsx"

a. Engineer of Programs and Contracts – The Engineer of Programs and Contracts is responsible for implementation and monitoring of the DRR's contracts for program and other maintenance, as well as preparing the Engineering Department's overall budget for approval by the Vice President-Engineering and other senior management.

b. Public Project Engineers – The four (4) Public Project Engineers (one for each of the DRR's 4 geographic divisions) interface with governmental agencies and other entities in handling requests for various types of public projects including rail/highway grade separations, new grade crossings, utility projects, and right-of-way encroachments. They also

entities in handling requests for various types of public projects including rail/highway grade separations, new grade crossings, utility projects, and right-of-way encroachments. They also provide engineering expertise and support to the Roadmasters for issues related to such projects in their territory.

c. Manager Administration & Budgets – The Manager of Administration & Budgets interfaces with the Human Resources Department with respect to hiring MOW employees. He also assists the Engineer of Programs and Contracts in preparing the annual Engineering/MOW budget, and is responsible for the MOW payroll and monitoring/payment of contractor invoices.[13]

d. Managers Environmental/Safety/Training – The two (2) Managers - Environmental/ Safety/Training interface with federal and state environmental authorities on compliance, and monitor environmental compliance with respect to the DRR's MOW activities. They also manage the vegetation control program for the Track Department, and are responsible for MOW employee training and compliance with Hazmat practices and procedures.

e. Manager Mechanical Operations – A separate Manager of Mechanical Operations is needed for the MOW function given the amount of equipment used for this function. This individual is responsible for coordinating the deployment, use and maintenance of MOW equipment. He works closely with the Director of Mechanical Services, who is part of the Vice President-Mechanical's staff (and included with the DRR's other Operating employees).

[13] The DRR's purchasing function has been centralized in a four-person Budgets & Purchasing section within the Finance & Accounting Department, discussed above under General & Administrative expenses. However, the purchasing for the MOW function is coordinated by the Manager of Administration & Budgets.

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One additional Administrative Assistant/Clerk is assigned to the Engineer of Programs and Contracts/Public Project Engineers and their staff, to assist with secretarial and other routine administrative duties.

f. Water Plant and Fuel Technicians – The six (6) Water Plant and Fuel Technicians are responsible for maintaining and repairing water and fuel equipment systems. The position is responsible for monitoring systems, performing preventative maintenance and general maintenance as necessary.

B. Non-Program MOW Work Performed by Contractors

While the DRR's in-house MOW forces handle most day-to-day routine and spot maintenance of the DRR's track and facilities, it is more cost-effective to contract out some maintenance work that is treated as operating expense. The treatment of such contracted work by DuPont's MOW experts is consistent with the approach approved by the Board.[14]

This contracted work includes (i) planned (or routine) maintenance that can be scheduled on a regular basis, (ii) unplanned maintenance, and (iii) large magnitude unplanned maintenance.

The costs associated with the contract work performed in these areas of maintenance are summarized in Table 6 and described below.

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[14] *See WFA/Basin* at 69-73.

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Exhibit III-D-3
Table 6
DRR Base Year Non-Program Contract Costs

	Position (1)	Total Costs (2)
1.	Planned Contract Maintenance	
	a. Track Geometry Testing	{ }
	b. Ultrasonic Rail Testing	{ }
	c. Rail Grinding	{ }
	d. Yard Cleaning	{ }
	e. Vegetation Control	{ }
	f. Crossing Repaving	{ }
	g. Equipment Maintenance	{ }
	h. Comm. Sys. Inspect & Repair	{ }
	i. Bridge Inspections	{ }
	j. Bldg. Maintenance	{ }
2.	Unplanned Contract Maintenance	
	a. Snow Removal	{ }
	b. Storm Debris Removal	{ }
	c. Building Repairs	{ }
3.	Large Magnitude Unplanned Maint.	
	a. Derailments and Clearing Wrecks	{ }
	b. Washouts	{ }
	c. Environmental Cleanups	{ }
4.	Total	**$33,382,936**

Source: Exhibit III-D-3 DRR MOW errata.xlsx.

1. Planned Contract Maintenance

Routine work is scheduled on a regular basis that is not performed frequently enough to justify the DRR's investment in the equipment and personnel required for it (such as track geometry and ultrasonic rail testing and rail grinding).

a. Track Geometry Testing – Track geometry testing is included in routine maintenance. The frequency of such testing is generally a function of the annual gross tonnage

moving over the track and ensures that the track and related structures meet all FRA standards in terms of alignment, gauge and profile. Track geometry test results are used to prioritize work to be performed by the Smoothing Crews. Geometry testing is required with varying frequency depending on the annual gross tonnage moving over various portions of the DRR. Generally, track carrying between 5 and 30 million gross tons ("MGT") per year is tested once per year, track carrying 30 to 60 MGT is tested twice per year, and track carrying more than 60 MGT is tested three times per year. These frequencies are consistent with NS's standards based on information produced in discovery.[15] The frequencies for testing above 30 MGT are conservative for a newly-constructed railroad that has better roadbed compaction, drainage, ballast and sub-ballast, rail and timber. This means the track structure will hold up better than average. The DRR also has no roadbed damage from previous use of jointed rail, where low joints developed.

The cost for track geometry testing is ${ } per track mile. This amount is based on data provided by NS in discovery. The total annual miles of testing and the related cost calculations are included in the workpapers accompanying this opening evidence.[16]

b. Ultrasonic Rail Testing – Ultrasonic rail testing is important in preventing derailments because it helps reveal internal rail defects that could cause disruptions in the DRR's operations. FRA regulations[17] require testing rail in Class 3 track, over which passenger trains do not operate, for internal defects at least once every 30 MGT or once a year, whichever interval is shorter, and similar testing of Class 4 through 5 track at least once every 40 MGT or once a year, whichever interval is shorter. Consistent with these standards, the DRR will conduct

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[15] Source: *See* e-workpaper "Geometry Testing Costs.xls."

[16] *See* e-workpaper "Exhibit III-D-3 DRR MOW errata.xls."

[17] 49 CFR § 213.237.

ultrasonic rail testing at least once a year on all of its main lines, and twice a year on track carrying between 40 and 80 MGT. This is more than adequate given that the DRR starts operations with all new rail on its mainline tracks and sidings.

Based on data provided by NS in discovery, the average cost for ultrasonic rail testing in 2009 was ${ } per track mile for each pass over the track with the test car.[18] The total annual miles of ultrasonic testing and the related cost calculations are included in the workpapers accompanying this opening evidence.[19]

c. **Rail Grinding** – NS provided summary costs and a record of miles covered by rail grinding in 2008, 2009 and 2010 in discovery. Rail grinding is a part of some Class I railroads' MOW plans as they determine necessity based on traffic, tonnage and rail characteristics, and the potential to extend the service life of the rail. Studies have indicated that premium rail in high-density territory, even with heavy curves, can withstand well in excess of 150 MGT without the need for grinding.[20] Here, 136-pound premium CWR rail is being used on the DRR's main tracks, on curves of 3 degrees or more and where annual gross tonnage is greater than 20 MGT. This rail is extremely durable under heavy loads. However, to be conservative, the DRR will rail-grind every 100 MGT in the curve areas with premium rail. Consistent with the approach used in *WFA/Basin*, rail grinding will be performed every 30 MGT in other curves and every 60 MGT for tangent track. Tangent rail and rail in curves less than 3 degrees receive one pass, and rail in curves equal to or greater than three degrees receive two

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[18] *See* e-workpaper "Ultrasonic Rail Testing.cost.xls."

[19] *See* e-workpaper "Exhibit III-D-3 DRR MOW errata.xls."

[20] *See* Kevin Sawley, Transportation Technology Test Center Inc, Report 928, "North American Rail Grinding Practices and Effectiveness," August 1999; *Railway Track and Structures*, December 2000, page 15.

passes. Switches, rail crossings (diamonds) and rail located in at-grade road crossings will also be ground at the same time that normal rail grinding is performed.

The cost allotted for rail grinding is { } per mile, based on information provided by NS in discovery. The total miles of grinding and the related cost calculations are included in the workpapers accompanying this opening evidence.[21] Switch grinding has been included in the total rail grinding quantity.

In *WFA/Basin*, the Board treated the cost of rail grinding as an operating expense, notwithstanding the complainant's argument that it should be capitalized because it extends rail life.[22] For the DRR, annual rail grinding is considered a capital cost and therefore is not included in the annual MOW expense.

d. Yard Cleaning – The DRR's yards should be cleaned once a year in order to ensure that debris does not affect rail operations. The amount and cost of yard cleaning required for these yards is based on a verbal quote from ARS, a company used by Class I railroads for yard cleaning. The total annual cost for yard cleaning is $959,400 per year.

e. Vegetation Control – Weed spraying, brush cutting and mowing are necessary in order to prevent overgrowth into the rail bed or other structures, which can cause a safety hazard. The most critical vegetation control has to do with the ballast section. If vegetation is allowed to flourish in the ballast section, it will soon foul the ballast and interfere with the most important function of ballast which is to permit water to drain from the track structure, uninterrupted. If water is allowed to be retained in the track structure it can reduce tie life and destabilize the track structure, thus increasing the risk of track failures and derailments.

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[21] *See* e-workpaper "Exhibit III-D-3 DRR MOW errata.xls."

[22] *See WFA/Basin* at 71.

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Vegetation control also is critical at grade crossings for the safety of both train operations and the traveling public.

The DRR's requirements for vegetation control work are based primarily on the climate conditions and annual rainfall in the geographic areas in which it lies. The areas in which the DRR is located south of Kentucky and Virginia receive considerably more precipitation per year than the areas in and north of those states, and have a longer growing season. As a result, weed spraying is needed once a year in the northerly areas and twice a year in the southerly areas (Tennessee/ North Carolina and south).

The annual cost for vegetation control is based on a prorated value from NS's data provided in discovery [23] for vegetation control at grade crossings and for line-of-road vegetation control. The total cost per mile for vegetation control is ${ }.[24]

Very little brush-cutting should be required because the DRR's right-of-way will be cleared during construction, and weed spraying will greatly inhibit the growth of brush. Brush or weeds may tend to accumulate near road grade crossings; the DRR's dozers will be used as needed to keep the right-of-way cleared around road crossings where contracted vegetation control work is not sufficient.

f. Crossing Repaving – Highway grade crossings must be repaved periodically. Asphalt pavement is used with treated hardwood crossing timbers in public grade crossings. The life of asphalt pavement is largely a function of road traffic, at least beyond 24 inches outside each rail, although rail traffic is also a factor within the crossing zone proper. A typical pavement application will last eight (8) to twelve (12) years, or longer. Consequently,

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[23] Source: *See* e-workpapers "Crossing maintenance 2009 payment schedule.xls." and "Brush 2009 payment schedule.xls."

[24] *See* e-workpaper "Exhibit III-D-3 DRR MOW errata.xls."

there should be little need for the DRR to begin paving activities immediately. However, to be conservative, and consistent with the approach used in the DCF model, Mr. Crouch has assumed that paving would begin in the DRR's first year of operations. As the paving should last at least ten (10) years, Mr. Crouch assumed that ten (10) percent of the total crossing paving quantity would be re-paved each year. The total cost of crossing paving is { } annually. This amount is capitalized as it is performed in conjunction with the annual capital (renewal) program.[25]

g. Equipment Maintenance – Normal maintenance of company leased equipment is contracted out, although the DRR has eighteen in-house mechanics who perform routine maintenance and repairs to the basic equipment used by the field track forces. The equipment that is maintained by contractors includes hi-rail trucks, dozers, Gradalls and backhoes, ballast regulators, tampers, air compressors and certain power hand tools. The DRR's mechanics are prepared and equipped to perform preventive maintenance and straightforward repairs to this equipment.

Based on Mr. Crouch's experience, the cost of annual maintenance of the DRR's equipment is five (5) percent of its purchase price.[26]

h. Communications System Inspection and Repair – Periodic inspection and planned maintenance of the DRR's communications system, which is described in detail in Part III-F-6, is performed by contractors. The DRR's communications system includes microwave towers and LMR radio facilities, which are inspected annually.

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[25] *See* e-workpaper "Exhibit III-D-3 DRR move.xls." and "Chapman Hwy Crossing Paving.pdf."

[26] NS did not provide any information on its annual equipment maintenance costs in discovery, and Mr. Crouch believes the 5 percent figure is reasonable. Details are provided in e-workpaper "Exhibit III-D-3 DRR MOW errata.xls."

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Communications maintenance and inspection costs are normally a component of maintenance agreements for communications systems entered into at the time of installation. In *WFA/Basin*, the complainant proposed and the Board accepted, a communications system maintenance cost of two (2) percent of original purchase cost. Based on Mr. Crouch's experience this percentage is reasonable, and it has been applied it to the DRR's communications-equipment acquisition costs developed by DuPont Witness Kruzich. The result is an annual cost of contracted repairs to the DRR's communications facilities of ${ }[27]

i. Bridge Inspections – As described earlier, the DRR's Bridge and Building ("B&B") Supervisors and B&B Inspectors perform basic bridge inspections as part of their duties, including annual inspections of all bridges. However, the DRR's major river bridges require periodic in-depth inspection to assess integrity; these inspections are performed by professional outside contractors in the company of one of the B&B Inspectors, using specialized equipment. These inspections involve careful examination of the substructure and superstructure of each bridge. The bridges will be new at start-up, and will be inspected on a five-year schedule by the outside contractors in addition to the annual inspections by the DRR's B&B department. Driving inspections are not required since bridge designs incorporate scour design. Mr. Crouch applied an average cost of ${ } per track foot of bridge length for contractor inspection, which is based on a total of 177,178 track feet of bridges. On a five-year cycle, the annual cost of inspecting major bridges using contracted inspections is ${ }.[28]

j. Building Maintenance – All of the DRR's buildings are new at start-up, so only occasional routine maintenance is required. Other than general plumbing and electrical

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[27] *See* e-workpaper "Exhibit III-D-3 DRR MOW errata.xls."

[28] Id.

repairs over time, HVAC systems generally require semi-annual inspections and maintenance which is performed by contractors (as is occasional outside maintenance). NS did not provide any information for building maintenance costs so Mr. Crouch developed an annual cost of $719,782 for contract building maintenance, which is based on two (2) percent of the total building cost.[29]

2. Unplanned Contracted Maintenance

Experience teaches us that certain maintenance will be needed that does not occur at regular intervals and is more economically handled by contractors who have the requisite expertise and specialized equipment (such as snow and storm debris removal and bridge superstructure repairs).

a. Snow Removal – The DRR's northern terminals will require occasional snow removal. Most snow removal activity is performed by the DRR's field maintenance personnel who are not as busy in the winter as in the summer in the areas where snowstorms are likely.

All main track switches in the Northern Region are equipped with switch heaters. The Ballast regulators to be purchased for the Northern Region are all equipped with snow removal attachments, and have a higher purchase cost, reflected in the MOW Equipment costs. These ballast regulators are run by Smoothing Gang members who are not as busy in the winter in these areas. Snow removal from roadways and parking lots will be contracted out; it is better handled with contractors because it is uneconomical to have extra in-house staff and specialized equipment available to perform this work.

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[29] Id.

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NS did not provide any data on snow removal costs in discovery. Based on his experience in the geographic regions served by the DRR, Mr. Crouch has allocated $325,000 per year for contract snow removal.[30]

b. Storm Debris Removal –There will be infrequent occasions where severe winds bring down trees or scatter debris on the right of way, and infrequent ice storm damage during winter conditions in the northerly parts of the DRR system. Depending on the severity and extent of the damage, outside contractors will be called upon to clean up the debris. In-house MOW forces will be available to assist, but the DRR will not staff for this eventuality. Once again, NS did not provide any information in discovery on storm debris removal costs. Based on his experience with weather conditions in the geographic regions where the DRR is situated, Mr. Crouch has provided $100,000 annually for this activity.[31]

c. Building Repairs – As described earlier, all of the DRR's buildings are new. Nevertheless, the buildings will require the occasional unplanned repair. Typical occurrences include storm damage, water and sewer line repairs, electrical failure, HVAC repairs, etc. In Mr. Crouch's experience, unplanned annual expense for building maintenance generally is subsumed within the general building maintenance costs described above.

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[30] Id.

[31] Id.

MAINTENANCE OF WAY

3. Large Magnitude Unplanned Maintenance

These are events requiring more people or specialized equipment than the DRR has because of the infrequency and unusual nature of the events (such as repairing the track structure after a major derailment or washout).

a. Derailments –A new railroad constructed to modern standards is less likely to experience a major derailment then the older plant of existing railroads. Nevertheless, over the 10-year DCF life of the DRR, derailments are likely to occur.

Removing rolling stock/lading and restoring the track structure after a major derailment usually involve considerable work requiring heavy equipment. Today, few railroads use in-house staff to repair the track after such derailments without assistance from a contractor; in fact, most Class I railroads no longer have auxiliary forces dedicated to derailment response. The same is true for regional/short-line railroads, which are even less able to afford this stand-by resource. These carriers rely primarily on contractors to respond to such occurrences because it is not cost-effective to have a separate complement of employees and heavy equipment on stand-by to deal with infrequent major derailments.

The DRR's average annual cost for repairing damage from derailments (primarily contractor expense) is $2,386,642 based on 2010 FRA Accident Reports for NS.[32] Given the DRR's brand-new network at start-up (including the fact that it did not replace older, jointed rail with CWR but starts operations with CWR on all of its main tracks), and considering that it moves only complete trains, the DRR certainly should not incur a greater expense for

[32] *See* e-workpaper "DRR Derailment and Clearing Wrecks.pdf."

derailments than the real-world NS does. When the estimated cost of clearing wrecks[33] is added, the DRR's total annual cost for derailments is $4,907,820.

b. Washouts – Again, a new railroad roadbed/track structure is not as prone to washouts as older, real-world railroad roadbed that may have experienced previous water-related damage, where ditches have not been maintained, culverts have become clogged with sediment or cut brush, or brush is allowed to accumulate in ditches, causing washouts. Nevertheless, washouts may occur – for example, when a culvert through the sub-grade becomes blocked, preventing the flow of water. This blockage can be caused by melting ice, snow or severe rainstorms that cause heavy runoff to move against the right of way. Floating debris at the upstream ends of some culverts can also prevent them from serving their intended purpose.

Based on Mr. Crouch's experience with railroad washouts in the geographic regions served by the DRR and its length in route miles, the average annual cost of washout repairs should not exceed $100,000. This cost includes furnishing and placing up to 1,000 tons of rip-rap. Other related work would be performed by the local field forces (including ditching and smoothing crews) as needed.

c. Environmental Cleanups – The DRR operates locomotive inspection and servicing facilities at its major yards that might be a source of inadvertent discharge of environmentally sensitive materials. In addition, the DRR transports some hazardous commodities over several of its lines. An infrequent environmental cleanup could occur if hazardous commodities are released during a derailment. Derailments are less likely to occur on the DRR than on a Class I railroad such as NS because the DRR begins operations July 1, 2009

[33] The DRR's estimated annual cost for clearing wrecks is $2,521,178 and is based on NS's 2009 R-1, Schedules 410 and 702. *See* e-workpaper "DRR Derailment and Clearing Wrecks.pdf.

with a brand-new track structure that includes CWR on all of its main tracks. It does not have to deal with situations where CWR replaced jointed rail that caused joint surface, ballast and subgrade pumping problems due to impact at rail joint locations, which increases the risk of derailments.

The DRR is providing protective drip pans at each location where locomotives are fueled at its yards. This insures that oil emissions from idling locomotives are contained. At each yard, 320 track feet are protected by drip pans, at a cost of ${ } per track foot. These pads have pvc cross drains to remove spilled fuel from the pans.

C. Program Maintenance

The Vice President-Engineering and the headquarters MOW administrative/support staff spend part of their time evaluating, planning and helping to execute capital MOW projects, as well as program contractor supervision. The field MOW forces assist in this effort to some extent, but their primary focus is on the day-to-day MOW work that is expensed. Consistent with the practice of most real-world railroads, DuPont's operating and engineering experts have concluded that one-third of the salaries of the Vice President-Engineering and the MOW administrative/support staff should be capitalized and two-thirds should be treated as operating expense, and that 100 percent of the salaries and equipment used by the remaining supervisory and field forces should be treated as operating expense.

Program maintenance, such as rail and tie renewal programs, that is performed by contractors, is capitalized in the DCF model. Consistent with the Board's SAC precedent and Class I railroad practice, the following more routine MOW work, that is contracted out, is also capitalized rather than being included in operating expense. Equipment costs are also capitalized in the DCF model.

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1. Surfacing

The DRR has eighteen (18) field smoothing crews which perform day-to-day surfacing of the track to correct surface and alignment defects and rough spots. In addition, heavy-tonnage track subjected to the high axle loadings of unit coal and other trains needs to be surfaced on a regular basis (once every three years) to prevent it from deviating from acceptable standards. Consistent with standard railroad practice, this additional surfacing is performed by a contractor and it is capitalized in the DCF model.

2. Rail Grinding

As noted earlier, {

}. The rail and switch grinding frequencies developed by Mr. Crouch, as described in the preceding section, were provided for purposes of capitalizing them in the DCF Model.

3. Crossing Repaving

Again, as discussed earlier, {

}. The DRR follows the same approach. The crossing repaving frequencies developed by Mr. Crouch were also provided for purposes of capitalizing them in the DCF Model.

4. Bridge Substructure and Superstructure Repair

Bridge life expectancy under NS's depreciation accounting is 60 years. This longevity generally reflects the stability of bridge superstructure and substructure components.[34] Nevertheless, unexpected minor repairs on a bridge substructure and superstructure will be required from time-to-time. The likelihood that steel and concrete repairs will be required is

[34] The DRR's bridges are being replaced through the DCF process.

negligible given that the structures are new in year one and have a life expectancy of well over 50 years.

In the experience of Mr. Crouch, the annual cost for bridge superstructure and substructure repairs typically does not exceed $4,000 per major bridge every five (5) years. This assumes a contractor's crew of five (5) working over a period of two days ($2,000) plus material ($1,000) and equipment ($1,000) and was accepted by the STB in *WFA/Basin*. Mr. Crouch uses this same approach here. This cost is capitalized.

D. Equipment

The DRR's in-house MOW forces require a variety of equipment to perform their duties, some of which has previously been described. The MOW equipment requirements and costs (other than for small tools, whose cost is included as a materials additive to the base compensation cost for each employee) are described below and listed in the MOW worksheet.[35]

1. Hi-Rail Vehicles

Each of the DRR's 90 field track crews has a hi-rail truck that provides transportation for the crew and is equipped with the tools necessary for the crew to perform its duties. This crew-cab vehicle comfortably seats the Foreman and three track workers. Its hi-rail gear provides the versatility required for maintenance forces to gain access to the track and carry out their duties, particularly on the portions of the DRR network where traffic density is high. For example, if the track crew cannot access the track at its headquarters due to imminent train arrival, the crew travels by road to a point where the dispatcher can provide positive protection for the crew to get on the track. Alternatively, if the crew is on the track, and it cannot remain or proceed due to an oncoming train, the hi-rail vehicle is removed until the train clears the PTC block and then either

[35] *See* e-workpaper "Exhibit III-D-3 DRR MOW xls." Tab "Equipment."

returns to the track or moves, by road, to another point where (with authority from the dispatcher) it again gains access to the track.

Each of these hi-rail vehicles is equipped with a boom crane and overhead racks. This allows the crew to load 39 ft. long rails, frogs, switch ties, cross ties and other materials necessary for track maintenance. The vehicle is also equipped with a hydraulic system providing the capability for operating portable tamping tools, impact wrenches, rail saw, rail drill, hammer, spike pullers, etc., which are included in the complement of tools carried on the vehicle.[36] Based on quotations from Stanley Tools, the cost to equip a gang truck or Assistant Roadmaster truck with these tools is $15,949 per vehicle.

Other MOW personnel are assigned smaller hi-rail vehicles. This includes the Roadmasters and Assistant Roadmasters, Signal Maintainers, Welding Crews and Lubricator Technicians. The Assistant Roadmasters' vehicles will also have an hydraulic pump and tool set similar to the system in the track crew vehicles. The Head Quarter's Engineering/MOW staff is also assigned hi-rail vehicles as described in Part III-D. In addition, the DRR has eight (8) semi-trailer "lowboys" trucks. There are also trailers for the backhoe assigned to each Roadmaster. These vehicles are used to deliver equipment, tools and materials to the field track and other crews.

The smaller hi-rail vehicles for the supervisory employees are intended for their transportation and that of others who may accompany them together with some capability for small material transport. Vehicles rated 3/4 to 1 ton are suitable. Hi-rail vehicles for Signal Maintainers, Welders and Lubricator Technicians not only provide transportation for the

[36] The hydraulic systems on the track crew's hi-rail trucks can perform more functions than an air compressor. Air tools have largely been replaced by the hydraulic tools supplied to each crew and each Assistant Roadmaster.

employees but need to be equipped with service bodies for transporting equipment, tools and parts. Here, too, vehicles rated 3/4 to 1 ton are appropriate. The rating tolerance accommodates a wide variety of vehicle manufacturers.

DRR's total hi-rail vehicle cost is $7.60 million.[37]

2. Equipment for Track and Related Work

The DRR's field crews responsible for track maintenance (including the track crews, smoothing crews, ditching crews and welding/grinding crews) have a variety of other specialized equipment needed to perform their tasks. The complete list of equipment and costs are included in the workpapers.[38]

a. Rail Drills – Rail drills are needed by the field track crews for drilling holes in replacement rail when bolted joints are installed, and replacing a rail that is found to be defective through electronic testing or visual detection. Each track crew has one rail drill, and each Assistant Roadmaster also has a hydraulic rail drill as part of the hydraulic tool set on his truck. The total cost for rail drills is included in the cost of the hydraulic tool package included with every hi-rail and every track crew.

b. Impact Wrenches – Each track crew and Assistant Roadmaster also has an impact wrench in the hydraulic tool set on its hi-rail vehicle. This piece of equipment is used to loosen and tighten joint bolts where joints are present in the track infrastructure. The impact feature of these tools is especially effective where a nut and bolt are seized and manual attempts to loosen them might prove unsafe. The impact wrench is also equipped with calibration capability so that applied force can be set in accordance with the manufacturer's specifications.

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[37] *See* e-workpaper"Exhibit III-D-3 DRR MOW errata.xls" tab, "Equipment."

[38] Id.

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The cost of impact wrenches is included in the cost of the hydraulic tool package included with every hi-rail and every track crew.

c. **Tamping Tools** – The field track crews are equipped with small, hand-held tampers. Major surfacing programs are incorporated into major rail and tie renewal projects to be performed by outside contractors with large tamping equipment. However, additional spot surfacing may be required for joints, switch and railroad crossing frogs, switch points, bridge approaches, at-grade crossing approaches, local spots on the high sides of curves, and as curves move out in the Spring. This spot tamping minimizes speed restrictions due to track conditions. Thus, each track crew is equipped with a set of tamping tools driven by the hi-rail vehicle's hydraulic system. These tamping tools are included in the cost of the hydraulic tool package included with every hi-rail and every track crew.

d. **Tampers and Ballast Regulators** – Each of the eighteen (18) smoothing crews is equipped with a modern high-speed tamper with switch-tamping capability to perform spot tamping work, and a ballast regulator which is required for moving ballast, restoring the roadbed section and shoulder ballast, and sweeping the track. These crews perform virtually all of the spot tamping, lining and surfacing required to maintain proper track line and surface. The cost of eighteen (18) tampers is $2.7 million and the cost of eighteen (18) ballast regulators is $1.1 million per year.

e. **Grinders** – Each of the thirty-six (36) welding/grinding crews has a complement of rail grinding equipment, including straight and profile grinders. This equipment is used to grind rail to the designed profile at specific locations. The DRR's welding crews use the Thermite welding process to eliminate joints created temporarily in CWR where a section of rail is replaced. They also restore, by welding, rail ends which are battered, chipped or crushed,

switch and rail crossing frogs, and switch points. Once the welding is complete, the weld zone needs to be ground to conform with the rail profile adjacent to the zone. In addition, these crews slot rail joints to be found in the vicinity of switches, railroad crossings and bridge approaches. The joints require slotting as the railhead flow, under traffic, moves to span the joint gap. If the flow is not checked by slotting, it eventually breaks off causing the rail end to chip.

Each of the 90 track crews also needs a straight grinder in connection with their occasional rail repair work. The cost for 90 straight grinders for the track crews and 36 sets of grinding equipment for the welding/grinding crews is included in the cost of the hydraulic tool sets.

f. **400-Amp Welders** – Each of the thirty-six (36) welding/grinding crews is also provided with a 400-amp welder, which is mounted on the crew's hi-rail truck. This smaller welding tool provides the crews with the needed flexibility to access a work site regardless of the location of the track. The cost for 400-amp welders is included the tool and material additive and in the truck cost for welders.

g. **Oxy-Acetylene Welders** – Each of the eighteen (18) welding/grinding crews also needs welding and cutting torches and fuel cylinders. The total cost for oxy-acetylene equipment for the eighteen (18) welding crews is included in the cost of welder trucks and the tool and material additive.

h. **Gradalls** – The DRR has twelve (12) hi-rail Gradall hydraulic excavators which are available to the twelve (12) of the sixteen (16) ditching crews. These machines, which can be operated either on-track or off-track, are used primarily for cleaning and shaping the parallel and lateral ditches along the right-of-way. The annual cost of twelve (12) Gradalls is $864,000.

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i. **Track Hoes** – The DRR also has four (4) backhoe track excavators (also known as a "track hoe"), that are available for use by the remaining four (4) ditching crews. These machines, which are operated off-track, are used primarily for clearing slide areas, installing culverts, and other miscellaneous excavation work which is not suited to a Gradall. They are also occasionally needed by the field track and signal forces. This machine is effective for specialized ditching purposes (such as improving drainage in the vicinity of highway grade crossings and placing signal conduit) and for spot excavating. It also can clear debris and beaver dams lodged at culverts and bridges when equipped with the optional grapple attachment. The total annual cost for four (4) track hoes is $168,000.

j. **Backhoes and Dump trucks** – Each of the thirty-six (36) roadmaster territories is equipped with a small rubber-tired backhoe, dump truck, and trailer to transport the backhoe. These additional support vehicles supplement the equipment described in the preceding sections and are available to the track, ditching and smoothing crews on an as-needed basis. The annual cost of this equipment, including dump truck for the track hoe excavators is $2.0 million.

3. Work Trains

Contractors provide the equipment (except locomotives) for large track programs. As explained in Part III-C, the DRR has several SW1500 locomotives available for periodic use in contractor work-train service, as needed.[39] These locomotives can also be used to move the occasional car of ballast, etc. needed by the DRR's field MOW track forces.

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[39] For example, CWR is laid in 1,440-foot strings from a rail train of specialized flatcars that requires a locomotive. Other contractor equipment items such as spike pullers, nipper-spikers, tampers and ballast regulators are self-propelled and do not require motive power.

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The DRR will temporarily store freight cars carrying materials in local yards, setout tracks, siding or other tracks.

E. Other - Scheduling of Maintenance

Spot maintenance work carried out by the DRR's MOW crews is not scheduled in planned maintenance windows. Although much of the work is routine, some occurrences are unplanned but require immediate attention and do not reflect the normal, routine approach to spot maintenance designed by DuPont's MOW experts. Given the flow of traffic on the railroad, spot MOW work must be fluid and flexible, as well as structured where possible.

In general, the field MOW crews (including signal maintainers) are responsible for all routine maintenance work that occurs on the DRR's right-of-way. However, the in-house crews do not perform all the work that is required. As described earlier, any condition requiring remedial action that cannot be met by the MOW field crews is referred to the proper authority, usually the Roadmaster or an Assistant Roadmaster, who calls in the needed resources. In the meantime, the field MOW forces provide protection in the area requiring remedial action.

Each day for a DRR field maintenance crew may involve different work than the previous day. In addition to regular duties, which the Foreman of each crew will have planned, the Roadmaster or other supervisor will have specific tasks which will be referred to a particular crew or a combination of crews.

On a given day, knowing what the expected traffic will be, and thus the work window available, a track crew (for example) may be able to move on track by hi-rail vehicle directly from its base to a location requiring the change-out of a defective rail which has precipitated a temporary slow order, thereby restricting the speed of trains. Another crew could have a similar task but, because of a differing circumstance with respect to train location and work window,

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must move by road (in its hi-rail vehicle) closer to the task's location, and then obtain a work window from the dispatcher.

Other activities can be scheduled more easily. For example, following the passage of an ultrasonic rail test car, some rails will require removal and joints must be Thermite-welded. Since the testing is planned, the replacement of defective rails can be scheduled. The field track crew, assisted by a welding crew, can then be ready to replace the defective rail and weld it.

Ultimately, the DRR's field MOW crews are not relying on specific maintenance windows that are planned substantially in advance of the needed work. Instead the crews plan their days around specific information about the number of trains expected that day in their territory and the work that needs to be completed. Obviously, no scheduled maintenance would be performed during the DRR's peak traffic period.

EXHIBIT III-F

EXHIBIT NO. 1

ROAD PROPERTY INVESTMENT
($ in Millions)

Item (1)	Amount (2)
1. Land	$3,374
2. Roadbed Preparation	3,969
3. Track Construction	8,242
4. Tunnels	444
5. Bridges	1,928
6. Signals and Communications	1,247
7. Buildings and Facilities	229
8. Public Improvements	122
9. Subtotal	$19,555
10. Mobilization	437
11. Engineering	1,618
12. Contingencies	1,824
13. Total	$23,434

Source: See e-workpaper "III-F Total errata.xlsx"

EXHIBIT III-H

EXHIBIT NO. 1

TABLE A: DRR ANNUAL COST OF CAPITAL

Year (1)	Industry Cost of Capital (2)	Industry Cost of Debt 1/ (3)	Industry Cost of Preferred Equity 2/ (4)	Industry Cost of Equity 3/ (5)	DRR 's Cost of Debt (6)	DRR 's Cost of Preferred Equity (7)	DRR 's Cost of Equity (8)	Debt as a Percent of Total Investment (9)	Preferred Equity as a Percent of Total Investment (10)	Equity as a Percent of Total Investment (11)	Composite Cost of Capital (12)	1 + Cost of Capital (13)	STB Prescribed Debt as a % of Capital 4/ (14)
2006	9.94%	5.97%	0.00%	11.13%	5.97%	0.00%	11.13%	23.05%	0.00%	76.95%	9.94%	1.0994	23.05%
2007	11.33%	6.15%	0.00%	12.68%	6.15%	0.00%	12.68%	20.68%	0.00%	79.32%	11.33%	1.1133	20.68%
2008	11.75%	6.57%	0.00%	13.17%	6.57%	0.00%	13.17%	21.54%	0.00%	78.46%	11.75%	1.1175	21.54%
2009	10.43%	5.72%	0.00%	12.37%	5.72%	0.00%	12.37%	29.10%	0.00%	70.90%	10.43%	1.1043	29.10%
2010	11.03%			12.99%	6.32%	0.00%	12.99%	22.15%	0.00%	77.85%	11.51%	1.1151	
2011					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2012					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2013					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2014					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2015					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2016					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2017					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2018					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	
2019					6.32%	0.00%	12.47%	22.15%	0.00%	77.85%	11.11%	1.1111	

1/ Cost of railroad industry debt from the STB Decision in Ex Parte No. 558 (Sub-No. 10), Railroad Cost of Capital - 2006, decided April 14, 2008, STB Decision in Ex Parte No. 558 (Sub-No. 11), Railroad Cost of Capital - 2007, decided September 24, 2008, STB Decision in Ex Parte No. 558 (Sub-No. 12), Railroad Cost of Capital - 2008, decided September 24, 2009, STB Decision in Ex Parte No. 558 (Sub-No. 13), Railroad Cost of Capital - 2009, decided October 28, 2010.

2/ No preferred equity was issued in 2006 - 2010.

3/ Cost of railroad industry cost of equity from the STB Decision in Ex Parte No. 558 (Sub-No. 10), Railroad Cost of Capital - 2006, decided April 14, 2008, STB Decision in Ex Parte No. 558 (Sub-No. 11),Railroad Cost of Capital - 2007, decided September 24, 2008, STB Decision in Ex Parte No. 558 (Sub-No. 12), Railroad Cost of Capital - 2008, decided September 24, 2009, STB Decision in Ex Parte No. 558 (Sub-No. 13), Railroad Cost of Capital - 2009, decided October 28, 2010, and STB Decision in Ex Parte No. 558 (Sub-No. 14), Railroad Cost of Capital - 2010, decided September 30, 2011.

4/ Capital structure from the STB Decision in Ex Parte No. 558 (Sub-No. 10), Railroad Cost of Capital - 2006, decided April 14, 2008, STB Decision in Ex Parte No. 558 (Sub-No. 11), Railroad Cost of Capital - 2007, decided September 24, 2008, STB Decision in Ex Parte No. 558 (Sub-No. 12), Railroad Cost of Capital - 2008, decided September 24, 2009, and STB Decision in Ex Parte No. 558 (Sub-No. 13), Railroad Cost of Capital - 2009, decided October 28, 2010.

TABLE B: DRR INFLATION INDEXES

Period	Land 1/	Hybrid RCAF 2/	MWSExFuel 3/	Mat & Suppl 4/	Wages & Supps 5/
(1)	(2)	(3)	(4)	(5)	(6)
4Q 2006	100.0		372.8	250.9	397.4
1Q 2007	102.7		381.7	256.9	407.0
2Q 2007	105.8		381.8	254.7	407.5
3Q 2007	108.7		387.7	265.2	412.3
4Q 2007	111.6		392.9	274.8	416.5
1Q 2008	113.0		397.6	276.2	421.9
2Q 2008	114.1		399.6	283.4	422.7
3Q 2008	115.0		410.0	285.6	434.9
4Q 2008	112.6		418.1	318.9	437.1
1Q 2009	109.5		423.9	319.5	444.1
2Q 2009	107.1	100.0	422.7	305.5	445.8
3Q 2009	105.6	110.3	425.8	312.5	448.0
4Q 2009	104.5	117.1	421.7	302.2	445.4
1Q 2010	104.7	122.1	451.4	311.2	479.7
2Q 2010	105.7	124.6	448.8	305.2	477.9
3Q 2010	107.1	125.5	448.1	304.5	477.1
4Q 2010	108.7	129.7	451.7	322.0	477.5
1Q 2011	110.1	128.4	453.9	314.7	481.9
2Q 2011	111.6	138.1	454.5	309.1	484.0
3Q 2011	113.0	141.5	460.7	329.4	486.8
4Q 2011	114.5	141.7	466.7	331.8	493.5
1Q 2012	116.3	137.1	466.4	331.8	493.2
2Q 2012	118.2	138.9	475.6	344.7	501.6
3Q 2012	120.1	143.0	485.1	346.5	512.6
4Q 2012	122.0	145.4	493.8	348.5	522.9
1Q 2013	123.9	146.3	504.0	351.0	533.3
2Q 2013	125.9	146.9	504.4	352.0	533.9
3Q 2013	127.9	147.7	508.4	355.2	538.7
4Q 2013	130.0	148.4	513.4	357.0	544.1
1Q 2014	132.1	148.4	518.3	358.8	550.0
2Q 2014	134.2	149.0	518.7	360.6	550.6
3Q 2014	136.3	149.1	524.5	362.7	557.2
4Q 2014	138.5	150.5	530.7	366.0	563.9
1Q 2015	140.8	151.2	536.3	368.4	569.8
2Q 2015	143.0	151.8	541.5	370.9	575.9
3Q 2015	145.3	152.5	546.8	373.4	582.0
4Q 2015	147.7	153.1	552.8	375.9	588.1
1Q 2016	150.1	153.8	557.5	377.5	593.4
2Q 2016	152.5	154.4	562.1	379.2	598.6
3Q 2016	154.9	155.0	566.9	380.9	603.9
4Q 2016	157.4	155.6	571.6	382.6	609.3
1Q 2017	160.0	155.9	576.3	384.1	614.9
2Q 2017	162.6	156.3	582.4	385.5	620.5
3Q 2017	165.2	156.6	587.0	386.9	626.1
4Q 2017	167.9	157.0	591.4	388.4	631.8
1Q 2018	170.6	157.5	596.8	389.9	637.8
2Q 2018	173.4	158.1	601.6	391.5	643.7
3Q 2018	176.2	158.6	606.4	393.0	649.8
4Q 2018	179.1	159.2	611.7	394.6	655.9
1Q 2019	182.0	159.6	617.0	396.1	661.8
2Q 2019	185.0	160.1	622.5	397.5	667.9
Annual Inflation Rate 6/	5.25%		3.82%	2.15%	4.06%

1/ Used to index Road Property Account 2. Based on historic change in rural land prices as reported by the USDA and urban land prices as reported by the National Council of Real Estate Investment Fiduciaries.

2/ Used to index expenses in Table K. Based on the RCAF-U and RCAF-A through 2Q12 then Global Insight forecast for remaining periods.

3/ Used to index Road Property Accounts 3, 5, 6, 13, 17, 19, 20, 26, 27, 37, and 39. Based on RCR indices - East Region through 1Q12 then Global Insight forecast.

4/ Used to index Road Property Accounts 8, 9, and 11. Based on RCR indexes - East Region through 1Q12 then Global Insight forecast for remaining periods.

5/ Used to index Road Property Accounts 1, 1A and 12. Based on RCR indexes - East Region through 1Q12 then Global Insight forecast for remaining periods.

6/ 1Q2009 ÷ 2Q2019^(1/10.25) - 1. The Annual Rate is used to develop asset replacement values at the end of asset lives.

TABLE C: DRR PROPERTY INVESTMENT VALUES

Construction of the DRR occurs between December 1, 2006 and May 31, 2009.
Investments are assumed to be in June 2009 dollars.

Property Account (1)	Property Component (2)	Service Life In Years 1/ (3)	Investment In 12/1/2006 Dollars 2/ (4)	Investment In 6/1/2007 Dollars 3/ (5)	Investment In 6/1/2008 Dollars 4/ (6)	Investment In 6/1/2009 Dollars 5/ (7)	2006 Investment Value 6/ (8)	2007 Investment Value 7/ (9)	2008 Investment Value 8/ (10)	2009 Investment Value 9/ (11)	Total Property Investment 2Q09 10/ (12)
1	Engineering	NA	$1,586,677,361	$1,627,003,081	$1,687,691,294	$1,779,921,408	$113,334,097	$1,394,574,070	$120,549,378	$0	$1,628,457,545
2	Land	NA	3,150,342,477	3,332,184,478	$3,594,577,457	$3,374,435,985	$0	$3,332,184,478	$0	$0	3,332,184,478
3	Grading	95	3,822,933,797	3,915,225,653	$4,097,758,437	$4,334,640,869	$0	$2,796,589,752	$1,170,788,125	$0	3,967,377,877
5	Tunnels	120	442,181,871	452,856,862	$473,969,623	$501,368,768	$0	$0	$434,472,154	$41,780,731	476,252,885
6	Bridges & Culverts	97	2,052,404,769	2,101,953,167	$2,199,948,889	$2,327,123,111	$0	$140,130,211	$1,759,959,111	$310,283,082	2,210,372,404
8	Ties	32	1,517,670,586	1,540,656,430	$1,714,260,040	$1,847,940,869	$0	$0	$1,428,550,033	$307,990,145	1,736,540,178
9	Rails and OTM	41	3,615,189,033	3,669,942,793	$4,083,477,768	$4,401,914,108	$0	$0	$3,402,898,140	$733,652,351	4,136,550,491
11	Ballast	39	1,069,116,310	1,085,308,586	$1,207,602,879	$1,301,773,746	$0	$0	$1,006,335,732	$216,962,291	1,223,298,023
12	Labor	38	1,568,155,927	1,608,010,922	$1,667,990,716	$1,759,144,218	$0	$0	$1,389,992,263	$293,190,703	1,683,182,966
13	Fences and Roadway Signs	95	7,917,684	8,108,829	$8,486,873	$8,977,481	$0	$0	$7,072,394	$1,496,247	8,568,641
17	Roadway Buildings	39	198,887,886	203,689,364	$213,185,621	$225,509,414	$0	$0	$213,185,621	$0	213,185,621
19	Fuel Stations	31	16,876,758	17,284,190	$18,090,001	$19,135,745	$0	$0	$18,090,001	$0	18,090,001
20	Shops and Enginehouses	50	12,335,060	12,632,848	$13,221,808	$13,986,132	$0	$0	$13,221,808	$0	13,221,808
26	Communications Systems	26	283,020,417	289,852,992	$303,366,305	$320,903,247	$0	$0	$151,683,153	$160,451,623	312,134,776
27	Signals and Interlockers	56	959,905,733	983,079,422	$1,028,911,831	$1,088,390,969	$0	$0	$514,455,916	$544,195,484	1,058,651,400
39	Public Improvements	38	113,757,519	116,503,811	$121,935,367	$128,984,183	$0	$0	$101,612,805	$21,497,364	123,110,169
	Total		$20,417,373,187	$20,964,293,430	$22,434,474,909	$23,434,150,250	$113,334,097	$7,663,478,511	$11,732,866,635	$2,631,500,020	$22,141,179,264

1/ 1 ÷ Depreciation Rate shown in Schedule 332 of NS' 2009 Annual Report R-1.
2/ June 2009, indexed to 2006 dollars; 2Q09 Investment x Inflation Index from Table B, 4Q2006 ÷ 2Q2009.
3/ June 2009, indexed to 2007 dollars; 2Q09 Investment x Inflation Index from Table B, 2Q2007 ÷ 2Q2009.
4/ June 2009, indexed to 2008 dollars; 2Q09 Investment x Inflation Index from Table B, 2Q2008 ÷ 2Q2009.
5/ June 2009, indexed to 2009 dollars; 2Q09 Investment x Inflation Index from Table B, 2Q2009 ÷ 2Q2009.
6/ Column (4) x Percent constructed in 2006.
7/ Column (5) x Percent constructed in 2007.
8/ Column (6) x Percent constructed in 2008.
9/ Column (7) x Percent constructed in 2009.
10/ Sum of Columns (8) through (11).

TABLE D: INTEREST DURING CONSTRUCTION

Month of Installation (1)	Cost of Funds 1/ (2)	Timing of Account 1 Investment 2/ (3)	Timing of Account 2 Investment 2/ (4)	Timing of Accounts 3,5 and 6 Investment 2/ (5)	Timing of Accounts 8 Through 39 Investment 2/ (6)	Total Investment by Month 3/ (7)	Interest During Construction 4/ (8)	Cost of Debt 5/ (9)	Deductible Interest During Construction 6/ (10)
Dec-06	0.79%	$113,334,097	$0	$0	$0	$113,334,097	$0	0.48%	$0
Jan-07	0.90%	116,214,506		0	0	116,214,506	1,018,178	0.50%	130,251
Feb-07	0.90%	116,214,506		0	0	116,214,506	2,071,380	0.50%	264,983
Mar-07	0.90%	116,214,506		0	0	116,214,506	3,134,044	0.50%	400,925
Apr-07	0.90%	116,214,506	476,026,354	0	0	592,240,860	4,206,254	0.50%	538,088
May-07	0.90%	116,214,506	476,026,354	0	0	592,240,860	9,564,652	0.50%	1,223,565
Jun-07	0.90%	116,214,506	476,026,354	0	0	592,240,860	14,971,189	0.50%	1,718,279
Jul-07	0.90%	116,214,506	476,026,354	0	0	592,240,860	20,426,297	0.50%	2,344,375
Aug-07	0.90%	116,214,506	476,026,354	559,317,950	0	1,151,558,810	25,930,414	0.50%	2,976,095
Sep-07	0.90%	116,214,506	476,026,354	559,317,950	0	1,151,558,810	36,508,813	0.50%	4,190,203
Oct-07	0.90%	116,214,506	476,026,354	559,317,950	0	1,151,558,810	47,182,246	0.50%	5,415,219
Nov-07	0.90%	116,214,506	0	559,317,950	0	675,532,456	57,951,569	0.50%	6,651,240
Dec-07	0.90%	116,214,506	0	699,448,162	0	815,662,667	64,541,087	0.50%	7,407,534
Jan-08	0.93%	120,549,378	0	732,057,322		852,606,700	74,994,852	0.53%	8,866,732
Feb-08	0.93%	0	0	771,554,790	40,749,572	812,304,362	83,621,165	0.53%	9,886,631
Mar-08	0.93%	0	0	186,160,728	774,395,708	960,556,436	91,952,905	0.53%	10,871,702
Apr-08	0.93%	0	0	186,160,728	774,395,708	960,556,436	101,740,809	0.53%	12,028,938
May-08	0.93%	0	0	186,160,728	774,395,708	960,556,436	111,619,737	0.53%	13,196,936
Jun-08	0.93%	0	0	186,160,728	774,395,708	960,556,436	121,590,535	0.53%	14,973,628
Jul-08	0.93%	0	0	186,160,728	774,395,708	960,556,436	131,654,058	0.53%	16,212,930
Aug-08	0.93%	0	0	186,160,728	733,646,137	919,806,865	141,811,167	0.53%	17,463,758
Sep-08	0.93%	0	0	186,160,728	733,646,137	919,806,865	151,683,778	0.53%	18,679,550
Oct-08	0.93%	0	0	186,160,728	955,692,493	1,141,853,221	161,648,201	0.53%	19,906,648
Nov-08	0.93%	0	0	186,160,728	955,692,493	1,141,853,221	173,770,229	0.53%	21,399,452
Dec-08	0.93%	0	0	186,160,728	955,692,493	1,141,853,221	186,004,987	0.53%	22,906,137
Jan-09	0.83%	0	0	196,922,271	1,022,276,920	1,219,199,191	177,152,429	0.46%	21,345,631
Feb-09	0.83%	0	0	155,141,541	1,022,276,920	1,177,418,460	188,749,966	0.46%	22,743,054
Mar-09	0.83%	0	0	0	234,882,369	234,882,369	200,096,813	0.46%	24,110,270
Apr-09	0.83%	0	0	0	0	0	203,709,576	0.46%	24,545,582
May-09	0.83%	0	0	0	0	0	205,401,506	0.46%	24,749,448
Total		$1,628,457,545	$3,332,184,478	$6,654,003,166	$10,526,534,075	$22,141,179,264	$2,794,708,837		$337,147,784

1/ ((1 + Cost of Capital from Table A for the applicable year)^(1/12) - 1) x 100.
2/ Applicable account value from Table C for the applicable investment period.
3/ Sum of Columns (3) through (6).
4/ January 2007 equals Column (2) x prior Column (7), all other periods equal Column (2) x ((Sum of Column (7) for all prior periods) + (Sum of Column (8) for all prior period
5/ ((1 + Cost of Debt from Table A for the applicable year)^(1/12) - 1) x 100.
6/ January 2007 equals prior Column (7) x Column (9) x Table A, Column (9) for 2007, all other periods equal Column (9) x ((Sum of Column (7) for all prior periods) + (Sum of Column (8) for all prior periods)) x Table A, Column (9) for the applicable year.

TABLE E: DRR INTEREST PAYMENTS FOR ASSETS PURCHASED WITH DEBT CAPITAL

INTEREST SCHEDULE FOR THE DRR 2006 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$113,334,097 1/
2. IDC	$0 2/
3. PRINCIPAL	$26,123,509 3/
4. INTEREST	5.97% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$381,457 6/

INTEREST SCHEDULE FOR THE DRR 2007 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$7,663,478,511 1/
2. IDC	$287,506,122 2/
3. PRINCIPAL	$1,644,263,622 3/
4. INTEREST	6.15% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$24,717,591 6/

INTEREST SCHEDULE FOR THE DRR 2008 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$11,732,866,635 1/
2. IDC	$1,532,092,425 2/
3. PRINCIPAL	$2,857,272,182 3/
4. INTEREST	6.57% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$45,816,846 6/

INTEREST SCHEDULE FOR THE DRR 2009 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$2,631,500,020 1/
2. IDC	$975,110,290 2/
3. PRINCIPAL	$776,863,861 3/
4. INTEREST	5.72% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$10,878,513 6/

Quarter (1)	Interest 7/ (2)	Quarter (3)	Interest 7/ (4)	Quarter (5)	Interest 7/ (6)	Quarter (7)	Interest 7/ (8)
1	$381,457	1	$24,717,591	1	$45,816,846	1	$10,878,513
2	381,457	2	24,717,591	2	45,816,846	2	$10,878,513
3	381,457	3	24,717,591	3	45,816,846	3	$10,878,513
4	381,457	4	24,717,591	4	45,816,846	4	$10,878,513
5	381,457	5	24,717,591	5	45,816,846	5	$10,878,513
6	381,457	6	24,717,591	6	45,816,846	6	$10,878,513
7	381,457	7	24,717,591	7	45,816,846	7	$10,878,513
8	381,457	8	24,717,591	8	45,816,846	8	$10,878,513
9	381,457	9	24,717,591	9	45,816,846	9	$10,878,513
10	381,457	10	24,717,591	10	45,816,846	10	$10,878,513
11	381,457	11	24,717,591	11	45,816,846	11	$10,878,513
12	381,457	12	24,717,591	12	45,816,846	12	$10,878,513
13	381,457	13	24,717,591	13	45,816,846	13	$10,878,513
14	381,457	14	24,717,591	14	45,816,846	14	$10,878,513
15	381,457	15	24,717,591	15	45,816,846	15	$10,878,513
16	381,457	16	24,717,591	16	45,816,846	16	$10,878,513
17	381,457	17	24,717,591	17	45,816,846	17	$10,878,513
18	381,457	18	24,717,591	18	45,816,846	18	$10,878,513
19	381,457	19	24,717,591	19	45,816,846	19	$10,878,513
20	381,457	20	24,717,591	20	45,816,846	20	$10,878,513
21	381,457	21	24,717,591	21	45,816,846	21	$10,878,513
22	381,457	22	24,717,591	22	45,816,846	22	$10,878,513
23	381,457	23	24,717,591	23	45,816,846	23	$10,878,513
24	381,457	24	24,717,591	24	45,816,846	24	$10,878,513
25	381,457	25	24,717,591	25	45,816,846	25	$10,878,513
26	381,457	26	24,717,591	26	45,816,846	26	$10,878,513
27	381,457	27	24,717,591	27	45,816,846	27	$10,878,513
28	381,457	28	24,717,591	28	45,816,846	28	$10,878,513
29	381,457	29	24,717,591	29	45,816,846	29	$10,878,513
30	381,457	30	24,717,591	30	45,816,846	30	$10,878,513
31	381,457	31	24,717,591	31	45,816,846	31	$10,878,513
32	381,457	32	24,717,591	32	45,816,846	32	$10,878,513
33	381,457	33	24,717,591	33	45,816,846	33	$10,878,513
34	381,457	34	24,717,591	34	45,816,846	34	$10,878,513
35	381,457	35	24,717,591	35	45,816,846	35	$10,878,513
36	381,457	36	24,717,591	36	45,816,846	36	$10,878,513
37	381,457	37	24,717,591	37	45,816,846	37	$10,878,513
38	381,457	38	24,717,591	38	45,816,846	38	$10,878,513
39	381,457	39	24,717,591	39	45,816,846	39	$10,878,513
40	381,457	40	24,717,591	40	45,816,846	40	$10,878,513

1/ From Table D, Column (7) for the applicable year investment.
2/ From Table D, Column (8) for the applicable year investment.
3/ (Total Investment + IDC) x (Proportion of Debt from Table A, Column (9)).
4/ From Table A, Column (6) for the applicable year investment.
5/ Based on Ex Parte No. 657, 20-year payment period x 4.
6/ { } x Yearly Principal.
7/ Line 6 coupon payment.

TABLE E: DRR INTEREST PAYMENTS FOR ASSETS PURCHASED WITH DEBT CAPITAL
(Continued)

INTEREST SCHEDULE FOR THE DRR 2006 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$113,334,097 1/
2. IDC	$0 2/
3. PRINCIPAL	$26,123,509 3/
4. INTEREST	5.97% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$381,457 6/

INTEREST SCHEDULE FOR THE DRR 2007 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$7,663,478,511 1/
2. IDC	$287,506,122 2/
3. PRINCIPAL	$1,644,263,622 3/
4. INTEREST	6.15% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$24,717,591 6/

INTEREST SCHEDULE FOR THE DRR 2008 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$11,732,866,635 1/
2. IDC	$1,532,092,425 2/
3. PRINCIPAL	$2,857,272,182 3/
4. INTEREST	6.57% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$45,816,846 6/

INTEREST SCHEDULE FOR THE DRR 2009 ROAD PROPERTY INVESTMENT FOR THE 2Q2009 START-UP	
1. TOTAL INVESTMENT	$2,631,500,020 1/
2. IDC	$975,110,290 2/
3. PRINCIPAL	$776,863,861 3/
4. INTEREST	5.72% 4/
5. TERM (QUARTERS)	80 5/
6. QUARTERLY COUPON	$10,878,513 6/

Quarter (1)	Interest 7/ (2)	Quarter (3)	Interest 7/ (4)	Quarter (5)	Interest 7/ (6)	Quarter (7)	Interest 7/ (8)
41	$381,457	41	$24,717,591	41	$45,816,846	41	$10,878,513
42	381,457	42	24,717,591	42	45,816,846	42	$10,878,513
43	381,457	43	24,717,591	43	45,816,846	43	$10,878,513
44	381,457	44	24,717,591	44	45,816,846	44	$10,878,513
45	381,457	45	24,717,591	45	45,816,846	45	$10,878,513
46	381,457	46	24,717,591	46	45,816,846	46	$10,878,513
47	381,457	47	24,717,591	47	45,816,846	47	$10,878,513
48	381,457	48	24,717,591	48	45,816,846	48	$10,878,513
49	381,457	49	24,717,591	49	45,816,846	49	$10,878,513
50	381,457	50	24,717,591	50	45,816,846	50	$10,878,513
51	381,457	51	24,717,591	51	45,816,846	51	$10,878,513
52	381,457	52	24,717,591	52	45,816,846	52	$10,878,513
53	381,457	53	24,717,591	53	45,816,846	53	$10,878,513
54	381,457	54	24,717,591	54	45,816,846	54	$10,878,513
55	381,457	55	24,717,591	55	45,816,846	55	$10,878,513
56	381,457	56	24,717,591	56	45,816,846	56	$10,878,513
57	381,457	57	24,717,591	57	45,816,846	57	$10,878,513
58	381,457	58	24,717,591	58	45,816,846	58	$10,878,513
59	381,457	59	24,717,591	59	45,816,846	59	$10,878,513
60	381,457	60	24,717,591	60	45,816,846	60	$10,878,513
61	381,457	61	24,717,591	61	45,816,846	61	$10,878,513
62	381,457	62	24,717,591	62	45,816,846	62	$10,878,513
63	381,457	63	24,717,591	63	45,816,846	63	$10,878,513
64	381,457	64	24,717,591	64	45,816,846	64	$10,878,513
65	381,457	65	24,717,591	65	45,816,846	65	$10,878,513
66	381,457	66	24,717,591	66	45,816,846	66	$10,878,513
67	381,457	67	24,717,591	67	45,816,846	67	$10,878,513
68	381,457	68	24,717,591	68	45,816,846	68	$10,878,513
69	381,457	69	24,717,591	69	45,816,846	69	$10,878,513
70	381,457	70	24,717,591	70	45,816,846	70	$10,878,513
71	381,457	71	24,717,591	71	45,816,846	71	$10,878,513
72	381,457	72	24,717,591	72	45,816,846	72	$10,878,513
73	381,457	73	24,717,591	73	45,816,846	73	$10,878,513
74	381,457	74	24,717,591	74	45,816,846	74	$10,878,513
75	381,457	75	24,717,591	75	45,816,846	75	$10,878,513
76	381,457	76	24,717,591	76	45,816,846	76	$10,878,513
77	381,457	77	24,717,591	77	45,816,846	77	$10,878,513
78	381,457	78	24,717,591	78	45,816,846	78	$10,878,513
79	381,457	79	24,717,591	79	45,816,846	79	$10,878,513
80	381,457	80	24,717,591	80	45,816,846	80	$10,878,513

1/ From Table D, Column (7) for the applicable year investment.
2/ From Table D, Column (8) for the applicable year investment.
3/ (Total Investment + IDC) x (Proportion of Debt from Table A, Column (9)).
4/ From Table A, Column (6) for the applicable year investment.
5/ Based on Ex Parte No. 657 20-year payment period x 4.
6/ { } x Yearly Principal.
7/ Line 6 coupon payment.

TABLE F: DRR PRESENT VALUE OF REPLACEMENT COST

Property Account (1)	Property Component (2)	Service Life In Years 1/ (3)	Investment 2/ (4)	Salvage 3/ (5)	Replacement Year Asset Net Cost 4/ (6)	Replacement Cost Adjusted To Reflect An Infinite Life 5/ (7)	Present Value Of Replacement Cost Adjusted To Reflect An Infinite Life (2009 Dollars) 6/ (8)
3	Grading	95	$168,940,986,145	$0	$143,777,369,944	$143,982,210,172	$7,591,896
5	Tunnels	120	52,247,381,938	0	44,465,178,835	44,476,312,467	172,287
6	Bridges & Culverts	97	100,880,014,479	0	67,776,590,584	67,861,596,862	2,955,278
8	Ties	32	4,106,748,902	0	2,605,720,533	2,930,773,434	107,617,854
9	Rails and OTM	41	11,813,331,400	793,407,003	7,031,620,646	7,482,377,528	109,806,691
11	Ballast	39	3,365,610,327	0	2,135,470,209	2,291,207,734	40,311,877
12	Labor	38	9,279,423,626	0	5,887,767,978	6,340,597,477	120,162,733
13	Fences and Roadway Signs	95	364,874,415	0	245,142,152	245,491,407	12,944
16	Stations and Office Buildings	35	0	0	0	0	0
17	Roadway Buildings	39	1,105,078,479	0	742,450,841	796,596,975	14,015,455
19	Wastewater Treatment	31	69,964,592	0	47,005,956	53,196,779	2,099,811
20	Shops and Enginehouses	50	103,276,083	0	69,386,398	71,681,423	406,891
26	Communications Systems	26	993,081,436	0	630,107,355	756,025,730	51,142,539
27	Signals and Interlockers	56	10,424,973,700	300,426,354	6,459,578,757	6,597,630,096	19,763,920
39	Public Improvements	38	613,764,807	0	412,360,033	444,839,657	8,715,118
	Total		$364,308,510,328	$1,093,833,357	$282,285,750,220	$284,330,537,745	$484,775,295

1/ From Table C, Column (3).

2/ (Table C, Column (10) after allocation of Engineering) x (Table B, 1.0 + Annual Inflation Index)^(Column (3)).

3/ [(Column (4) x Salvage %) - (Table C, Column (10) after allocation of Engineering x Salvage %)] x (1 - Current Federal Tax Rate) + (Table C, Column (10) after allocation of Engineering x Salvage %).

4/ Column (4) - (Present Value of the remaining tax deductions for depreciation, interest expense and the Present Value of any salvage).

5/ Column (6) + [(Column (6) / ((1 + Real Cost of Capital)^Column (3) - 1)].

6/ Column (7) / ((1 + Average Nominal Cost of Capital from Table A Column (2))^Column (3)).

TABLE G: DRR TAX DEPRECIATION SCHEDULES

Depreciation of Start-up investment for tax purposes using
accounting lives from Modified Accelerated Cost Recovery System (MACRS) 1/

Road Property Account (1)	Road Property Component (2)	Asset Lives Per MACRS 2/ (3)	Total 2Q 2009 Investment (4)	Depreciable Base (5)
1	Engineering	5	$1,628,457,545	$1,628,457,545
2	Land	N/A	3,332,184,478	0
3	Grading	50	3,967,377,877	3,967,377,877
5	Tunnels	50	476,252,885	476,252,885
6	Bridges & Culverts	15	2,210,372,404	2,210,372,404
8	Ties	7	1,736,540,178	1,736,540,178
9	Rails and OTM	7	4,136,550,491	4,136,550,491
11	Ballast	7	1,223,298,023	1,223,298,023
12	Labor	7	1,683,182,966	1,683,182,966
13	Fences and Roadway Signs	15	8,568,641	8,568,641
16	Stations and Office Buildings	15	0	0
17	Roadway Buildings	15	213,185,621	213,185,621
19	Fuel Stations	15	18,090,001	18,090,001
20	Shops and Enginehouses	15	13,221,808	13,221,808
26	Communications Systems	7	312,134,776	312,134,776
27	Signals and Interlockers	7	1,058,651,400	1,058,651,400
39	Public Improvements	15	123,110,169	123,110,169
	Total		$22,141,179,264	$18,808,994,786

1/ Applicable Depreciation Method: 200 or 150 percent
Declining Balance Switching to Straight Line
Applicable Recovery Periods: 7, 15 and 50 a/ years
Applicable Convention: Mid-quarter(property placed in service in second quarter)

The Depreciation Rates are as follows for the corresponding
Recovery Period and Recovery year:

Recovery		— Recovery Period —			Recovery	— Recovery Period —		
Year	5-Year	7-year	15-year	50-year	Year	7-year	15-year	50-year
1	20.00%	17.85%	6.250%	2.00%	10	0.00%	5.900%	2.00%
2	20.00%	23.47%	9.380%	2.00%	11	0.00%	5.910%	2.00%
3	20.00%	16.76%	8.440%	2.00%	12	0.00%	5.900%	2.00%
4	20.00%	11.97%	7.590%	2.00%	13	0.00%	5.910%	2.00%
5	20.00%	8.87%	6.830%	2.00%	14	0.00%	5.900%	2.00%
6		8.87%	6.150%	2.00%	15	0.00%	5.910%	2.00%
7		8.87%	5.910%	2.00%	16	0.00%	2.460%	2.00%
8		3.34%	5.90%	2.00%	17	0.00%	0.000%	2.00%
9		0.00%	5.910%	2.00%	18	0.00%	0.000%	2.00%
					19-50	0.00%	0.000%	2.00%

a/ 50 year property uses the Straight Line Method for all time periods

2/ Bonus Depreciation Per the **Economic Stimulus Act of 2008,** and the **American Recovery & Reinvestment Act** for the following depreciable assets:

MACRS Lives (1)	Bonus Depreciation (2)
7	$5,075,178,917
15	$1,223,209,216

TABLE G: DRR TAX DEPRECIATION SCHEDULES
(Continued)

	Amortization - 5 Years			Road Property Depreciation - MACRS 7 Years			Depreciation - MACRS 15 Years			Depreciation - MACRS 50 Years			
Year	Unamortized Investment 1/	Rate 2/	Annual Amort. 3/	Undepreciated Investment 4/	Rate 2/	Annual Amount 5/	Undepreciated Investment 6/	Rate 2/	Annual Amount 7/	Unamortized Investment 8/	Rate 2/	Annual Amount 9/	Total Annual Depreciation 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	$1,628,457,545	20.00%	$325,691,509	$5,075,178,917	17.85%	$905,919,437	$1,363,339,428	6.25%	$85,208,714	$4,443,630,762	2%	$88,872,615	$7,704,080,409
2	1,302,766,036	20.00%	325,691,509	4,169,259,481	23.47%	1,191,144,492	1,278,130,713	9.38%	127,881,238	4,354,758,147	2%	88,872,615	1,733,589,854
3	977,074,527	20.00%	325,691,509	2,978,114,989	16.76%	850,599,987	1,150,249,475	8.44%	115,065,848	4,265,885,532	2%	88,872,615	1,380,229,959
4	651,383,018	20.00%	325,691,509	2,127,515,002	11.97%	607,498,916	1,035,183,627	7.59%	103,477,463	4,177,012,917	2%	88,872,615	1,125,540,503
5	325,691,509	20.00%	325,691,509	1,520,016,086	8.87%	450,168,370	931,706,165	6.83%	93,116,083	4,088,140,301	2%	88,872,615	957,848,577
6				1,069,847,716	8.87%	450,168,370	838,590,082	6.15%	83,845,375	3,999,267,686	2%	88,872,615	622,886,360
7				619,679,346	8.87%	450,168,370	754,744,707	5.91%	80,573,360	3,910,395,071	2%	88,872,615	619,614,345
8				169,510,976	3.34%	169,510,976	674,171,347	5.90%	80,437,026	3,821,522,456	2%	88,872,615	338,820,617
9							593,734,321	5.91%	80,573,360	3,732,649,840	2%	88,872,615	169,445,975
10					100.00%		513,160,961	5.90%	80,437,026	3,643,777,225	2%	88,872,615	169,309,641
11							432,723,934	5.91%	80,573,360	3,554,904,610	2%	88,872,615	169,445,975
12							352,150,574	5.90%	80,437,026	3,466,031,995	2%	88,872,615	169,309,641
13							271,713,548	5.91%	80,573,360	3,377,159,379	2%	88,872,615	169,445,975
14							191,140,188	5.90%	80,437,026	3,288,286,764	2%	88,872,615	169,309,641
15							110,703,162	5.91%	80,573,360	3,199,414,149	2%	88,872,615	169,445,975
16							30,129,801	2.21%	30,129,801	3,110,541,534	2%	88,872,615	119,002,417
17										3,021,668,918	2%	88,872,615	88,872,615
18								100.00%		2,932,796,303	2%	88,872,615	88,872,615
19										2,843,923,688	2%	88,872,615	88,872,615
20										2,755,051,073	2%	88,872,615	88,872,615
21										2,666,178,457	2%	88,872,615	88,872,615

1/ From Table G, Page 8, Column (5), Road Property Accounts 1.

2/ From Table G, Footnote 1/, Page 8.

3/ Column (2), Year 1 x Column (3).

4/ From Table G, Page 8, Column (5), Road Property Accounts 8, 9, 11, 12, 26 and 27 minus Page 10, 7-Year Bonus Depreciation.

5/ Column (5), Year 1 x Column (6).

6/ From Table G, Page 8, Column (5), Road Property Accounts 6, 13, 16, 17, 19, 20 and 39 minus Page 8, 15-Year Bonus Depreciation.

7/ Column (8), Year 1 x Column (9).

8/ From Table G, Page 8, Column (5), Road Property Accounts 3 and 5.

9/ Column (11), Year 1 x Column (12).

10/ Column (4) + Column (7) + Column (10) + Column (13) plus Page 8, 7 & 15 Year Bonus Depreciation.

TABLE H: DRR AVERAGE ANNUAL INFLATION IN ASSET PRICES

Development of average annual inflation factors for all capital assets

1.	2Q2009 Land value	$3,332,184,478 1/
2.	2Q2009 Property asset value accounts 3, 5, 6, 13, 17, 26, 27, 39 and 52	$8,400,965,582 1/
3.	2Q2009 Road Property asset value accounts 8, 9, and 11	$7,096,388,693 1/
4.	2Q2009 Road Property asset value accounts 1 and 12	$3,311,640,511 1/

Period	Quarter	Inflation Index For Land 2/	Inflation Index For Line 2 Property Assets 3/	Inflation Index For Line 3 Road Property Assets 4/	Inflation Index For Line 4 Road Property Assets 5/	Land Value 6/	Road Property Value 7/	2Q2009 Inflation Index 8/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0		1.000	1.000	1.000	1.000	$3,332,184,478	$18,808,994,786	1.000
1	June 1-June 30 09	0.978	0.997	0.956	1.004	3,260,206,605	18,486,936,840	0.982
2	2009 3 Qtr	0.964	1.004	0.978	1.009	3,212,686,032	18,720,255,253	0.991
3	2009 4 Qtr	0.954	0.995	0.946	1.003	3,179,508,887	18,390,839,746	0.974
4	2010 1 Qtr	0.957	1.065	0.974	1.080	3,187,479,837	19,435,114,785	1.022
5	2010 2 Qtr	0.965	1.059	0.955	1.076	3,217,184,651	19,236,899,215	1.014
6	2010 3 Qtr	0.978	1.057	0.953	1.074	3,259,313,670	19,201,513,205	1.014
7	2010 4 Qtr	0.993	1.066	1.008	1.075	3,309,281,277	19,664,532,859	1.038
8	2011 1 Qtr	1.006	1.071	0.985	1.085	3,351,754,843	19,578,804,017	1.036
9	2011 2 Qtr	1.019	1.072	0.967	1.090	3,395,305,214	19,481,973,470	1.033
10	2011 3 Qtr	1.032	1.087	1.031	1.096	3,439,958,691	20,076,607,935	1.062
11	2011 4 Qtr	1.046	1.101	1.038	1.111	3,485,742,293	20,298,785,475	1.074
12	2012 1 Qtr	1.063	1.100	1.038	1.111	3,541,213,861	20,290,602,903	1.076
13	2012 2 Qtr	1.080	1.122	1.079	1.129	3,597,615,094	20,822,283,237	1.103
14	2012 3 Qtr	1.097	1.144	1.084	1.154	3,654,962,438	21,131,376,364	1.119
15	2012 4 Qtr	1.114	1.165	1.091	1.177	3,713,272,642	21,427,559,098	1.135
16	2013 1 Qtr	1.132	1.189	1.099	1.201	3,772,562,771	21,762,025,803	1.153
17	2013 2 Qtr	1.150	1.190	1.102	1.202	3,832,850,208	21,796,223,882	1.158
18	2013 3 Qtr	1.169	1.199	1.112	1.213	3,894,152,660	21,981,886,139	1.169
19	2013 4 Qtr	1.187	1.211	1.117	1.225	3,956,488,167	22,159,554,717	1.180
20	2014 1 Qtr	1.206	1.223	1.123	1.239	4,019,875,105	22,342,194,873	1.191

1/ Table C, Page 3, Column (12).
2/ Previous Column (3) x (1 + Quarterly Inflation Rate Change from Table B).
3/ Previous Column (4) x (1 + Quarterly Inflation Rate Change from Table B).
4/ Previous Column (5) x (1 + Quarterly Inflation Rate Change from Table B).
5/ Previous Column (6) x (1 + Quarterly Inflation Rate Change from Table B).
6/ Line 1 x Column (3) for applicable quarter.
7/ (Line 2 x Column (4) for applicable quarter) + (Line 3 x Column (5)for applicable quarter) + (Line 4 x Column (6) for applicable quarter).
8/ (Column (7) + Column (8)) ÷ (Period 0; (Column (7) + Column (8))).
9/ Annual weighted inflation using the last two quarters, used to calculate real cost of capital.

TABLE H: DRR AVERAGE ANNUAL INFLATION IN ASSET PRICES
(Continued)

Development of average annual inflation factors for all capital assets

1.	2Q2009 Land value	$3,332,184,478 1/
2.	2Q2009 Property asset value accounts 3, 5, 6, 13, 17, 26, 27, 39 and 52	$8,400,965,582 1/
3.	2Q2009 Road Property asset value accounts 8, 9, and 11	$7,096,388,693 1/
4.	2Q2009 Road Property asset value accounts 1 and 12	$3,311,640,511 1/

Period	Quarter	Inflation Index For Land 2/	Inflation Index For Line 2 Property Assets 3/	Inflation Index For Line 3 Road Property Assets 4/	Inflation Index For Line 4 Road Property Assets 5/	Land Value 6/	Road Property Value 7/	2Q2009 Inflation Index 8/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
21	2014 2 Qtr	1.226	1.224	1.129	1.240	$4,084,332,198	$22,393,851,068	1.196
22	2014 3 Qtr	1.245	1.237	1.135	1.255	4,149,878,517	22,606,093,091	1.208
23	2014 4 Qtr	1.265	1.252	1.145	1.270	4,216,533,495	22,851,340,009	1.223
24	2015 1 Qtr	1.286	1.265	1.153	1.283	4,284,316,929	23,062,032,935	1.235
25	2015 2 Qtr	1.306	1.277	1.161	1.297	4,353,248,988	23,263,925,684	1.247
26	2015 3 Qtr	1.327	1.290	1.169	1.310	4,423,350,222	23,469,434,736	1.260
27	2015 4 Qtr	1.349	1.304	1.176	1.324	4,494,641,569	23,690,078,443	1.273
28	2016 1 Qtr	1.371	1.315	1.182	1.336	4,567,144,361	23,858,181,070	1.284
29	2016 2 Qtr	1.393	1.326	1.187	1.348	4,640,880,333	24,026,238,800	1.295
30	2016 3 Qtr	1.415	1.337	1.192	1.360	4,715,871,631	24,198,695,450	1.306
31	2016 4 Qtr	1.438	1.348	1.198	1.372	4,792,140,822	24,370,080,510	1.317
32	2017 1 Qtr	1.461	1.359	1.202	1.385	4,869,710,898	24,535,860,376	1.328
33	2017 2 Qtr	1.485	1.374	1.207	1.397	4,948,605,288	24,731,234,187	1.340
34	2017 3 Qtr	1.509	1.385	1.211	1.410	5,028,847,866	24,897,122,800	1.352
35	2017 4 Qtr	1.534	1.395	1.216	1.423	5,110,462,960	25,058,475,091	1.363
36	2018 1 Qtr	1.559	1.408	1.220	1.436	5,193,475,357	25,243,030,017	1.375
37	2018 2 Qtr	1.584	1.419	1.225	1.450	5,277,910,321	25,417,903,175	1.386
38	2018 3 Qtr	1.610	1.431	1.230	1.463	5,363,793,593	25,593,300,434	1.398
39	2018 4 Qtr	1.636	1.443	1.235	1.477	5,451,151,408	25,776,963,529	1.410
40	2019 1 Qtr	1.663	1.455	1.240	1.490	5,540,010,498	25,959,391,916	1.423
41	April 1-May 31 '19	1.690	1.469	1.244	1.504	5,630,398,109	26,147,387,514	1.435
Annual Average 9/								3.52%

1/ Table C, Page 3, Column (12).
2/ Previous Column (3) x (1 + Quarterly Inflation Rate Change from Table B).
3/ Previous Column (4) x (1 + Quarterly Inflation Rate Change from Table B).
4/ Previous Column (5) x (1 + Quarterly Inflation Rate Change from Table B).
5/ Previous Column (6) x (1 + Quarterly Inflation Rate Change from Table B).
6/ Line 1 x Column (3) for applicable quarter.
7/ (Line 2 x Column (4) for applicable quarter) + (Line 3 x Column (5)for applicable quarter) + (Line 4 x Column (6) for applicable quarter).
8/ (Column (7) + Column (8)) ÷ (Period 0; (Column (7) + Column (8))).
9/ Annual weighted inflation using the last two quarters, used to calculate real cost of capital.

TABLE I: DRR DISCOUNTED CASH FLOW
(Road Property)

Discounted Cash Flow
Present Value of the Cash Flow Discounted at the Cost of Capital in Table A
Inflation In Asset Values From Table H

1. 2Q2009 Road Property Investment	$22,188,317,453 1/	Federal Tax Rate	35.0%
2. Interest During Construction (2Q2009 Invest.)	$2,794,708,837 2/		
3. Total 2Q2009 Investment	$24,983,026,290 3/	Route Mile Weighted	
4. Present Value Of Replacement Cost for the DRR	$484,775,295 4/	Average State Tax Rate	6.5% 6/
5. Total Cost Recovered From Quarterly Revenue Flow	$25,467,801,586 5/		

Period	Quarter	Quarterly Levelized Capital Carrying Charge Requirement 7/	Interest on Investment Financed With Debt 8/	Tax Depreciation 9/	Actual Federal Tax Payments 10/	Actual State Tax Payments 11/	Cash Flow 12/	Present Value Cash Flow 13/	Cumulative Present Value 14/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	June 1 to June 30	$79,227,492	$26,965,189	$1,080,011,272	$0	$0	$79,227,492	$78,250,593	$78,250,593
2	2009 3 Qtr	569,984,548	81,794,407	3,312,034,568	0	0	569,984,548	547,827,243	626,077,836
3	2009 4 Qtr	560,561,634	81,794,407	3,312,034,568	0	0	560,561,634	524,291,390	1,150,369,226
4	2010 1 Qtr	587,906,984	81,794,407	433,397,464	0	0	587,906,984	535,089,940	1,685,459,166
5	2010 2 Qtr	583,527,793	81,794,407	433,397,464	0	0	583,527,793	516,830,964	2,202,290,130
6	2010 3 Qtr	583,703,028	81,794,407	433,397,464	0	0	583,703,028	503,322,024	2,705,612,155
7	2010 4 Qtr	597,034,337	81,794,407	433,397,464	0	0	597,034,337	501,439,458	3,207,051,612
8	2011 1 Qtr	595,910,236	81,794,407	345,057,490	0	0	595,910,236	487,489,481	3,694,541,093
9	2011 2 Qtr	594,525,612	81,794,407	345,057,490	0	0	594,525,612	473,718,319	4,168,259,412
10	2011 3 Qtr	611,139,173	81,794,407	345,057,490	0	0	611,139,173	474,301,983	4,642,561,396
11	2011 4 Qtr	618,102,840	81,794,407	345,057,490	0	0	618,102,840	467,240,807	5,109,802,203
12	2012 1 Qtr	619,331,768	81,794,407	281,385,126	0	0	619,331,768	456,003,936	5,565,806,138
13	2012 2 Qtr	634,614,597	81,794,407	281,385,126	0	0	634,614,597	455,114,318	6,020,920,457
14	2012 3 Qtr	644,137,506	81,794,407	281,385,126	0	0	644,137,506	449,939,620	6,470,860,076
15	2012 4 Qtr	653,349,928	81,794,407	281,385,126	0	0	653,349,928	444,515,290	6,915,375,367
16	2013 1 Qtr	663,582,724	81,794,407	239,462,144	0	0	663,582,724	439,745,228	7,355,120,594
17	2013 2 Qtr	666,038,176	81,794,407	239,462,144	0	0	666,038,176	429,902,920	7,785,023,514
18	2013 3 Qtr	672,456,196	81,794,407	239,462,144	0	0	672,456,196	422,766,415	8,207,789,929
19	2013 4 Qtr	678,693,327	81,794,407	239,462,144	0	0	678,693,327	415,599,739	8,623,389,668
20	2014 1 Qtr	685,086,981	81,794,407	155,721,590	0	0	685,086,981	408,613,404	9,032,003,072
21	2014 2 Qtr	688,104,487	81,794,407	155,721,590	0	0	688,104,487	399,748,177	9,431,751,250
22	2014 3 Qtr	695,323,540	81,794,407	155,721,590	0	0	695,323,540	393,445,192	9,825,196,442
23	2014 4 Qtr	703,429,122	81,794,407	155,721,590	0	0	703,429,122	387,688,449	10,212,884,891
24	2015 1 Qtr	710,666,055	81,794,407	154,903,586	0	0	710,666,055	381,498,906	10,594,383,797
25	2015 2 Qtr	717,704,142	81,794,407	154,903,586	0	0	717,704,142	375,265,281	10,969,649,078

TABLE I: DRR DISCOUNTED CASH FLOW
(Road Property Continued)

Period	Quarter	Quarterly Levelized Capital Carrying Charge Requirement 7/	Interest on Investment Financed With Debt 8/	Tax Depreciation 9/	Actual Federal Tax Payments 10/	Actual State Tax Payments 11/	Cash Flow 12/	Present Value Cash Flow 13/	Cumulative Present Value 14/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
26	2015 3 Qtr	$724,866,593	$81,794,407	$154,903,586	$0	$0	$724,866,593	$369,161,350	$11,338,810,427
27	2015 4 Qtr	732,453,285	81,794,407	154,903,586	77,495,811	15,487,930	639,469,543	317,207,329	11,656,017,756
28	2016 1 Qtr	738,706,042	81,794,407	84,705,154	187,179,218	37,408,714	514,118,110	248,399,924	11,904,417,680
29	2016 2 Qtr	744,989,681	81,794,407	84,705,154	189,234,712	37,819,515	517,935,455	243,741,458	12,148,159,138
30	2016 3 Qtr	751,420,260	81,794,407	84,705,154	191,338,272	38,239,922	521,842,066	239,198,282	12,387,357,420
31	2016 4 Qtr	757,856,200	81,794,407	84,705,154	193,443,586	38,660,679	525,751,935	234,728,086	12,622,085,506
32	2017 1 Qtr	764,180,281	81,794,407	42,361,494	209,363,695	41,842,394	512,974,192	223,071,918	12,845,157,424
33	2017 2 Qtr	771,307,854	81,794,407	42,361,494	211,695,255	42,308,368	517,304,231	219,109,206	13,064,266,630
34	2017 3 Qtr	777,704,213	81,794,407	42,361,494	213,787,621	42,726,538	521,190,054	215,018,546	13,279,285,176
35	2017 4 Qtr	784,018,353	81,794,407	42,361,494	215,853,092	43,139,333	525,025,929	210,972,457	13,490,257,633
36	2018 1 Qtr	790,971,786	81,794,407	42,327,410	218,138,836	43,596,150	529,236,799	207,138,225	13,697,395,859
37	2018 2 Qtr	797,710,582	81,794,407	42,327,410	220,343,220	44,036,708	533,330,655	203,316,194	13,900,712,052
38	2018 3 Qtr	804,500,637	81,794,407	42,327,410	222,564,371	44,480,616	537,455,650	199,564,489	14,100,276,541
39	2018 4 Qtr	811,543,820	81,794,407	42,327,410	224,868,326	44,941,073	541,734,422	195,926,090	14,296,202,631
40	2019 1 Qtr	818,593,931	81,794,407	42,361,494	227,163,397	45,399,754	546,030,780	192,348,220	14,488,550,852
41	April 1-May 31 '19	553,577,308	54,829,218	28,396,166	153,860,728	30,749,845	368,966,736	128,274,658	14,616,825,509
	Future	47,580,795,727	4,712,653,107	1,162,446,940	13,642,696,791	2,726,561,990	31,211,536,946	10,850,976,076	25,467,801,586

1/ From Table C, Column (12) + Maintenance of Way Capital Costs
2/ From Table D, Column (8).
3/ Line 1 + Line 2.
4/ Table F Column (8).
5/ Line 3 + Line 4.
6/ DRR route mile weighted average state tax rates for the DRR states.
7/ Carrying costs needed to recover the total investment over 1 month, 39 quarters and 2 months after consideration of the applicable interest payments, tax depreciation and tax liability. The Future value is an estimate of a perpetual income stream for the DRR and is calculated by taking the Period 41, Column (3) value and dividing it by the DRR 's estimated quarterly Real Cost of Capital.
8/ Value from Table E, except for Future. Future equals Period 40, Column (4) value and dividing it by the DRR 's estimated quarterly Real Cost of Capital.
9/ Value from Table G, Page 9, Column (14) divided by 4 quarters.
10/ Table J: Part 1 Page 14 of 18.
11/ Table J: Part 2 Page 15 of 18.
12/ (Column (3) - Column (6) - Column (7)).
13/ Column (8) discounted by the fourth root of the annual Cost of Capital adjusted to midquarter dollars from Table A.
14/ Cumulative total of Column (9).

TABLE J - PART 1: COMPUTATION OF FEDERAL TAX LIABILITY - TAXABLE INCOME

(Road Property)

Time Period	Taxable Income B/4 NOL's DRR 1/	Net Operating Losses Generated 2/	NOL's Generated Plus Carryforward 3/	Carryforward Utilized 4/	Carryforward Remaining 5/	Carryback Available 6/	Carryback Utilized 7/	Carryback Remaining 8/	Annual Taxable Income 9/	Annual Tax Liability 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2007	($33,260,757)	($33,260,757)	($33,260,757)	$0	($33,260,757)	($33,260,757)	$0	($33,260,757)	$0	$0
2008	(186,393,043)	(186,393,043)	(219,653,799)	0	(219,653,799)	(219,653,799)	0	(219,653,799)	0	0
Jan. 1-May 31 09	(117,493,985)	(117,493,985)	(337,147,784)	0	(337,147,784)	(337,147,784)	0	(337,147,784)	0	0
June 1-June 30 09	(1,027,748,970)	(1,027,748,970)	(1,364,896,754)	0	(1,364,896,754)	(1,364,896,754)	0	(1,364,896,754)	0	0
2009 3 Qtr	(2,823,844,428)	(2,823,844,428)	(4,188,741,182)	0	(4,188,741,182)	(4,188,741,182)	0	(4,188,741,182)	0	0
2009 4 Qtr	(2,833,267,342)	(2,833,267,342)	(7,022,008,523)	0	(7,022,008,523)	(7,022,008,523)	0	(7,022,008,523)	0	0
2010 1 Qtr	72,715,113	0	(7,022,008,523)	72,715,113	(6,949,293,410)	(6,949,293,410)	0	(6,949,293,410)	0	0
2010 2 Qtr	68,335,923	0	(6,949,293,410)	68,335,923	(6,880,957,487)	(6,880,957,487)	0	(6,880,957,487)	0	0
2010 3 Qtr	68,511,157	0	(6,880,957,487)	68,511,157	(6,812,446,330)	(6,812,446,330)	0	(6,812,446,330)	0	0
2010 4 Qtr	81,842,466	0	(6,812,446,330)	81,842,466	(6,730,603,864)	(6,730,603,864)	0	(6,730,603,864)	0	0
2011 1 Qtr	169,058,339	0	(6,730,603,864)	169,058,339	(6,561,545,525)	(6,561,545,525)	0	(6,561,545,525)	0	0
2011 2 Qtr	167,673,715	0	(6,561,545,525)	167,673,715	(6,393,871,810)	(6,393,871,810)	0	(6,393,871,810)	0	0
2011 3 Qtr	184,287,276	0	(6,393,871,810)	184,287,276	(6,209,584,534)	(6,209,584,534)	0	(6,209,584,534)	0	0
2011 4 Qtr	191,250,943	0	(6,209,584,534)	191,250,943	(6,018,333,591)	(6,018,333,591)	0	(6,018,333,591)	0	0
2012 1 Qtr	256,152,235	0	(6,018,333,591)	256,152,235	(5,762,181,356)	(5,762,181,356)	0	(5,762,181,356)	0	0
2012 2 Qtr	271,435,064	0	(5,762,181,356)	271,435,064	(5,490,746,292)	(5,490,746,292)	0	(5,490,746,292)	0	0
2012 3 Qtr	280,957,973	0	(5,490,746,292)	280,957,973	(5,209,788,318)	(5,209,788,318)	0	(5,209,788,318)	0	0
2012 4 Qtr	290,170,395	0	(5,209,788,318)	290,170,395	(4,919,617,924)	(4,919,617,924)	0	(4,919,617,924)	0	0
2013 1 Qtr	342,326,172	0	(4,919,617,924)	342,326,172	(4,577,291,751)	(4,577,291,751)	0	(4,577,291,751)	0	0
2013 2 Qtr	344,781,624	0	(4,577,291,751)	344,781,624	(4,232,510,127)	(4,232,510,127)	0	(4,232,510,127)	0	0
2013 3 Qtr	351,199,645	0	(4,232,510,127)	351,199,645	(3,881,310,483)	(3,881,310,483)	0	(3,881,310,483)	0	0
2013 4 Qtr	357,436,775	0	(3,881,310,483)	357,436,775	(3,523,873,707)	(3,523,873,707)	0	(3,523,873,707)	0	0
2014 1 Qtr	447,570,984	0	(3,523,873,707)	447,570,984	(3,076,302,724)	(3,076,302,724)	0	(3,076,302,724)	0	0
2014 2 Qtr	450,588,490	0	(3,076,302,724)	450,588,490	(2,625,714,234)	(2,625,714,234)	0	(2,625,714,234)	0	0
2014 3 Qtr	457,807,543	0	(2,625,714,234)	457,807,543	(2,167,906,691)	(2,167,906,691)	0	(2,167,906,691)	0	0
2014 4 Qtr	465,913,125	0	(2,167,906,691)	465,913,125	(1,701,993,566)	(1,701,993,566)	0	(1,701,993,566)	0	0
2015 1 Qtr	473,968,061	0	(1,701,993,566)	473,968,061	(1,228,025,505)	(1,228,025,505)	0	(1,228,025,505)	0	0
2015 2 Qtr	481,006,149	0	(1,228,025,505)	481,006,149	(747,019,357)	(747,019,357)	0	(747,019,357)	0	0
2015 3 Qtr	488,168,599	0	(747,019,357)	488,168,599	(258,850,758)	(258,850,758)	0	(258,850,758)	0	0
2015 4 Qtr	480,267,361	0	(258,850,758)	258,850,758	0	0	0	0	221,416,603	77,495,811
2016 1 Qtr	534,797,767	0	0	0	0	0	0	0	534,797,767	187,179,218
2016 2 Qtr	540,670,605	0	0	0	0	0	0	0	540,670,605	189,234,712
2016 3 Qtr	546,680,776	0	0	0	0	0	0	0	546,680,776	191,338,272
2016 4 Qtr	552,695,959	0	0	0	0	0	0	0	552,695,959	193,443,586
2017 1 Qtr	598,181,986	0	0	0	0	0	0	0	598,181,986	209,363,695
2017 2 Qtr	604,843,585	0	0	0	0	0	0	0	604,843,585	211,695,255
2017 3 Qtr	610,821,774	0	0	0	0	0	0	0	610,821,774	213,787,621
2017 4 Qtr	616,723,119	0	0	0	0	0	0	0	616,723,119	215,853,092
2018 1 Qtr	623,253,818	0	0	0	0	0	0	0	623,253,818	218,138,836
2018 2 Qtr	629,552,057	0	0	0	0	0	0	0	629,552,057	220,343,220
2018 3 Qtr	635,898,204	0	0	0	0	0	0	0	635,898,204	222,564,371
2018 4 Qtr	642,480,930	0	0	0	0	0	0	0	642,480,930	224,868,326
2019 1 Qtr	649,038,276	0	0	0	0	0	0	0	649,038,276	227,163,397
April 1-May 31 '19	439,602,079	0	0	0	0	0	0	0	439,602,079	153,860,728
Future	38,979,133,690	0	0	0	0	0	0	0	38,979,133,690	13,642,696,791

1/ Table I, Page 13, Column (3) - Table E, Page 5, Columns (2), (4), (6) & (8) - Table G, Column (14) / 4 - Table J Part 2, Page 15, Column (11).
Values for 2007-May 31, 2009 from Table D, Sum of Column (10).
2/ Column (2) if less than zero, otherwise zero.
3/ Cumulative total of Column (2).
4/ If Column (2) is greater than zero, and (Column (2) + Column (4) is less than zero, then Column (2), otherwise Column (4).
5/ Column (4) + Column (5) + Column (8).
6/ Previous period Column (9) + current period Column (3) - current period Column (5).
7/ If previous Column (10) is greater than zero, and previous Column (10) is less than current Column (7), then previous Column (10), otherwise zero.
8/ Column (7) + Column (8).
9/ If Column (2) is greater than zero, then Column (2) - Column (5) - Column (8), otherwise zero.
10/ Column (10) times applicable Federal Statutory Tax Rate.

TABLE J - PART 2: COMPUTATION OF STATE TAX LIABILITY - TAXABLE INCOME
(Road Property)

Time Period	Taxable Income B/4 NOL's DRR 1/	Net Operating Losses Generated 2/	NOL's Generated Plus Carryforward 3/	Carryforward Utilized 4/	Carryforward Remaining 5/	Carryback Available 6/	Carryback Utilized 7/	Carryback Remaining 8/	Annual Taxable Income 9/	Annual Tax Liability 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2007	($33,260,757)	($33,260,757)	($33,260,757)	$0	($33,260,757)	($33,260,757)	$0	($33,260,757)	$0	$0
2008	(186,393,043)	(186,393,043)	(219,653,799)	0	(219,653,799)	(219,653,799)	0	(219,653,799)	0	0
Jan. 1-May 31 09	(117,493,985)	(117,493,985)	(337,147,784)	0	(337,147,784)	(337,147,784)	0	(337,147,784)	0	0
June 1-June 30 09	(1,027,748,970)	(1,027,748,970)	(1,364,896,754)	0	(1,364,896,754)	(1,364,896,754)	0	(1,364,896,754)	0	0
2009 3 Qtr	(2,823,844,428)	(2,823,844,428)	(4,188,741,182)	0	(4,188,741,182)	(4,188,741,182)	0	(4,188,741,182)	0	0
2009 4 Qtr	(2,833,267,342)	(2,833,267,342)	(7,022,008,523)	0	(7,022,008,523)	(7,022,008,523)	0	(7,022,008,523)	0	0
2010 1 Qtr	72,715,113	0	(7,022,008,523)	72,715,113	(6,949,293,410)	(6,949,293,410)	0	(6,949,293,410)	0	0
2010 2 Qtr	68,335,923	0	(6,949,293,410)	68,335,923	(6,880,957,487)	(6,880,957,487)	0	(6,880,957,487)	0	0
2010 3 Qtr	68,511,157	0	(6,880,957,487)	68,511,157	(6,812,446,330)	(6,812,446,330)	0	(6,812,446,330)	0	0
2010 4 Qtr	81,842,466	0	(6,812,446,330)	81,842,466	(6,730,603,864)	(6,730,603,864)	0	(6,730,603,864)	0	0
2011 1 Qtr	169,058,339	0	(6,730,603,864)	169,058,339	(6,561,545,525)	(6,561,545,525)	0	(6,561,545,525)	0	0
2011 2 Qtr	167,673,715	0	(6,561,545,525)	167,673,715	(6,393,871,810)	(6,393,871,810)	0	(6,393,871,810)	0	0
2011 3 Qtr	184,287,276	0	(6,393,871,810)	184,287,276	(6,209,584,534)	(6,209,584,534)	0	(6,209,584,534)	0	0
2011 4 Qtr	191,250,943	0	(6,209,584,534)	191,250,943	(6,018,333,591)	(6,018,333,591)	0	(6,018,333,591)	0	0
2012 1 Qtr	256,152,235	0	(6,018,333,591)	256,152,235	(5,762,181,356)	(5,762,181,356)	0	(5,762,181,356)	0	0
2012 2 Qtr	271,435,064	0	(5,762,181,356)	271,435,064	(5,490,746,292)	(5,490,746,292)	0	(5,490,746,292)	0	0
2012 3 Qtr	280,957,973	0	(5,490,746,292)	280,957,973	(5,209,788,318)	(5,209,788,318)	0	(5,209,788,318)	0	0
2012 4 Qtr	290,170,395	0	(5,209,788,318)	290,170,395	(4,919,617,924)	(4,919,617,924)	0	(4,919,617,924)	0	0
2013 1 Qtr	342,326,172	0	(4,919,617,924)	342,326,172	(4,577,291,751)	(4,577,291,751)	0	(4,577,291,751)	0	0
2013 2 Qtr	344,781,624	0	(4,577,291,751)	344,781,624	(4,232,510,127)	(4,232,510,127)	0	(4,232,510,127)	0	0
2013 3 Qtr	351,199,645	0	(4,232,510,127)	351,199,645	(3,881,310,483)	(3,881,310,483)	0	(3,881,310,483)	0	0
2013 4 Qtr	357,436,775	0	(3,881,310,483)	357,436,775	(3,523,873,707)	(3,523,873,707)	0	(3,523,873,707)	0	0
2014 1 Qtr	447,570,984	0	(3,523,873,707)	447,570,984	(3,076,302,724)	(3,076,302,724)	0	(3,076,302,724)	0	0
2014 2 Qtr	450,588,490	0	(3,076,302,724)	450,588,490	(2,625,714,234)	(2,625,714,234)	0	(2,625,714,234)	0	0
2014 3 Qtr	457,807,543	0	(2,625,714,234)	457,807,543	(2,167,906,691)	(2,167,906,691)	0	(2,167,906,691)	0	0
2014 4 Qtr	465,913,125	0	(2,167,906,691)	465,913,125	(1,701,993,566)	(1,701,993,566)	0	(1,701,993,566)	0	0
2015 1 Qtr	473,968,061	0	(1,701,993,566)	473,968,061	(1,228,025,505)	(1,228,025,505)	0	(1,228,025,505)	0	0
2015 2 Qtr	481,006,149	0	(1,228,025,505)	481,006,149	(747,019,357)	(747,019,357)	0	(747,019,357)	0	0
2015 3 Qtr	488,168,599	0	(747,019,357)	488,168,599	(258,850,758)	(258,850,758)	0	(258,850,758)	0	0
2015 4 Qtr	495,755,291	0	(258,850,758)	258,850,758	0	0	0	0	236,904,533	15,487,930
2016 1 Qtr	572,206,481	0	0	0	0	0	0	0	572,206,481	37,408,714
2016 2 Qtr	578,490,119	0	0	0	0	0	0	0	578,490,119	37,819,515
2016 3 Qtr	584,920,698	0	0	0	0	0	0	0	584,920,698	38,239,922
2016 4 Qtr	591,356,638	0	0	0	0	0	0	0	591,356,638	38,660,679
2017 1 Qtr	640,024,380	0	0	0	0	0	0	0	640,024,380	41,842,394
2017 2 Qtr	647,151,953	0	0	0	0	0	0	0	647,151,953	42,308,368
2017 3 Qtr	653,548,312	0	0	0	0	0	0	0	653,548,312	42,726,538
2017 4 Qtr	659,862,452	0	0	0	0	0	0	0	659,862,452	43,139,333
2018 1 Qtr	666,849,969	0	0	0	0	0	0	0	666,849,969	43,596,150
2018 2 Qtr	673,588,765	0	0	0	0	0	0	0	673,588,765	44,036,708
2018 3 Qtr	680,378,819	0	0	0	0	0	0	0	680,378,819	44,480,616
2018 4 Qtr	687,422,003	0	0	0	0	0	0	0	687,422,003	44,941,073
2019 1 Qtr	694,438,030	0	0	0	0	0	0	0	694,438,030	45,399,754
April 1-May 31 '19	470,351,924	0	0	0	0	0	0	0	470,351,924	30,749,845
Future	41,705,695,680	0	0	0	0	0	0	0	41,705,695,680	2,726,561,990

1/ Table I, Page 13, Column (3) - Table E, Page 5, Columns (2), (4), (6) & (8) - Table G, Column (14) / 4.
Values for 2007-May 31, 2009 from Table D, Sum of Column (10).
2/ Column (2) if less than zero, otherwise zero.
3/ Cumulative total of Column (2).
4/ If Column (2) is greater than zero, and (Column (2) + Column (4) is less than zero, then Column (2), otherwise Column (4).
5/ Column (4) + Column (5) + Column (8).
6/ Previous period Column (9) + current period Column (3) - current period Column (5).
7/ If previous Column (10) is greater than zero, and previous Column (10) is less than current Column (7), then previous Column (10), otherwise zero.
8/ Column (7) + Column (8).
9/ If Column (2) is greater than zero, then Column (2) - Column (5) - Column (8), otherwise zero.
10/ Column (10) times applicable route mile weighted State Statutory Tax Rates.

TABLE K: DRR OPERATING EXPENSES

Item		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
(1)		(2)	(3)	(4)	(5)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Train & Engine Personnel		$314,029,473	$345,576,394	$369,035,264	$379,712,850	$392,707,437	$406,571,363	$416,347,539	$439,198,741	$463,440,799	$489,166,561	$518,099,183
2. Locomotive Lease Expense		$58,346,262	$64,207,638	$68,566,265	$70,550,146	$72,964,524	$75,540,423	$77,356,823	$81,602,546	$86,106,689	$90,886,502	$96,262,145
3. Locomotive Maintenance Expense		$124,015,088	$136,473,455	$145,737,725	$149,954,468	$155,086,231	$160,561,310	$164,422,073	$173,446,365	$183,019,928	$193,179,429	$204,605,368
4. Locomotive Operating Expense		$394,111,561	$433,703,407	$463,144,630	$476,545,155	$492,853,552	$510,252,980	$522,522,224	$551,200,815	$581,624,951	$613,911,157	$650,222,019
5. Railcar Lease Expense		$307,472,930	$338,361,191	$361,330,269	$371,784,920	$384,508,196	$398,082,661	$407,654,723	$430,028,820	$453,764,734	$478,953,375	$507,281,920
6. Material & Supply Operating		$3,797,332	$3,797,332	$3,797,332	$3,797,332	$3,797,332	$3,797,332	$3,797,332	$3,797,332	$3,797,332	$3,797,332	$3,797,332
7. Ad Valorem Tax		$56,681,330	$56,681,330	$56,681,330	$56,681,330	$56,681,330	$56,681,330	$56,681,330	$56,681,330	$56,681,330	$56,681,330	$56,681,330
8. Operating Managers		$53,672,046	$53,672,046	$53,672,046	$53,672,046	$53,672,046	$53,672,046	$53,672,046	$53,672,046	$53,672,046	$53,672,046	$53,672,046
9. General & Administration		$170,048,396	$59,655,859	$59,655,859	$59,655,859	$59,655,859	$59,655,859	$59,655,859	$59,655,859	$59,655,859	$59,655,859	$59,655,859
10. Loss and Damage		$14,077,196	$15,491,370	$16,542,976	$17,021,626	$17,604,143	$18,225,630	$18,663,873	$19,688,238	$20,774,952	$21,928,177	$23,225,157
11. Trackage Rights		$42,278,322	$46,525,538	$49,683,845	$51,121,387	$52,870,870	$54,737,394	$56,053,577	$59,130,073	$62,393,823	$65,857,326	$69,752,574
12. Intermodal Lift Costs		$90,771,783	$99,890,577	$106,671,480	$109,757,890	$113,514,040	$117,521,477	$120,347,329	$126,952,583	$133,959,870	$141,396,030	$149,759,148
13. Multi-Level Loading Costs		$6,917,396	$7,612,307	$8,129,056	$8,364,260	$8,650,503	$8,955,896	$9,171,244	$9,674,607	$10,208,607	$10,775,291	$11,412,614
14. Insurance	1.96%	$35,134,105	$35,632,443	$37,611,732	$38,512,629	$39,609,018	$40,778,755	$41,603,597	$43,531,615	$45,576,983	$47,747,536	$50,188,660
15. Maintenance of Way		$156,612,785	$156,612,785	$156,612,785	$156,612,785	$156,612,785	$156,612,785	$156,612,785	$156,612,785	$156,612,785	$156,612,785	$156,612,785
16. Total Operating Expenses		$1,827,966,004	$1,853,893,671	$1,956,872,591	$2,003,744,683	$2,060,787,865	$2,121,647,238	$2,164,562,353	$2,264,873,755	$2,371,290,687	$2,484,220,735	$2,611,228,141
17. Expense Per Quarter		456,991,501	$463,473,418	$489,218,148	$500,936,171	$515,196,966	$530,411,810	$541,140,588	$566,218,439	$592,822,672	$621,055,184	$652,807,035

TABLE K: DRR OPERATING EXPENSES, INDEXED
(Continued)

Period (1)	Quarter (2)	Hybrid Index 1/ (3)	Operating Expense Indexed For Inflation 2/ (4)	Period (5)	Quarter (6)	Hybrid Index 1/ (7)	Operating Expense Indexed For Inflation 2/ (8)
1	June 1 to June 30	100.000	$150,631,155 3/	27	2015 4 Qtr	153.119	$828,587,277
2	2009 3 Qtr	110.339	504,495,504 4/	28	2016 1 Qtr	153.751	870,564,710
3	2009 4 Qtr	117.144	535,610,908 4/	29	2016 2 Qtr	154.385	874,158,043
4	2010 1 Qtr	122.071	565,767,029	30	2016 3 Qtr	154.982	877,539,033
5	2010 2 Qtr	124.633	577,641,208	31	2016 4 Qtr	155.582	880,933,099
6	2010 3 Qtr	125.532	581,807,006	32	2017 1 Qtr	155.945	924,476,933
7	2010 4 Qtr	129.733	601,279,273	33	2017 2 Qtr	156.309	926,634,433
8	2011 1 Qtr	128.412	628,216,479	34	2017 3 Qtr	156.637	928,578,119
9	2011 2 Qtr	138.110	675,656,961	35	2017 4 Qtr	156.965	930,525,882
10	2011 3 Qtr	141.540	692,439,300	36	2018 1 Qtr	157.527	978,330,351
11	2011 4 Qtr	141.700	693,220,870	37	2018 2 Qtr	158.091	981,832,062
12	2012 1 Qtr	137.054	686,550,715	38	2018 3 Qtr	158.641	985,249,142
13	2012 2 Qtr	138.888	695,740,091	39	2018 4 Qtr	159.193	988,678,114
14	2012 3 Qtr	142.971	716,194,850	40	2019 1 Qtr	159.649	1,042,197,012
15	2012 4 Qtr	145.402	728,370,163	41	April 1-May 31 '19	160.105	700,613,553
16	2013 1 Qtr	146.274	753,600,248				
17	2013 2 Qtr	146.859	756,614,649				
18	2013 3 Qtr	147.667	760,776,030				
19	2013 4 Qtr	148.368	764,389,716				
20	2014 1 Qtr	148.443	787,357,224				
21	2014 2 Qtr	148.999	790,309,814				
22	2014 3 Qtr	149.074	790,704,969				
23	2014 4 Qtr	150.490	798,216,666				
24	2015 1 Qtr	151.162	817,996,310				
25	2015 2 Qtr	151.836	821,646,431				
26	2015 3 Qtr	152.476	825,109,556				

1/ 2Q09 equals 100.0, all other quarters equal Quarterly Inflation Indexes for the Hybrid Index from Table B).

2/ (Quarterly expense from Table K, Page 16, for the applicable time period x Column (3) or Column (7) ÷ Period 1: June 1 to June 30, 2009.

3/ (Quarterly 2009 expense excluding start-up costs from Table K, Page 16 x 30/92) + (Annual start-up expense from Table K, Page 16 x 30/365)

4/ (Quarterly 2009 expense excluding start-up costs from Table K, Page 16 x Column (3) ÷ Period 1: June 1 to June 30, 2009) + (Annual start-up expense from Table K, Page 16 x 92/365 x Column (3) ÷ Period 1: June 1 to June 30, 2009).

TABLE L : DRR - Stand-Alone Costs and Revenues

Quarterly Revenue Requirements to Cover Total Stand-Alone Costs

Period (1)	Quarter (2)	Quarterly Capital Requirement Road Property (3)	Quarterly Operating Expense (4)	Annual Stand-Alone Requirement (5)	Quarterly Stand-Alone Revenues (6)	Annual Stand-Alone Revenues (7)	Overpayments Or Shortfalls In Revenues (8)	PV Difference (9)	Cumulative PV Difference (10)
1	June 1-June 30 09	$79,227,492	$150,631,155						
2	2009 3 Qtr	569,984,548	504,495,504						
3	2009 4 Qtr	560,561,634	535,610,908	$2,400,511,241		$3,349,996,131	$949,484,890	$926,214,385	$926,214,385
4	2010 1 Qtr	587,906,984	565,767,029						
5	2010 2 Qtr	583,527,793	577,641,208						
6	2010 3 Qtr	583,703,028	581,807,006						
7	2010 4 Qtr	597,034,337	601,279,273	4,678,666,658		6,642,807,927	1,964,141,269	1,714,023,529	2,640,237,914
8	2011 1 Qtr	595,910,236	628,216,479						
9	2011 2 Qtr	594,525,612	675,656,961						
10	2011 3 Qtr	611,139,173	692,439,300						
11	2011 4 Qtr	618,102,840	693,220,870	5,109,211,471		7,250,894,061	2,141,682,590	1,689,825,949	4,330,063,863
12	2012 1 Qtr	619,331,768	686,550,715						
13	2012 2 Qtr	634,614,597	695,740,091						
14	2012 3 Qtr	644,137,506	716,194,850						
15	2012 4 Qtr	653,349,928	728,370,163	5,378,289,618		8,092,558,612	2,714,268,995	1,927,527,508	6,257,591,371
16	2013 1 Qtr	663,582,724	753,600,248						
17	2013 2 Qtr	666,038,176	756,614,649						
18	2013 3 Qtr	672,456,196	760,776,030						
19	2013 4 Qtr	678,693,327	764,389,716	5,716,151,066		8,683,051,185	2,966,900,119	1,896,319,257	8,153,910,628
20	2014 1 Qtr	685,086,981	787,357,224						
21	2014 2 Qtr	688,104,487	790,309,814						
22	2014 3 Qtr	695,323,540	790,704,969						
23	2014 4 Qtr	703,429,122	798,216,666	5,938,532,802		9,511,505,582	3,572,972,781	2,055,412,851	10,209,323,479
24	2015 1 Qtr	710,666,055	817,996,310						
25	2015 2 Qtr	717,704,142	821,646,431						
26	2015 3 Qtr	724,866,593	825,109,556						
27	2015 4 Qtr	732,453,285	828,587,277	6,179,029,648		10,287,456,885	4,108,427,237	2,127,187,587	12,336,511,066
28	2016 1 Qtr	738,706,042	870,564,710						
29	2016 2 Qtr	744,989,681	874,158,043						
30	2016 3 Qtr	751,420,260	877,539,033						
31	2016 4 Qtr	757,856,200	880,933,099	6,496,167,068		11,264,722,566	4,768,555,498	2,222,172,978	14,558,684,044
32	2017 1 Qtr	764,180,281	924,476,933						
33	2017 2 Qtr	771,307,854	926,634,433						
34	2017 3 Qtr	777,704,213	928,578,119						
35	2017 4 Qtr	784,018,353	930,525,882	6,807,426,069		12,407,612,570	5,600,186,501	2,348,844,907	16,907,528,952
36	2018 1 Qtr	790,971,786	978,330,351						
37	2018 2 Qtr	797,710,582	981,832,062						
38	2018 3 Qtr	804,500,637	985,249,142						
39	2018 4 Qtr	811,543,820	988,678,114	7,138,816,495		13,496,875,907	6,358,059,412	2,400,143,806	19,307,672,757
40	2019 1 Qtr	818,593,931	1,042,197,012						
41	April 1-May 31 '19	553,577,308	700,613,553	3,114,981,804		6,116,978,938	3,001,997,135	1,075,111,160	20,382,783,918

EXHIBIT NO. 2

Railroad Industry Debt - 1998 to 2009

($ in Thousands)

	Railroad	Bonds	ETC	CSA	Other	Total
		(1)	(2)	(3)	(4)	(5)	(6)
	1998					
1.	BNSF	$3,567,245	$384,003	$0	$1,465,800	$5,417,048
2.	Conrail	1,315,232	164,531	0	486,888	1,966,651
3.	CSX	4,751,927	606,877	165,555	1,167,181	6,691,540
4.	NS	5,553,302	382,253	0	2,196,875	8,132,430
5.	UP	6,083,074	374,485	121,483	1,856,527	8,435,569
6.	Total	$21,270,780	$1,912,149	$287,038	$7,173,271	$30,643,238
	1999					
7.	BNSF	$3,788,968	$434,180	$0	$1,633,315	$5,856,463
8.	CSX	4,646,421	675,181	150,904	1,235,278	6,707,784
9.	NS	5,586,787	411,447	0	2,096,136	8,094,370
10.	UP	6,400,711	324,661	95,627	1,835,651	8,656,650
11.	Total	$20,422,887	$1,845,469	$246,531	$6,800,380	$29,315,267
	2000					
12.	BNSF	$3,874,165	$479,450	$0	$1,616,226	$5,969,841
13.	CSX	4,301,219	722,600	130,993	777,661	5,932,473
14.	NS	5,303,625	399,607	0	1,880,779	7,584,011
15.	UP	5,900,352	264,294	72,433	1,900,215	8,137,294
16.	Total	$19,379,361	$1,865,951	$203,426	$6,174,881	$27,623,619
	2001					
17.	BNSF	$4,753,585	$477,866	$0	$1,491,266	$6,722,717
18.	CSX	5,322,289	757,043	130,975	268,512	6,478,819
19.	NS	6,830,019	506,733	0	356,197	7,692,949
20.	UP	5,923,562	237,954	54,863	1,775,176	7,991,555
21.	Total	$22,829,455	$1,979,596	$185,838	$3,891,151	$28,886,040
	2002					
22.	BNSF	$5,346,700	$431,510	$0	$1,271,585	$7,049,795
23.	CSX	5,398,556	608,004	124,985	675,212	6,806,757
24.	NS	7,059,667	338,868	0	506,454	7,904,989
25.	UP	6,038,802	187,827	32,287	1,711,672	7,970,588
26.	Total	$23,843,725	$1,566,209	$157,272	$4,164,923	$29,732,129
	2003					
27.	BNSF	$5,718,153	$386,023	$0	$1,098,941	$7,203,117
28.	CSX	5,237,473	490,636	115,990	174,600	6,018,699
29.	NS	6,952,242	293,619	0	939,125	8,184,986
30.	UP	6,332,851	168,355	2,773	2,019,969	8,523,948
31.	Total	$24,240,719	$1,338,633	$118,763	$4,232,635	$29,930,750

Railroad Industry Debt - 1998 to 2009

($ in Thousands)

	Railroad	Bonds	ETC	CSA	Other	Total
		(1)	(2)	(3)	(4)	(5)	(6)
	2004					
32.	BNSF	$5,444,619	$324,213	$0	$790,901	$6,559,733
33.	CSX	6,418,995	427,920	159,558	136,431	7,142,904
34.	NS	6,911,770	246,784	0	784,506	7,943,060
35.	UP	6,132,695	247,642	0	1,301,462	7,681,799
36.	Total	$24,908,079	$1,246,559	$159,558	$3,013,300	$29,327,496
	2005					
37.	BNSF	$5,464,515	$368,458	$0	$1,195,009	$7,027,982
38.	CSX	5,062,299	366,722	142,197	306,737	5,877,955
39.	NS	6,787,492	195,483	0	326,245	7,309,220
40.	UP	5,812,182	208,593	0	1,251,308	7,272,083
41.	Total	$23,126,488	$1,139,256	$142,197	$3,079,299	$27,487,240
	2006					
42.	BNSF	$5,948,542	$315,007	$0	$1,472,626	$7,736,175
43.	CSX	4,637,108	287,070	74,489	293,002	5,291,669
44.	NS	6,409,527	157,391	0	147,213	6,714,131
45.	UP	5,966,313	169,828	0	1,166,408	7,302,549
46.	Total	$22,961,490	$929,296	$74,489	$3,079,249	$27,044,524
	2007					
47.	BNSF	$6,194,580	$262,421	$0	$1,201,743	$7,658,744
48.	CSX	4,959,289	221,209	63,389	230,126	5,474,013
49.	NS	6,034,279	131,643	0	286,067	6,451,989
50.	UP	4,931,853	189,350	0	1,140,434	6,261,637
51.	Total	$22,120,001	$804,623	$63,389	$2,858,370	$25,846,383
	2008					
52.	BNSF	$7,098,663	$227,997	$0	$1,443,114	$8,769,774
53.	CSX	6,785,450	192,631	54,389	179,534	7,212,004
54.	NS	5,860,071	112,996	0	273,935	6,247,002
55.	UP	6,142,454	233,118	0	1,468,746	7,844,318
56.	Total	$25,886,638	$766,742	$54,389	$3,365,329	$30,073,098
	2009					
57.	BNSF	$7,915,817	$236,659	$0	$1,554,082	$9,706,558
58.	CSX	7,657,784	158,159	43,349	78,462	7,937,754
59.	NS	6,685,553	97,756	0	124,709	6,908,018
60.	UP	7,288,352	215,499	0	2,075,919	9,579,770
61.	Total	$29,547,506	$708,073	$43,349	$3,833,172	$34,132,100

Sources: STB Ex Parte No. 558 - Railroad Cost of Capital.

EXHIBIT NO. 3

DRR Maximum Markup Methodology Results

	Year	Stand-Alone Costs 1/	DRR Revenues 1/	Maximum Markup 2/
	(1)	(2)	(3)	(4)
1.	2009	$2,400,511,241	$3,349,996,131	117.8%
2.	2010	4,678,666,658	6,642,807,927	118.1%
3.	2011	5,109,211,471	7,250,894,061	117.6%
4.	2012	5,378,289,618	8,092,558,612	114.3%
5.	2013	5,716,151,066	8,683,051,185	113.3%
6.	2014	5,938,532,802	9,511,505,582	109.8%
7.	2015	6,179,029,648	10,287,456,885	107.8%
8.	2016	6,496,167,068	11,264,722,566	104.4%
9.	2017	6,807,426,069	12,407,612,570	101.2%
10.	2018	7,138,816,495	13,496,875,907	98.4%
11.	2019	3,114,981,804	6,116,978,938	95.7%

1/ Source: Exhibit III-H-1.

2/ Source: *See* e-workpaper "MaximumMarkup Errata.accdb."

EXHIBIT NO. 4

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q09

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	2Q2009 Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	xxx	$2,238	$4,028	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	xxx	$1,629	$2,932	xxx	xxx
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	xxx	$1,222	$2,200	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	xxx	$2,224	$4,004	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	xxx	$2,222	$4,000	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	xxx	$2,166	$3,899	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	xxx	$2,858	$5,144	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	xxx	$2,579	$4,642	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	xxx	$2,274	$4,094	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	xxx	$2,120	$3,817	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	xxx	$1,731	$3,116	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	xxx	$1,222	$2,200	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	xxx	$1,497	$2,695	xxx	xxx
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	xxx	$398	$717	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,781	$3,205	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,785	$3,213	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	xxx	$565	$1,017	xxx	xxx
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$7,715	$1,513	$2,724	$1,782	$2,724
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$4,537	$1,891	$3,403	$2,227	$3,403
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$4,537	$1,882	$3,388	$2,217	$3,388
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$7,715	$1,513	$2,724	$1,782	$2,724
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$9,563	$2,358	$4,244	$2,777	$4,244
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$4,537	$1,737	$3,127	$2,046	$3,127
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$8,561	$1,642	$2,956	$1,934	$2,956
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$8,093	$1,873	$3,372	$2,206	$3,372
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$8,093	$1,778	$3,201	$2,095	$3,201
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$5,132	$1,487	$2,677	$1,751	$2,677
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$8,093	$1,793	$3,227	$2,112	$3,227
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$7,715	$1,505	$2,709	$1,773	$2,709
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$4,537	$1,659	$2,986	$1,954	$2,986
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$10,560	$2,690	$4,841	$3,168	$4,841
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$10,560	$2,469	$4,443	$2,907	$4,443
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$7,715	$1,482	$2,667	$1,745	$2,667
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$4,537	$1,882	$3,388	$2,217	$3,388
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$8,093	$1,882	$3,388	$2,217	$3,388
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$7,715	$1,482	$2,668	$1,745	$2,668
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$6,649	$1,681	$3,025	$1,979	$3,025
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$5,132	$1,499	$2,697	$1,765	$2,697
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$7,715	$1,452	$2,614	$1,710	$2,614
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$5,132	$1,634	$2,942	$1,925	$2,942
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$7,715	$1,526	$2,746	$1,797	$2,746
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$10,560	$2,681	$4,827	$3,158	$4,827
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$6,465	$2,333	$4,200	$2,748	$4,200
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$4,537	$1,944	$3,499	$2,290	$3,499
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$8,093	$1,604	$2,887	$1,889	$2,887
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,157	$1,720	$3,097	$2,026	$3,097
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$8,093	$1,787	$3,216	$2,104	$3,216
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$8,093	$1,863	$3,354	$2,195	$3,354
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$9,563	$2,350	$4,230	$2,768	$4,230
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$8,939	$2,272	$4,089	$2,676	$4,089
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$8,093	$1,873	$3,372	$2,206	$3,372
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,617	$2,910	$1,904	$2,910
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,280	$4,103	$2,685	$4,103
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,911	$1,009	$1,816	$1,188	$1,816
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$2,341	$622	$1,120	$733	$1,120
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$4,450	$1,441	$2,594	$1,697	$2,594
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$6,246	$2,774	$4,992	$3,267	$4,992
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$5,689	$2,125	$3,824	$2,502	$3,824
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$6,093	$2,456	$4,421	$2,893	$4,421

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q09

	Origin		Destination				2Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$3,530	$1,260	$2,269	$1,484	$2,269
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$10,747	$2,437	$4,387	$2,871	$4,387
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$4,880	$1,650	$2,970	$1,943	$2,970
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,266	$2,280	$1,492	$2,280
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$5,689	$2,145	$3,862	$2,527	$3,862
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$5,689	$2,123	$3,822	$2,501	$3,822
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,271	$2,287	$1,496	$2,287
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,242	$2,235	$1,462	$2,235
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,270	$2,287	$1,496	$2,287
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$5,689	$2,143	$3,857	$2,524	$3,857
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$5,101	$2,306	$4,151	$2,716	$4,151
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$5,689	$2,139	$3,850	$2,519	$3,850
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$6,246	$2,777	$4,999	$3,271	$4,999
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$5,689	$2,122	$3,819	$2,499	$3,819
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$5,364	$2,435	$4,383	$2,868	$4,383
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,373	$486	$874	$572	$874
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$10,123	$2,611	$4,700	$3,075	$4,700
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$4,608	$1,992	$3,586	$2,346	$3,586
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$3,550	$1,197	$2,155	$1,410	$2,155
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$1,092	$299	$539	$353	$539
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$2,184	$303	$546	$357	$546
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$1,993	$308	$555	$363	$555
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$3,658	$1,532	$2,758	$1,805	$2,758
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$1,993	$308	$554	$363	$554
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,384	$2,492	$1,630	$2,492
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,104	$3,788	$2,478	$3,788
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$4,068	$1,713	$3,083	$2,018	$3,083
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$1,092	$260	$469	$307	$469
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$4,003	$1,683	$3,029	$1,982	$3,029
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,317	$2,371	xxx	xxx
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	xxx	$927	$1,668	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	xxx	$1,945	$3,500	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	xxx	$952	$1,713	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	xxx	$2,176	$3,916	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$263	$474	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	xxx	$883	$1,589	xxx	xxx
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	xxx	$587	$1,056	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	xxx	$2,039	$3,670	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	xxx	$3,000	$5,401	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$391	$705	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$413	$743	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	xxx	$1,473	$2,652	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	xxx	$1,403	$2,526	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	xxx	$930	$1,673	xxx	xxx
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	xxx	$1,313	$2,363	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	xxx	$995	$1,792	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	xxx	$357	$643	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	xxx	$2,037	$3,667	xxx	xxx
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	xxx	$618	$1,113	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	xxx	$689	$1,240	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,321	$2,378	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	xxx	$1,390	$2,503	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	xxx	$1,139	$2,051	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$266	$478	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$453	$815	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$264	$475	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	xxx	$742	$1,336	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	xxx	$1,417	$2,550	xxx	xxx
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	xxx	$1,261	$2,269	xxx	xxx
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	xxx	$1,829	$3,292	xxx	xxx
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	xxx	$2,520	$4,536	xxx	xxx
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$2,951	$625	$1,125	$736	$1,125
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	xxx	$996	$1,793	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,206	$3,970	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$356	$641	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,046	$3,682	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,311	$4,161	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,600	$2,881	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$2,948	$5,306	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,046	$3,682	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q09

	Origin		Destination				2Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,674	$4,812	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,046	$3,682	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,840	$3,311	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,046	$3,682	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,445	$4,401	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,206	$3,970	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,046	$3,682	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,533	$2,759	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$608	$1,095	xxx	xxx

1/ From Exhibit II-A-1
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 5

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q09

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	3Q2009 Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	xxx	$2,286	$4,114	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	xxx	$1,663	$2,994	xxx	xxx
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	xxx	$1,248	$2,247	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	xxx	$2,271	$4,089	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	xxx	$2,269	$4,085	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	xxx	$2,212	$3,982	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	xxx	$2,918	$5,253	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	xxx	$2,634	$4,741	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	xxx	$2,323	$4,181	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	xxx	$2,165	$3,898	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	xxx	$1,768	$3,182	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	xxx	$1,248	$2,247	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	xxx	$1,529	$2,752	xxx	xxx
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	xxx	$407	$732	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,818	$3,273	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,823	$3,281	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	xxx	$577	$1,038	xxx	xxx
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$7,715	$1,545	$2,782	$1,820	$2,782
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$4,851	$1,931	$3,475	$2,274	$3,475
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$4,851	$1,922	$3,460	$2,264	$3,460
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$7,715	$1,545	$2,781	$1,820	$2,781
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$8,086	$2,407	$4,333	$2,835	$4,333
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$5,019	$1,774	$3,193	$2,089	$3,193
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$8,561	$1,677	$3,019	$1,975	$3,019
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$8,093	$1,913	$3,443	$2,253	$3,443
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$8,093	$1,816	$3,269	$2,139	$3,269
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$5,516	$1,519	$2,733	$1,789	$2,733
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$8,093	$1,831	$3,296	$2,156	$3,296
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$7,715	$1,537	$2,766	$1,810	$2,766
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$4,851	$1,694	$3,049	$1,995	$3,049
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$10,560	$2,747	$4,944	$3,235	$4,944
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$10,560	$2,521	$4,538	$2,969	$4,538
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$7,715	$1,513	$2,724	$1,782	$2,724
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$4,851	$1,922	$3,460	$2,264	$3,460
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$8,093	$1,922	$3,460	$2,264	$3,460
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$7,715	$1,513	$2,724	$1,783	$2,724
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$6,649	$1,716	$3,089	$2,021	$3,089
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$5,324	$1,530	$2,755	$1,802	$2,755
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$7,715	$1,483	$2,669	$1,746	$2,669
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$5,411	$1,669	$3,004	$1,966	$3,004
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$7,715	$1,558	$2,804	$1,835	$2,804
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$10,560	$2,738	$4,929	$3,225	$4,929
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$6,465	$2,383	$4,289	$2,806	$4,289
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$4,778	$1,985	$3,574	$2,338	$3,574
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$8,093	$1,638	$2,948	$1,929	$2,948
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,157	$1,757	$3,162	$2,069	$3,162
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$8,093	$1,824	$3,284	$2,149	$3,284
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$8,093	$1,903	$3,425	$2,241	$3,425
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$7,875	$2,400	$4,319	$2,826	$4,319
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$8,939	$2,320	$4,176	$2,732	$4,176
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$8,093	$1,913	$3,443	$2,253	$3,443
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,651	$2,972	$1,944	$2,972
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,328	$4,190	$2,742	$4,190
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,911	$1,030	$1,854	$1,213	$1,854
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$2,341	$635	$1,143	$748	$1,143
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$4,450	$1,472	$2,649	$1,733	$2,649
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$7,028	$2,832	$5,098	$3,336	$5,098
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$5,814	$2,170	$3,906	$2,555	$3,906
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$6,093	$2,508	$4,515	$2,954	$4,515

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q09

	Origin		Destination				3Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$3,677	$1,287	$2,317	$1,516	$2,317
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$11,817	$2,489	$4,480	$2,932	$4,480
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$4,880	$1,685	$3,033	$1,984	$3,033
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,392	$1,293	$2,328	$1,523	$2,328
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$5,779	$2,191	$3,944	$2,580	$3,944
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$6,095	$2,168	$3,903	$2,554	$3,903
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,362	$1,297	$2,335	$1,528	$2,335
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,433	$1,268	$2,282	$1,493	$2,282
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,514	$1,297	$2,335	$1,528	$2,335
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$5,824	$2,188	$3,939	$2,577	$3,939
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$5,101	$2,355	$4,239	$2,774	$4,239
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$5,993	$2,184	$3,932	$2,573	$3,932
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$6,863	$2,836	$5,105	$3,340	$5,105
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$6,037	$2,167	$3,900	$2,552	$3,900
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$5,364	$2,487	$4,476	$2,929	$4,476
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,373	$496	$893	$584	$893
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$10,123	$2,667	$4,800	$3,141	$4,800
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$4,659	$2,035	$3,662	$2,396	$3,662
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$3,958	$1,222	$2,200	$1,440	$2,200
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$1,296	$306	$550	$360	$550
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$1,982	$310	$557	$365	$557
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$1,993	$315	$567	$371	$567
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$4,096	$1,565	$2,816	$1,843	$2,816
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$1,993	$315	$566	$370	$566
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,414	$2,545	$1,665	$2,545
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,149	$3,868	$2,531	$3,868
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$4,698	$1,749	$3,149	$2,060	$3,149
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$1,092	$266	$479	$313	$479
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$4,328	$1,719	$3,094	$2,024	$3,094
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,345	$2,421	xxx	xxx
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	xxx	$946	$1,703	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	xxx	$1,986	$3,574	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	xxx	$972	$1,750	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	xxx	$2,222	$3,999	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$269	$484	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	xxx	$901	$1,623	xxx	xxx
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	xxx	$599	$1,078	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	xxx	$2,082	$3,748	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	xxx	$3,064	$5,515	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$400	$719	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$422	$759	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	xxx	$1,505	$2,708	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	xxx	$1,433	$2,579	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	xxx	$949	$1,709	xxx	xxx
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	xxx	$1,341	$2,413	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	xxx	$1,017	$1,830	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	xxx	$365	$657	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	xxx	$2,080	$3,745	xxx	xxx
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	xxx	$631	$1,136	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	xxx	$703	$1,266	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,349	$2,428	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	xxx	$1,420	$2,556	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	xxx	$1,163	$2,094	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$271	$488	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$463	$833	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$269	$485	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	xxx	$758	$1,364	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$7,502	$1,447	$2,604	$1,704	$2,604
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$5,843	$1,287	$2,317	$1,516	$2,317
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$4,200	$1,868	$3,362	$2,200	$3,362
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	xxx	$2,573	$4,632	xxx	xxx
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$2,951	$638	$1,149	$752	$1,149
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	xxx	$1,017	$1,831	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,253	$4,055	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$364	$655	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,089	$3,760	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,360	$4,249	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,634	$2,942	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$3,010	$5,418	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,089	$3,760	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q09

	Origin		Destination				3Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,730	$4,914	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,089	$3,760	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,879	$3,382	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,089	$3,760	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,497	$4,494	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,253	$4,055	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,089	$3,760	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,565	$2,817	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$621	$1,118	xxx	xxx

1/ From Exhibit II-A-2
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 6

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 4Q09

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	4Q2009 Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	xxx	$2,313	$4,164	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	xxx	$1,683	$3,030	xxx	xxx
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	xxx	$1,264	$2,274	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	xxx	$2,299	$4,138	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	xxx	$2,297	$4,134	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	xxx	$2,239	$4,030	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	xxx	$2,953	$5,316	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	xxx	$2,666	$4,798	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	xxx	$2,351	$4,231	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	xxx	$2,192	$3,945	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	xxx	$1,789	$3,221	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	xxx	$1,264	$2,274	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	xxx	$1,547	$2,785	xxx	xxx
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	xxx	$412	$741	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,841	$3,313	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,845	$3,321	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	xxx	$584	$1,051	xxx	xxx
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$7,715	$1,564	$2,815	$1,842	$2,815
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$5,500	$1,954	$3,517	$2,301	$3,517
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$5,500	$1,946	$3,502	$2,291	$3,502
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$7,715	$1,564	$2,815	$1,842	$2,815
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$7,875	$2,437	$4,386	$2,870	$4,386
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$5,500	$1,795	$3,232	$2,114	$3,232
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$8,561	$1,697	$3,055	$1,999	$3,055
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$8,093	$1,936	$3,485	$2,280	$3,485
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$8,093	$1,838	$3,309	$2,165	$3,309
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$5,900	$1,537	$2,767	$1,810	$2,767
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$8,093	$1,853	$3,336	$2,183	$3,336
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$7,715	$1,556	$2,800	$1,832	$2,800
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$5,500	$1,715	$3,086	$2,019	$3,086
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$10,560	$2,780	$5,004	$3,274	$5,004
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$10,560	$2,551	$4,593	$3,005	$4,593
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$7,715	$1,532	$2,757	$1,804	$2,757
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$5,500	$1,946	$3,502	$2,291	$3,502
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$8,093	$1,946	$3,502	$2,291	$3,502
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$7,715	$1,532	$2,757	$1,804	$2,757
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$6,649	$1,737	$3,127	$2,046	$3,127
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$5,900	$1,549	$2,788	$1,824	$2,788
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$7,715	$1,501	$2,701	$1,768	$2,701
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$5,900	$1,689	$3,041	$1,989	$3,041
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$7,715	$1,577	$2,838	$1,857	$2,838
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$10,560	$2,772	$4,989	$3,264	$4,989
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$6,465	$2,411	$4,341	$2,840	$4,341
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$5,500	$2,009	$3,617	$2,367	$3,617
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$8,093	$1,658	$2,984	$1,952	$2,984
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,157	$1,778	$3,201	$2,094	$3,201
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$8,093	$1,847	$3,324	$2,175	$3,324
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$8,093	$1,926	$3,467	$2,268	$3,467
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$7,875	$2,429	$4,372	$2,860	$4,372
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$8,939	$2,348	$4,227	$2,765	$4,227
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$8,093	$1,936	$3,485	$2,280	$3,485
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,671	$3,008	$1,968	$3,008
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,356	$4,241	$2,775	$4,241
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,911	$1,043	$1,877	$1,228	$1,877
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$2,341	$643	$1,157	$757	$1,157
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$4,450	$1,490	$2,681	$1,754	$2,681
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$8,200	$2,867	$5,160	$3,376	$5,160
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$6,500	$2,196	$3,953	$2,586	$3,953

Comparison of NS Tariff Rates and
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	Origin		Destination				4Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$6,093	$2,538	$4,569	$2,990	$4,569
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$4,000	$1,303	$2,345	$1,534	$2,345
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$13,600	$2,519	$4,535	$2,967	$4,535
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$4,880	$1,705	$3,070	$2,008	$3,070
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,000	$1,309	$2,356	$1,542	$2,356
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$6,500	$2,218	$3,992	$2,612	$3,992
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$6,500	$2,195	$3,950	$2,585	$3,950
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,000	$1,313	$2,364	$1,547	$2,364
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,000	$1,283	$2,310	$1,511	$2,310
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,000	$1,313	$2,363	$1,546	$2,363
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$6,500	$2,215	$3,986	$2,608	$3,986
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$5,101	$2,384	$4,291	$2,807	$4,291
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$6,500	$2,211	$3,980	$2,604	$3,980
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$8,200	$2,871	$5,167	$3,381	$5,167
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$6,500	$2,193	$3,947	$2,583	$3,947
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$5,364	$2,517	$4,531	$2,964	$4,531
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,373	$502	$903	$591	$903
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$10,123	$2,699	$4,858	$3,179	$4,858
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$4,905	$2,059	$3,707	$2,425	$3,707
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$4,800	$1,237	$2,227	$1,457	$2,227
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$1,603	$309	$557	$364	$557
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$1,700	$313	$564	$369	$564
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$1,500	$319	$574	$375	$574
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$5,000	$1,584	$2,851	$1,865	$2,851
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$1,500	$318	$573	$375	$573
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,431	$2,575	$1,685	$2,575
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,175	$3,915	$2,562	$3,915
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$6,000	$1,771	$3,187	$2,085	$3,187
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$1,092	$269	$485	$317	$485
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$5,000	$1,740	$3,131	$2,049	$3,131
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,362	$2,451	xxx	xxx
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	xxx	$958	$1,724	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	xxx	$2,010	$3,618	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	xxx	$984	$1,771	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	xxx	$2,249	$4,048	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$272	$490	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	xxx	$912	$1,642	xxx	xxx
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	xxx	$606	$1,091	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	xxx	$2,108	$3,794	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	xxx	$3,101	$5,582	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$405	$728	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$427	$768	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	xxx	$1,523	$2,741	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	xxx	$1,450	$2,610	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	xxx	$961	$1,729	xxx	xxx
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	xxx	$1,357	$2,442	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	xxx	$1,029	$1,852	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	xxx	$369	$665	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	xxx	$2,106	$3,790	xxx	xxx
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	xxx	$639	$1,150	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	xxx	$712	$1,282	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,365	$2,458	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	xxx	$1,437	$2,587	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	xxx	$1,178	$2,120	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$275	$494	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$468	$843	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$273	$491	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	xxx	$767	$1,381	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$7,502	$1,464	$2,636	$1,725	$2,636
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$5,843	$1,303	$2,345	$1,535	$2,345
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$4,200	$1,890	$3,403	$2,226	$3,403
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$5,641	$2,605	$4,688	$3,067	$4,688
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$2,951	$646	$1,163	$761	$1,163
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	xxx	$1,029	$1,853	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,280	$4,104	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$368	$663	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,114	$3,806	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,389	$4,300	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,654	$2,977	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$3,047	$5,484	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 4Q09

	Origin		Destination				4Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,114	$3,806	xxx	xxx
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,763	$4,974	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,114	$3,806	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,901	$3,423	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,114	$3,806	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,527	$4,549	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,280	$4,104	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,114	$3,806	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,584	$2,851	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$629	$1,131	xxx	xxx

1/ From Exhibit II-A-3
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 7

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q09

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	2Q2009 Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	xxx	$2,238	$4,028	xxx	xxx
3. Belle	WV	Danville	IL	NS	2813980	xxx	$1,629	$2,932	xxx	xxx
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	xxx	$1,222	$2,200	xxx	xxx
10. Charleston	TN	Edgemoor	DE	NS	2812815	xxx	$2,224	$4,004	xxx	xxx
11. Edgemoor	DE	Chicago	IL	NS	2816130	xxx	$2,222	$4,000	xxx	xxx
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	xxx	$2,166	$3,899	xxx	xxx
13. Edgemoor	DE	Mahrt	AL	NS	2816130	xxx	$2,858	$5,144	xxx	xxx
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	xxx	$2,579	$4,642	xxx	xxx
15. Edgemoor	DE	Wabash	IN	NS	2816130	xxx	$2,274	$4,094	xxx	xxx
16. Lemoyne	AL	Giant	SC	NS	4810560	xxx	$2,120	$3,817	xxx	xxx
17. Loudon	TN	Braithwaite	LA	NS	2818512	xxx	$1,731	$3,116	xxx	xxx
18. Louisville	KY	Decatur	IL	NS	2819450	xxx	$1,222	$2,200	xxx	xxx
19. Louisville	KY	Lafayette	IN	NS	2819450	xxx	$1,497	$2,695	xxx	xxx
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	xxx	$398	$717	xxx	xxx
23. Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,781	$3,205	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,785	$3,213	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	xxx	$565	$1,017	xxx	xxx
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$7,715	$1,513	$2,724	$1,782	$2,724
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$4,537	$1,891	$3,403	$2,227	$3,403
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$4,537	$1,882	$3,388	$2,217	$3,388
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$7,715	$1,513	$2,724	$1,782	$2,724
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$9,563	$2,358	$4,244	$2,777	$4,244
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$4,537	$1,737	$3,127	$2,046	$3,127
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$8,561	$1,642	$2,956	$1,934	$2,956
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$8,093	$1,873	$3,372	$2,206	$3,372
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$8,093	$1,778	$3,201	$2,095	$3,201
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$5,132	$1,487	$2,677	$1,751	$2,677
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$8,093	$1,793	$3,227	$2,112	$3,227
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$7,715	$1,505	$2,709	$1,773	$2,709
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$4,537	$1,659	$2,986	$1,954	$2,986
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$10,560	$2,690	$4,841	$3,168	$4,841
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$10,560	$2,469	$4,443	$2,907	$4,443
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$7,715	$1,482	$2,667	$1,745	$2,667
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$4,537	$1,882	$3,388	$2,217	$3,388
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$8,093	$1,882	$3,388	$2,217	$3,388
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$7,715	$1,482	$2,668	$1,745	$2,668
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$6,649	$1,681	$3,025	$1,979	$3,025
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$5,132	$1,499	$2,697	$1,765	$2,697
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$7,715	$1,452	$2,614	$1,710	$2,614
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$5,132	$1,634	$2,942	$1,925	$2,942
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$7,715	$1,526	$2,746	$1,797	$2,746
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$10,560	$2,681	$4,827	$3,158	$4,827
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$6,465	$2,333	$4,200	$2,748	$4,200
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$4,537	$1,944	$3,499	$2,290	$3,499
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$8,093	$1,604	$2,887	$1,889	$2,887
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,157	$1,720	$3,097	$2,026	$3,097
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$8,093	$1,787	$3,216	$2,104	$3,216
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$8,093	$1,863	$3,354	$2,195	$3,354
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$9,563	$2,350	$4,230	$2,768	$4,230
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$8,939	$2,272	$4,089	$2,676	$4,089
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$8,093	$1,873	$3,372	$2,206	$3,372
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,617	$2,910	$1,904	$2,910
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,280	$4,103	$2,685	$4,103
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$1,911	$1,009	$1,816	$1,188	$1,816
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$2,341	$622	$1,120	$733	$1,120
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$4,450	$1,441	$2,594	$1,697	$2,594
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$6,246	$2,774	$4,992	$3,267	$4,992
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$5,689	$2,125	$3,824	$2,502	$3,824
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$6,093	$2,456	$4,421	$2,893	$4,421

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q09

	Origin		Destination				2Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$3,530	$1,260	$2,269	$1,484	$2,269
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$10,747	$2,437	$4,387	$2,871	$4,387
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$4,880	$1,650	$2,970	$1,943	$2,970
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,266	$2,280	$1,492	$2,280
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$5,689	$2,145	$3,862	$2,527	$3,862
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$5,689	$2,123	$3,822	$2,501	$3,822
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,271	$2,287	$1,496	$2,287
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,242	$2,235	$1,462	$2,235
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$3,149	$1,270	$2,287	$1,496	$2,287
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$5,689	$2,143	$3,857	$2,524	$3,857
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$5,101	$2,306	$4,151	$2,716	$4,151
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$5,689	$2,139	$3,850	$2,519	$3,850
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$6,246	$2,777	$4,999	$3,271	$4,999
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$5,689	$2,122	$3,819	$2,499	$3,819
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$5,364	$2,435	$4,383	$2,868	$4,383
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,373	$486	$874	$572	$874
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$10,123	$2,611	$4,700	$3,075	$4,700
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$4,608	$1,992	$3,586	$2,346	$3,586
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$3,550	$1,197	$2,155	$1,410	$2,155
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$1,092	$299	$539	$353	$539
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$2,184	$303	$546	$357	$546
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$1,993	$308	$555	$363	$555
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$3,658	$1,532	$2,758	$1,805	$2,758
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$1,993	$308	$554	$363	$554
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,384	$2,492	$1,630	$2,492
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,104	$3,788	$2,478	$3,788
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$4,068	$1,713	$3,083	$2,018	$3,083
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$1,092	$260	$469	$307	$469
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$4,003	$1,683	$3,029	$1,982	$3,029
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,317	$2,371	xxx	xxx
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	xxx	$927	$1,668	xxx	xxx
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	xxx	$1,945	$3,500	xxx	xxx
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	xxx	$952	$1,713	xxx	xxx
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	xxx	$2,176	$3,916	xxx	xxx
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$263	$474	xxx	xxx
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	xxx	$883	$1,589	xxx	xxx
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	xxx	$587	$1,056	xxx	xxx
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	xxx	$2,039	$3,670	xxx	xxx
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	xxx	$3,000	$5,401	xxx	xxx
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$391	$705	xxx	xxx
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	xxx	$413	$743	xxx	xxx
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	xxx	$1,473	$2,652	xxx	xxx
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	xxx	$1,403	$2,526	xxx	xxx
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	xxx	$930	$1,673	xxx	xxx
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	xxx	$1,313	$2,363	xxx	xxx
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	xxx	$995	$1,792	xxx	xxx
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	xxx	$357	$643	xxx	xxx
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	xxx	$2,037	$3,667	xxx	xxx
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	xxx	$618	$1,113	xxx	xxx
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	xxx	$689	$1,240	xxx	xxx
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	xxx	$1,321	$2,378	xxx	xxx
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	xxx	$1,390	$2,503	xxx	xxx
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	xxx	$1,139	$2,051	xxx	xxx
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$266	$478	xxx	xxx
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	xxx	$453	$815	xxx	xxx
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	xxx	$264	$475	xxx	xxx
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	xxx	$742	$1,336	xxx	xxx
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	xxx	$1,417	$2,550	xxx	xxx
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	xxx	$1,261	$2,269	xxx	xxx
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	xxx	$1,829	$3,292	xxx	xxx
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	xxx	$2,520	$4,536	xxx	xxx
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$2,951	$625	$1,125	$736	$1,125
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	xxx	$996	$1,793	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,206	$3,970	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$356	$641	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,046	$3,682	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,311	$4,161	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,600	$2,881	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$2,948	$5,306	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,046	$3,682	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q09

	Origin		Destination				2Q2009				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,674	$4,812	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,046	$3,682	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,840	$3,311	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,046	$3,682	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,445	$4,401	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,206	$3,970	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,046	$3,682	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,533	$2,759	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$608	$1,095	xxx	xxx

1/ From Exhibit II-A-1
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 8

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q10

	Origin		Destination				2Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves											
1.	**Removed**										
2.	Bayway	NJ	Waynesville	NC	NS	2819315	$12,014	$2,331	$4,196	$2,754	$4,196
3.	Belle	WV	Danville	IL	NS	2813980	$4,626	$1,699	$3,059	$2,008	$3,059
4.	**Removed**										
5.	**Removed**										
6.	**Removed**										
7.	**Removed**										
8.	**Removed**										
9.	Belle	WV	Wyandotte	MI	NS	2813934	$6,264	$1,266	$2,279	$1,496	$2,279
10.	Charleston	TN	Edgemoor	DE	NS	2812815	$13,638	$2,315	$4,168	$2,735	$4,168
11.	Edgemoor	DE	Chicago	IL	NS	2816130	$9,200	$2,315	$4,167	$2,735	$4,167
12.	Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,084	$2,257	$4,062	$2,666	$4,062
13.	Edgemoor	DE	Mahrt	AL	NS	2816130	$11,566	$2,980	$5,364	$3,521	$5,364
14.	Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$5,860	$2,689	$4,840	$3,177	$4,840
15.	Edgemoor	DE	Wabash	IN	NS	2816130	$6,193	$2,370	$4,266	$2,800	$4,266
16.	Lemoyne	AL	Giant	SC	NS	4810560	$4,800	$2,214	$3,986	$2,616	$3,986
17.	Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,809	$3,257	$2,137	$3,257
18.	Louisville	KY	Decatur	IL	NS	2819450	$3,302	$1,269	$2,284	$1,499	$2,284
19.	Louisville	KY	Lafayette	IN	NS	2819450	$3,752	$1,556	$2,801	$1,839	$2,801
20.	**Removed**										
21.	**Removed**										
22.	McIntosh	AL	Lemoyne	AL	NS	2812220	$1,500	$407	$732	$481	$732
23.	Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,852	$3,334	xxx	xxx
24.	Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,857	$3,342	xxx	xxx
25.	Reybold	DE	Morrisville	PA	NS	2819315	xxx	$581	$1,046	xxx	xxx
Exhibit B - Joint Moves											
1.	Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$7,937	$1,582	$2,848	$1,869	$2,848
2.	Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$5,500	$1,981	$3,566	$2,340	$3,566
3.	**Removed**										
4.	Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$5,579	$1,971	$3,548	$2,328	$3,548
5.	Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$7,715	$1,582	$2,848	$1,869	$2,848
6.	Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$8,495	$2,469	$4,444	$2,917	$4,444
7.	**Removed**										
8.	Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$5,569	$1,816	$3,269	$2,146	$3,269
9.	Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$8,561	$1,719	$3,093	$2,030	$3,093
10.	Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$8,214	$1,960	$3,529	$2,316	$3,529
11.	Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$8,093	$1,861	$3,349	$2,198	$3,349
12.	**Removed**										
13.	Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$5,900	$1,555	$2,798	$1,837	$2,798
14.	Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$8,163	$1,876	$3,377	$2,217	$3,377
15.	Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$8,975	$1,574	$2,833	$1,859	$2,833
16.	**Removed**										
17.	Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$5,500	$1,733	$3,119	$2,047	$3,119
18.	Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$11,892	$2,818	$5,072	$3,329	$5,072
19.	Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$11,262	$2,587	$4,656	$3,056	$4,656
20.	Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$7,715	$1,542	$2,775	$1,821	$2,775
21.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$5,579	$1,971	$3,548	$2,328	$3,548
22.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$8,252	$1,971	$3,548	$2,328	$3,548
23.	Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$7,715	$1,550	$2,789	$1,831	$2,789
24.	Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$7,283	$1,758	$3,165	$2,077	$3,165
25.	Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$5,917	$1,567	$2,820	$1,851	$2,820
26.	**Removed**										
27.	Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$7,967	$1,511	$2,719	$1,785	$2,719
28.	**Removed**										
29.	Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$5,917	$1,712	$3,082	$2,023	$3,082
30.	Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$8,975	$1,596	$2,872	$1,885	$2,872
31.	**Removed**										
32.	Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$11,226	$2,809	$5,056	$3,319	$5,056
33.	Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$6,465	$2,443	$4,397	$2,886	$4,397
34.	**Removed**										
35.	Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$5,590	$2,038	$3,669	$2,408	$3,669
36.	Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$8,093	$1,673	$3,012	$1,977	$3,012
37.	Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,157	$1,790	$3,222	$2,114	$3,222
38.	**Removed**										
39.	Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$8,093	$1,869	$3,365	$2,209	$3,365
40.	Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$8,660	$1,950	$3,510	$2,304	$3,510
41.	Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$7,875	$2,461	$4,429	$2,907	$4,429
42.	Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$8,939	$2,379	$4,282	$2,811	$4,282
43.	Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$9,000	$1,960	$3,529	$2,316	$3,529
44.	Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,703	$3,066	$2,012	$3,066
45.	Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,405	$4,329	$2,842	$4,329
46.	**Removed**										
47.	Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$3,000	$1,050	$1,890	$1,240	$1,890
48.	Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$2,519	$650	$1,171	$768	$1,171
49.	Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$4,450	$1,506	$2,711	$1,779	$2,711
50.	Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$8,200	$2,896	$5,212	$3,421	$5,212
51.	Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$6,976	$2,217	$3,990	$2,619	$3,990

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q10

	Origin		Destination				2Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$6,828	$2,561	$4,610	$3,026	$4,610
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$4,088	$1,313	$2,363	$1,551	$2,363
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$13,733	$2,540	$4,573	$3,001	$4,573
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$5,171	$1,720	$3,096	$2,032	$3,096
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,140	$1,319	$2,374	$1,558	$2,374
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$7,100	$2,239	$4,030	$2,645	$4,030
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$6,500	$2,215	$3,988	$2,617	$3,988
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,140	$1,323	$2,382	$1,563	$2,382
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,233	$1,293	$2,327	$1,527	$2,327
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,140	$1,323	$2,381	$1,563	$2,381
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$6,500	$2,236	$4,024	$2,641	$4,024
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$5,101	$2,407	$4,333	$2,844	$4,333
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$6,950	$2,232	$4,017	$2,637	$4,017
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$8,286	$2,900	$5,219	$3,426	$5,219
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$6,745	$2,214	$3,985	$2,615	$3,985
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$5,881	$2,572	$4,630	$3,039	$4,630
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,387	$503	$906	$595	$906
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$11,325	$2,738	$4,928	$3,234	$4,928
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$5,223	$2,102	$3,784	$2,484	$3,784
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$5,432	$1,242	$2,235	$1,467	$2,235
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$1,645	$307	$552	$363	$552
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$1,700	$311	$560	$367	$560
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$1,535	$317	$570	$374	$570
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$5,635	$1,597	$2,875	$1,887	$2,875
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$1,535	$316	$569	$374	$569
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,455	$2,619	$1,719	$2,619
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,216	$3,989	$2,618	$3,989
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$6,052	$1,784	$3,211	$2,107	$3,211
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$1,353	$267	$480	$315	$480
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$5,038	$1,763	$3,173	$2,083	$3,173
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$7,022	$1,371	$2,467	$1,619	$2,467
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$7,281	$966	$1,739	$1,142	$1,739
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$9,585	$2,035	$3,663	$2,404	$3,663
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$7,281	$993	$1,787	$1,173	$1,787
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$5,051	$2,270	$4,086	$2,682	$4,086
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$992	$269	$485	$318	$485
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$2,700	$917	$1,651	$1,084	$1,651
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,585	$612	$1,102	$723	$1,102
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$8,966	$2,127	$3,829	$2,513	$3,829
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$6,986	$3,122	$5,619	$3,688	$5,619
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$403	$725	$476	$725
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$427	$769	$505	$769
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$3,532	$1,535	$2,763	$1,814	$2,763
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$5,400	$1,460	$2,629	$1,725	$2,629
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$5,638	$964	$1,734	$1,138	$1,734
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$3,000	$1,366	$2,458	$1,613	$2,458
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$4,800	$1,036	$1,864	$1,224	$1,864
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,520	$368	$662	$435	$662
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,151	$2,125	$3,825	$2,510	$3,825
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,500	$641	$1,153	$757	$1,153
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,000	$715	$1,287	$844	$1,287
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$7,022	$1,375	$2,475	$1,624	$2,475
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$3,800	$1,449	$2,609	$1,712	$2,609
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,000	$1,184	$2,132	$1,399	$2,132
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,025	$273	$492	$323	$492
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,128	$440	$792	$520	$792
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$992	$270	$486	$319	$486
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,000	$770	$1,386	$910	$1,386
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$7,502	$1,481	$2,665	$1,749	$2,665
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$6,106	$1,313	$2,363	$1,551	$2,363
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$5,044	$1,904	$3,427	$2,250	$3,427
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$5,788	$2,616	$4,709	$3,091	$4,709
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$3,467	$648	$1,166	$765	$1,166
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	xxx	$1,036	$1,865	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,300	$4,140	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$366	$659	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,132	$3,838	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,410	$4,338	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,667	$3,000	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$3,075	$5,535	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q10

	Origin		Destination				2Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,132	$3,838	xxx	xxx
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,789	$5,020	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,132	$3,838	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,917	$3,451	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,132	$3,838	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,550	$4,590	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,300	$4,139	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,132	$3,838	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,596	$2,873	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$630	$1,134	xxx	xxx

1/ From Exhibit II-A-5
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 9

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q10

	Origin		Destination				3Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves											
1.	**Removed**										
2.	Bayway	NJ	Waynesville	NC	NS	2819315	$12,014	$2,310	$4,157	$2,729	$4,157
3.	Belle	WV	Danville	IL	NS	2813980	$4,626	$1,683	$3,030	$1,989	$3,030
4.	**Removed**										
5.	**Removed**										
6.	**Removed**										
7.	**Removed**										
8.	**Removed**										
9.	Belle	WV	Wyandotte	MI	NS	2813934	$6,264	$1,254	$2,258	$1,482	$2,258
10.	Charleston	TN	Edgemoor	DE	NS	2812815	$13,638	$2,294	$4,129	$2,710	$4,129
11.	Edgemoor	DE	Chicago	IL	NS	2816130	$9,200	$2,293	$4,128	$2,709	$4,128
12.	Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,084	$2,236	$4,024	$2,641	$4,024
13.	Edgemoor	DE	Mahrt	AL	NS	2816130	$11,566	$2,952	$5,314	$3,488	$5,314
14.	Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$5,860	$2,664	$4,795	$3,147	$4,795
15.	Edgemoor	DE	Wabash	IN	NS	2816130	$6,193	$2,348	$4,226	$2,774	$4,226
16.	Lemoyne	AL	Giant	SC	NS	4810560	$4,800	$2,193	$3,948	$2,591	$3,948
17.	Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,792	$3,226	$2,117	$3,226
18.	Louisville	KY	Decatur	IL	NS	2819450	$3,302	$1,257	$2,263	$1,485	$2,263
19.	Louisville	KY	Lafayette	IN	NS	2819450	$3,752	$1,542	$2,775	$1,821	$2,775
20.	**Removed**										
21.	**Removed**										
22.	McIntosh	AL	Lemoyne	AL	NS	2812220	$1,500	$403	$726	$476	$726
23.	Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,835	$3,302	xxx	xxx
24.	Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,839	$3,311	xxx	xxx
25.	Reybold	DE	Morrisville	PA	NS	2819315	xxx	$576	$1,036	xxx	xxx
Exhibit B - Joint Moves										$0	$0
1.	Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$8,975	$1,567	$2,821	$1,852	$2,821
2.	Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$5,950	$1,962	$3,532	$2,318	$3,532
3.	**Removed**										
4.	Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$5,950	$1,952	$3,514	$2,307	$3,514
5.	Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$8,975	$1,567	$2,821	$1,852	$2,821
6.	Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$11,400	$2,446	$4,402	$2,889	$4,402
7.	**Removed**										
8.	Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$5,950	$1,799	$3,239	$2,126	$3,239
9.	Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$8,561	$1,702	$3,064	$2,011	$3,064
10.	Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$9,000	$1,942	$3,496	$2,294	$3,496
11.	Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$9,000	$1,843	$3,318	$2,178	$3,318
12.	**Removed**										
13.	Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$6,000	$1,540	$2,772	$1,819	$2,772
14.	Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$9,000	$1,859	$3,346	$2,196	$3,346
15.	Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$8,975	$1,559	$2,806	$1,842	$2,806
16.	**Removed**										
17.	Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$5,950	$1,716	$3,090	$2,028	$3,090
18.	Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$14,555	$2,791	$5,024	$3,298	$5,024
19.	Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$14,555	$2,563	$4,613	$3,027	$4,613
20.	Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$8,975	$1,527	$2,749	$1,804	$2,749
21.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$5,950	$1,952	$3,514	$2,307	$3,514
22.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$9,000	$1,952	$3,514	$2,307	$3,514
23.	Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$8,975	$1,535	$2,763	$1,814	$2,763
24.	Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$8,975	$1,742	$3,136	$2,058	$3,136
25.	Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$6,000	$1,552	$2,793	$1,833	$2,793
26.	**Removed**										
27.	Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$8,975	$1,496	$2,694	$1,768	$2,694
28.	**Removed**										
29.	Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$6,000	$1,696	$3,054	$2,004	$3,054
30.	Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$8,975	$1,581	$2,845	$1,867	$2,845
31.	**Removed**										
32.	Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$14,555	$2,783	$5,009	$3,288	$5,009
33.	Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$6,465	$2,420	$4,356	$2,859	$4,356
34.	**Removed**										
35.	Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$5,950	$2,019	$3,635	$2,386	$3,635
36.	Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$9,000	$1,658	$2,984	$1,959	$2,984
37.	Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,157	$1,773	$3,191	$2,095	$3,191
38.	**Removed**										
39.	Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$9,000	$1,852	$3,334	$2,188	$3,334
40.	Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$9,000	$1,932	$3,477	$2,282	$3,477
41.	Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$11,400	$2,438	$4,388	$2,880	$4,388
42.	Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$12,588	$2,357	$4,242	$2,784	$4,242
43.	Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$9,000	$1,942	$3,496	$2,294	$3,496
44.	Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,687	$3,037	$1,994	$3,037
45.	Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,383	$4,289	$2,815	$4,289
46.	**Removed**										
47.	Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$3,000	$1,040	$1,872	$1,229	$1,872
48.	Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$3,356	$644	$1,160	$761	$1,160
49.	Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$5,425	$1,492	$2,685	$1,762	$2,685
50.	Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$8,774	$2,869	$5,163	$3,389	$5,163
51.	Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$9,200	$2,196	$3,953	$2,595	$3,953
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$10,272	$2,537	$4,567	$2,998	$4,567

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q10

	Origin		Destination				3Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$4,700	$1,300	$2,341	$1,536	$2,341
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$13,865	$2,517	$4,530	$2,973	$4,530
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$6,920	$1,704	$3,067	$2,013	$3,067
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,306	$2,352	$1,544	$2,352
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$9,200	$2,218	$3,992	$2,620	$3,992
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$9,200	$2,195	$3,951	$2,593	$3,951
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,311	$2,359	$1,549	$2,359
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,281	$2,305	$1,513	$2,305
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,311	$2,359	$1,548	$2,359
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$9,200	$2,215	$3,987	$2,617	$3,987
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$5,101	$2,384	$4,292	$2,817	$4,292
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$9,200	$2,211	$3,980	$2,612	$3,980
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$8,774	$2,872	$5,170	$3,394	$5,170
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$9,200	$2,193	$3,947	$2,591	$3,947
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$6,075	$2,548	$4,587	$3,010	$4,587
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,450	$499	$898	$589	$898
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$13,730	$2,712	$4,882	$3,204	$4,882
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$6,389	$2,083	$3,749	$2,461	$3,749
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$8,395	$1,230	$2,214	$1,453	$2,214
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$1,700	$304	$547	$359	$547
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$1,700	$308	$555	$364	$555
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$1,700	$314	$565	$371	$565
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$8,611	$1,582	$2,848	$1,869	$2,848
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$1,700	$313	$564	$370	$564
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,441	$2,594	$1,703	$2,594
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,195	$3,952	$2,594	$3,952
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$6,295	$1,767	$3,181	$2,088	$3,181
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$2,577	$264	$476	$312	$476
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$5,215	$1,746	$3,143	$2,063	$3,143
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$7,022	$1,358	$2,444	$1,604	$2,444
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$7,281	$957	$1,723	$1,131	$1,723
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$9,585	$2,016	$3,629	$2,382	$3,629
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$7,281	$984	$1,770	$1,162	$1,770
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$5,051	$2,249	$4,048	$2,657	$4,048
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$992	$267	$480	$315	$480
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$2,700	$909	$1,635	$1,073	$1,635
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,585	$606	$1,092	$716	$1,092
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$8,966	$2,107	$3,793	$2,490	$3,793
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$6,986	$3,092	$5,566	$3,653	$5,566
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$399	$719	$472	$719
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$423	$762	$500	$762
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$3,532	$1,521	$2,737	$1,797	$2,737
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$5,400	$1,447	$2,604	$1,709	$2,604
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$5,638	$954	$1,718	$1,128	$1,718
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$3,000	$1,353	$2,435	$1,598	$2,435
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$4,800	$1,026	$1,847	$1,212	$1,847
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,520	$364	$656	$431	$656
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,151	$2,105	$3,789	$2,487	$3,789
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,500	$635	$1,142	$750	$1,142
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,000	$708	$1,274	$836	$1,274
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$7,022	$1,362	$2,452	$1,609	$2,452
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$3,800	$1,436	$2,584	$1,696	$2,584
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,000	$1,173	$2,112	$1,386	$2,112
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,025	$271	$487	$320	$487
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,128	$436	$784	$515	$784
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$992	$267	$481	$316	$481
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,000	$763	$1,373	$901	$1,373
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$7,502	$1,467	$2,640	$1,733	$2,640
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$7,332	$1,301	$2,341	$1,536	$2,341
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$9,000	$1,886	$3,395	$2,229	$3,395
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$7,347	$2,592	$4,665	$3,062	$4,665
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$4,500	$642	$1,155	$758	$1,155
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	xxx	$1,026	$1,847	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,278	$4,101	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$363	$653	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,113	$3,803	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,388	$4,298	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,651	$2,972	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$3,046	$5,484	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,112	$3,802	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q10

	Origin		Destination				3Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,763	$4,973	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,112	$3,802	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,899	$3,418	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,113	$3,803	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,526	$4,547	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,278	$4,101	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,112	$3,802	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,581	$2,846	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$624	$1,123	xxx	xxx

1/ From Exhibit II-A-6
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 10

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 4Q10

Origin City (1)	ST	Destination City (2)	ST	Railroad(s) (3)	Commodity (4)	4Q2010 Tariff Rate 1/ (5)	Phase III Cost 1/ (6)	Jurisdictional Threshold 1/ (7)	SAC Rate 2/ (8)	STB Maximum Rate 3/ (9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	$12,014	$2,352	$4,234	$2,779	$4,234
3. Belle	WV	Danville	IL	NS	2813980	$4,626	$1,714	$3,086	$2,025	$3,086
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	$6,264	$1,277	$2,299	$1,509	$2,299
10. Charleston	TN	Edgemoor	DE	NS	2812815	$13,638	$2,336	$4,205	$2,760	$4,205
11. Edgemoor	DE	Chicago	IL	NS	2816130	$9,200	$2,336	$4,204	$2,759	$4,204
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,084	$2,277	$4,098	$2,690	$4,098
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$11,566	$3,007	$5,412	$3,552	$5,412
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$5,860	$2,713	$4,883	$3,205	$4,883
15. Edgemoor	DE	Wabash	IN	NS	2816130	$6,193	$2,391	$4,304	$2,825	$4,304
16. Lemoyne	AL	Giant	SC	NS	4810560	$4,800	$2,234	$4,021	$2,639	$4,021
17. Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,825	$3,285	$2,156	$3,285
18. Louisville	KY	Decatur	IL	NS	2819450	$3,302	$1,280	$2,305	$1,513	$2,305
19. Louisville	KY	Lafayette	IN	NS	2819450	$3,752	$1,570	$2,826	$1,855	$2,826
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$1,500	$411	$739	$485	$739
23. Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,868	$3,363	xxx	xxx
24. Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,873	$3,372	xxx	xxx
25. Reybold	DE	Morrisville	PA	NS	2819315	xxx	$586	$1,055	xxx	xxx
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$8,975	$1,596	$2,873	$1,886	$2,873
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$5,950	$1,998	$3,597	$2,361	$3,597
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$5,950	$1,988	$3,579	$2,349	$3,579
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$8,975	$1,596	$2,873	$1,886	$2,873
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$11,400	$2,491	$4,483	$2,943	$4,483
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$5,950	$1,832	$3,298	$2,165	$3,298
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$8,561	$1,734	$3,121	$2,048	$3,121
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$9,000	$1,978	$3,560	$2,337	$3,560
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$9,000	$1,877	$3,379	$2,218	$3,379
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$6,000	$1,568	$2,823	$1,853	$2,823
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$9,000	$1,893	$3,407	$2,236	$3,407
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$8,975	$1,588	$2,858	$1,876	$2,858
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$5,950	$1,748	$3,146	$2,065	$3,146
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$14,555	$2,843	$5,117	$3,359	$5,117
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$14,555	$2,610	$4,698	$3,083	$4,698
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$8,975	$1,555	$2,800	$1,837	$2,800
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$5,950	$1,988	$3,579	$2,349	$3,579
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$9,000	$1,988	$3,579	$2,349	$3,579
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$8,975	$1,563	$2,814	$1,847	$2,814
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$8,975	$1,774	$3,193	$2,096	$3,193
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$6,000	$1,580	$2,845	$1,867	$2,845
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$8,975	$1,524	$2,743	$1,801	$2,743
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$6,000	$1,728	$3,110	$2,041	$3,110
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$8,975	$1,610	$2,898	$1,902	$2,898
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$14,555	$2,834	$5,101	$3,348	$5,101
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$6,465	$2,464	$4,436	$2,911	$4,436
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$5,950	$2,056	$3,702	$2,429	$3,702
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$9,000	$1,688	$3,039	$1,995	$3,039
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,214	$1,806	$3,250	$2,133	$3,250
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$9,000	$1,886	$3,395	$2,228	$3,395
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$9,000	$1,967	$3,541	$2,324	$3,541
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$11,400	$2,482	$4,468	$2,933	$4,468
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$12,588	$2,400	$4,320	$2,836	$4,320
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$9,000	$1,978	$3,560	$2,337	$3,560
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,719	$3,093	$2,030	$3,093
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,427	$4,368	$2,867	$4,368
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$3,000	$1,059	$1,906	$1,251	$1,906
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$3,356	$656	$1,181	$775	$1,181
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$5,425	$1,519	$2,735	$1,795	$2,735
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$8,774	$2,921	$5,259	$3,451	$5,259
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$9,200	$2,237	$4,026	$2,642	$4,026
52. Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$10,272	$2,584	$4,651	$3,053	$4,651

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 4Q10

	Origin		Destination				4Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$4,700	$1,324	$2,384	$1,565	$2,384
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$13,865	$2,563	$4,613	$3,028	$4,613
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$6,920	$1,736	$3,124	$2,050	$3,124
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,331	$2,395	$1,572	$2,395
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$9,200	$2,259	$4,066	$2,668	$4,066
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$9,200	$2,235	$4,023	$2,641	$4,023
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,335	$2,403	$1,577	$2,403
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,304	$2,348	$1,541	$2,348
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$4,700	$1,335	$2,403	$1,577	$2,403
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$9,200	$2,256	$4,060	$2,665	$4,060
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$5,101	$2,428	$4,371	$2,869	$4,371
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$9,200	$2,252	$4,053	$2,660	$4,053
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$8,774	$2,925	$5,266	$3,456	$5,266
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$9,200	$2,233	$4,020	$2,639	$4,020
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$6,075	$2,595	$4,671	$3,066	$4,671
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,450	$508	$914	$600	$914
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$13,730	$2,762	$4,971	$3,263	$4,971
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$6,389	$2,121	$3,818	$2,506	$3,818
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$8,395	$1,253	$2,255	$1,480	$2,255
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$1,700	$310	$557	$366	$557
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$1,700	$314	$565	$371	$565
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$1,700	$319	$575	$377	$575
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$8,611	$1,611	$2,900	$1,903	$2,900
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$1,700	$319	$574	$377	$574
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$5,713	$1,468	$2,642	$1,734	$2,642
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,013	$2,236	$4,024	$2,641	$4,024
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$6,295	$1,800	$3,239	$2,126	$3,239
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$2,577	$269	$485	$318	$485
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$5,215	$1,779	$3,201	$2,101	$3,201
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$7,022	$1,383	$2,489	$1,634	$2,489
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$7,281	$975	$1,755	$1,152	$1,755
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$9,585	$2,053	$3,696	$2,426	$3,696
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$7,281	$1,002	$1,803	$1,183	$1,803
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$5,051	$2,290	$4,122	$2,706	$4,122
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$992	$272	$489	$321	$489
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$2,700	$925	$1,666	$1,093	$1,666
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,585	$618	$1,112	$730	$1,112
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$8,966	$2,146	$3,863	$2,536	$3,863
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$6,986	$3,149	$5,669	$3,721	$5,669
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$407	$732	$480	$732
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$431	$776	$509	$776
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$3,532	$1,549	$2,788	$1,830	$2,788
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$5,400	$1,473	$2,652	$1,741	$2,652
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$5,638	$972	$1,750	$1,148	$1,750
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$3,000	$1,378	$2,480	$1,628	$2,480
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$4,800	$1,045	$1,881	$1,234	$1,881
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,520	$371	$668	$439	$668
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,151	$2,144	$3,859	$2,533	$3,859
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,500	$646	$1,163	$763	$1,163
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,000	$721	$1,298	$852	$1,298
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$7,022	$1,387	$2,497	$1,639	$2,497
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$3,800	$1,462	$2,632	$1,728	$2,632
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,000	$1,195	$2,151	$1,412	$2,151
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,025	$276	$496	$326	$496
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,128	$444	$799	$524	$799
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$992	$272	$490	$322	$490
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,000	$777	$1,399	$918	$1,399
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$7,502	$1,494	$2,689	$1,765	$2,689
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$7,332	$1,324	$2,384	$1,565	$2,384
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$9,000	$1,921	$3,458	$2,270	$3,458
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$7,347	$2,639	$4,751	$3,118	$4,751
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$4,500	$653	$1,176	$772	$1,176
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	xxx	$1,045	$1,881	xxx	xxx
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,320	$4,176	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$370	$665	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,151	$3,873	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,432	$4,377	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,682	$3,027	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$3,103	$5,585	xxx	xxx
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,151	$3,872	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 4Q10

	Origin		Destination				4Q2010				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,813	$5,064	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,151	$3,872	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,934	$3,481	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,151	$3,873	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,573	$4,631	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,320	$4,176	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,151	$3,873	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,610	$2,898	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$635	$1,144	xxx	xxx

1/ From Exhibit II-A-7
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 11

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 1Q11

	Origin		Destination				1Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves											
1.	**Removed**										
2.	Bayway	NJ	Waynesville	NC	NS	2819315	$12,855	$2,425	$4,364	$2,852	$4,364
3.	Belle	WV	Danville	IL	NS	2813980	$11,836	$1,767	$3,181	$2,079	$3,181
4.	**Removed**										
5.	**Removed**										
6.	**Removed**										
7.	**Removed**										
8.	**Removed**										
9.	Belle	WV	Wyandotte	MI	NS	2813934	$8,814	$1,317	$2,370	$1,549	$2,370
10.	Charleston	TN	Edgemoor	DE	NS	2812815	$18,562	$2,408	$4,334	$2,832	$4,334
11.	Edgemoor	DE	Chicago	IL	NS	2816130	$9,844	$2,408	$4,334	$2,832	$4,334
12.	Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,510	$2,347	$4,225	$2,760	$4,225
13.	Edgemoor	DE	Mahrt	AL	NS	2816130	$12,376	$3,099	$5,579	$3,645	$5,579
14.	Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$6,270	$2,796	$5,034	$3,289	$5,034
15.	Edgemoor	DE	Wabash	IN	NS	2816130	$6,627	$2,465	$4,437	$2,899	$4,437
16.	Lemoyne	AL	Giant	SC	NS	4810560	$5,136	$2,303	$4,145	$2,708	$4,145
17.	Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,882	$3,387	$2,213	$3,387
18.	Louisville	KY	Decatur	IL	NS	2819450	$4,596	$1,320	$2,376	$1,552	$2,376
19.	Louisville	KY	Lafayette	IN	NS	2819450	$6,139	$1,619	$2,913	$1,904	$2,913
20.	**Removed**										
21.	**Removed**										
22.	McIntosh	AL	Lemoyne	AL	NS	2812220	$1,605	$423	$762	$498	$762
23.	Reybold	DE	Detroit	MI	NS	2819315	xxx	$1,926	$3,467	xxx	xxx
24.	Reybold	DE	Fort Mill	SC	NS	2819315	xxx	$1,931	$3,476	xxx	xxx
25.	Reybold	DE	Morrisville	PA	NS	2819315	xxx	$604	$1,088	xxx	xxx
Exhibit B - Joint Moves											
1.	Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$12,100	$1,646	$2,962	$1,935	$2,962
2.	Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$11,812	$2,060	$3,708	$2,423	$3,708
3.	**Removed**										
4.	Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$11,812	$2,050	$3,690	$2,411	$3,690
5.	Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$12,100	$1,646	$2,962	$1,935	$2,962
6.	Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$19,539	$2,568	$4,622	$3,020	$4,622
7.	**Removed**										
8.	Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$11,812	$1,889	$3,400	$2,222	$3,400
9.	Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$10,242	$1,787	$3,217	$2,102	$3,217
10.	Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$14,136	$2,039	$3,670	$2,398	$3,670
11.	Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$14,136	$1,935	$3,483	$2,276	$3,483
12.	**Removed**										
13.	Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$8,533	$1,617	$2,910	$1,902	$2,910
14.	Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$14,136	$1,951	$3,513	$2,295	$3,513
15.	Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$12,100	$1,637	$2,946	$1,925	$2,946
16.	**Removed**										
17.	Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$11,812	$1,802	$3,244	$2,119	$3,244
18.	Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$22,732	$2,931	$5,275	$3,447	$5,275
19.	Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$22,732	$2,690	$4,843	$3,164	$4,843
20.	Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$12,100	$1,603	$2,886	$1,886	$2,886
21.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$11,812	$2,050	$3,690	$2,411	$3,690
22.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$14,136	$2,050	$3,690	$2,411	$3,690
23.	Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$12,100	$1,612	$2,901	$1,896	$2,901
24.	Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$13,450	$1,829	$3,292	$2,151	$3,292
25.	Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$8,533	$1,629	$2,933	$1,916	$2,933
26.	**Removed**										
27.	Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$12,100	$1,571	$2,828	$1,848	$2,828
28.	**Removed**										
29.	Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$8,533	$1,781	$3,206	$2,095	$3,206
30.	Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$12,100	$1,660	$2,987	$1,952	$2,987
31.	**Removed**										
32.	Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$22,732	$2,922	$5,259	$3,436	$5,259
33.	Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$13,535	$2,540	$4,573	$2,988	$4,573
34.	**Removed**										
35.	Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$11,812	$2,120	$3,816	$2,493	$3,816
36.	Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$14,136	$1,740	$3,133	$2,047	$3,133
37.	Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,531	$1,861	$3,351	$2,189	$3,351
38.	**Removed**										
39.	Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$14,136	$1,944	$3,500	$2,287	$3,500
40.	Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$14,136	$2,028	$3,651	$2,385	$3,651
41.	Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$19,539	$2,559	$4,606	$3,010	$4,606
42.	Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$19,888	$2,474	$4,454	$2,910	$4,454
43.	Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$14,136	$2,039	$3,670	$2,398	$3,670
44.	Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,772	$3,189	$2,084	$3,189
45.	Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,502	$4,503	$2,942	$4,503
46.	**Removed**										
47.	Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$4,170	$1,092	$1,965	$1,284	$1,965
48.	Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$3,591	$676	$1,218	$796	$1,218
49.	Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$7,690	$1,566	$2,819	$1,842	$2,819
50.	Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$9,388	$3,012	$5,421	$3,542	$5,421
51.	Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$9,844	$2,306	$4,150	$2,712	$4,150

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 1Q11

	Origin		Destination				1Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$10,991	$2,664	$4,795	$3,133	$4,795
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$5,029	$1,365	$2,457	$1,606	$2,457
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$24,453	$2,642	$4,756	$3,107	$4,756
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$7,404	$1,789	$3,220	$2,104	$3,220
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,372	$2,469	$1,613	$2,469
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$9,844	$2,328	$4,191	$2,739	$4,191
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$9,844	$2,304	$4,148	$2,710	$4,148
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,376	$2,477	$1,619	$2,477
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,345	$2,420	$1,582	$2,420
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,376	$2,477	$1,618	$2,477
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$9,844	$2,325	$4,186	$2,735	$4,186
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$6,205	$2,503	$4,506	$2,944	$4,506
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$9,844	$2,321	$4,178	$2,730	$4,178
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$9,388	$3,016	$5,428	$3,547	$5,428
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$9,844	$2,302	$4,144	$2,708	$4,144
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$12,624	$2,675	$4,815	$3,146	$4,815
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,486	$524	$942	$616	$942
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$21,912	$2,847	$5,125	$3,349	$5,125
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$8,384	$2,187	$3,936	$2,572	$3,936
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$8,983	$1,292	$2,325	$1,519	$2,325
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$2,400	$319	$574	$375	$574
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$2,900	$323	$582	$380	$582
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$2,400	$329	$593	$387	$593
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$9,214	$1,661	$2,990	$1,953	$2,990
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$2,400	$329	$592	$387	$592
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,513	$2,723	$1,779	$2,723
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,305	$4,149	$2,711	$4,149
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$8,928	$1,855	$3,339	$2,182	$3,339
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$2,758	$278	$500	$326	$500
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$6,899	$1,833	$3,300	$2,156	$3,300
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,426	$2,566	$1,677	$2,566
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$10,487	$1,005	$1,809	$1,182	$1,809
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$12,839	$2,117	$3,810	$2,489	$3,810
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$10,487	$1,033	$1,859	$1,214	$1,859
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$8,926	$2,361	$4,250	$2,777	$4,250
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$280	$504	$329	$504
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$3,431	$954	$1,717	$1,122	$1,717
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,585	$637	$1,146	$749	$1,146
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$9,085	$2,212	$3,982	$2,602	$3,982
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$8,409	$3,247	$5,844	$3,818	$5,844
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$419	$754	$493	$754
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$444	$800	$523	$800
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$3,825	$1,597	$2,874	$1,878	$2,874
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$6,224	$1,519	$2,734	$1,786	$2,734
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$6,210	$1,002	$1,804	$1,179	$1,804
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$3,411	$1,420	$2,557	$1,671	$2,557
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$5,505	$1,077	$1,939	$1,267	$1,939
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,553	$383	$689	$450	$689
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,246	$2,210	$3,978	$2,599	$3,978
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,560	$666	$1,199	$784	$1,199
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,051	$743	$1,338	$874	$1,338
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$8,033	$1,430	$2,574	$1,682	$2,574
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$3,922	$1,507	$2,713	$1,773	$2,713
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,066	$1,232	$2,217	$1,449	$2,217
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,025	$284	$511	$334	$511
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,128	$457	$823	$538	$823
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,005	$281	$505	$330	$505
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,120	$801	$1,442	$942	$1,442
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$8,265	$1,540	$2,772	$1,811	$2,772
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$7,845	$1,365	$2,458	$1,606	$2,458
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$10,777	$1,980	$3,565	$2,329	$3,565
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$9,864	$2,721	$4,897	$3,200	$4,897
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$4,500	$674	$1,212	$792	$1,212
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$9,265	$1,078	$1,940	$1,267	$1,940
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	xxx	$2,392	$4,305	xxx	xxx
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	xxx	$381	$686	xxx	xxx
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	xxx	$2,218	$3,992	xxx	xxx
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	xxx	$2,507	$4,512	xxx	xxx
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	xxx	$1,734	$3,121	xxx	xxx
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	xxx	$3,198	$5,757	xxx	xxx

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 1Q11

	Origin		Destination				1Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	xxx	$2,218	$3,992	xxx	xxx
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	xxx	$2,900	$5,221	xxx	xxx
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	xxx	$2,218	$3,992	xxx	xxx
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	xxx	$1,994	$3,589	xxx	xxx
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	xxx	$2,218	$3,992	xxx	xxx
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	xxx	$2,652	$4,774	xxx	xxx
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	xxx	$2,392	$4,305	xxx	xxx
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	xxx	$2,218	$3,992	xxx	xxx
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	xxx	$1,660	$2,988	xxx	xxx
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	xxx	$655	$1,179	xxx	xxx

1/ From Exhibit II-A-8
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 12

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q11

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	2Q2011 Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	$12,855	$2,523	$4,541	$2,967	$4,541
3. Belle	WV	Danville	IL	NS	2813980	$11,836	$1,839	$3,310	$2,163	$3,310
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	$8,814	$1,370	$2,466	$1,612	$2,466
10. Charleston	TN	Edgemoor	DE	NS	2812815	$18,562	$2,505	$4,510	$2,947	$4,510
11. Edgemoor	DE	Chicago	IL	NS	2816130	$9,844	$2,505	$4,509	$2,947	$4,509
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,510	$2,442	$4,396	$2,872	$4,396
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$12,376	$3,225	$5,805	$3,793	$5,805
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$6,270	$2,910	$5,237	$3,422	$5,237
15. Edgemoor	DE	Wabash	IN	NS	2816130	$6,627	$2,565	$4,616	$3,016	$4,616
16. Lemoyne	AL	Giant	SC	NS	4810560	$5,136	$2,396	$4,313	$2,818	$4,313
17. Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,958	$3,524	$2,303	$3,524
18. Louisville	KY	Decatur	IL	NS	2819450	$4,596	$1,373	$2,472	$1,615	$2,472
19. Louisville	KY	Lafayette	IN	NS	2819450	$6,139	$1,684	$3,031	$1,981	$3,031
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$1,605	$440	$793	$518	$793
23. Reybold	DE	Detroit	MI	NS	2819315	$7,812	$2,004	$3,607	$2,357	$3,607
24. Reybold	DE	Fort Mill	SC	NS	2819315	$6,108	$2,009	$3,616	$2,363	$3,616
25. Reybold	DE	Morrisville	PA	NS	2819315	$3,614	$629	$1,132	$740	$1,132
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$12,100	$1,712	$3,082	$2,014	$3,082
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$11,812	$2,144	$3,859	$2,521	$3,859
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$11,812	$2,133	$3,839	$2,508	$3,839
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$12,100	$1,712	$3,082	$2,014	$3,082
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$19,539	$2,672	$4,809	$3,142	$4,809
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$11,812	$1,966	$3,538	$2,312	$3,538
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$10,242	$1,860	$3,348	$2,187	$3,348
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$14,136	$2,121	$3,819	$2,495	$3,819
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$14,136	$2,014	$3,624	$2,368	$3,624
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$8,533	$1,682	$3,028	$1,979	$3,028
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$14,136	$2,030	$3,655	$2,388	$3,655
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$12,100	$1,703	$3,066	$2,003	$3,066
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$11,812	$1,875	$3,375	$2,205	$3,375
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$22,732	$3,049	$5,489	$3,586	$5,489
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$22,732	$2,799	$5,039	$3,292	$5,039
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$12,100	$1,668	$3,003	$1,962	$3,003
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$11,812	$2,133	$3,839	$2,508	$3,839
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$14,136	$2,133	$3,839	$2,508	$3,839
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$12,100	$1,677	$3,019	$1,972	$3,019
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$13,450	$1,903	$3,425	$2,238	$3,425
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$8,533	$1,695	$3,051	$1,994	$3,051
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$12,100	$1,635	$2,942	$1,923	$2,942
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$8,533	$1,853	$3,336	$2,179	$3,336
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$12,100	$1,727	$3,108	$2,031	$3,108
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$22,732	$3,040	$5,472	$3,575	$5,472
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$13,535	$2,643	$4,758	$3,109	$4,758
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$11,812	$2,206	$3,970	$2,594	$3,970
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$14,136	$1,811	$3,260	$2,130	$3,260
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$4,606	$1,937	$3,486	$2,278	$3,486
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$14,136	$2,023	$3,641	$2,379	$3,641
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$14,136	$2,110	$3,798	$2,482	$3,798
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$19,539	$2,663	$4,793	$3,132	$4,793
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$19,888	$2,574	$4,634	$3,028	$4,634
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$14,136	$2,121	$3,818	$2,495	$3,818
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,843	$3,318	$2,168	$3,318
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,603	$4,685	$3,061	$4,685
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$4,170	$1,136	$2,045	$1,336	$2,045
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$3,591	$704	$1,267	$828	$1,267
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$7,690	$1,630	$2,933	$1,917	$2,933
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$9,388	$3,134	$5,640	$3,685	$5,640
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$9,844	$2,399	$4,318	$2,822	$4,318

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q11

	Origin		Destination				2Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$10,991	$2,772	$4,989	$3,260	$4,989
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$5,029	$1,421	$2,557	$1,671	$2,557
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$24,453	$2,749	$4,948	$3,233	$4,948
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$7,404	$1,862	$3,351	$2,189	$3,351
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,427	$2,569	$1,679	$2,569
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$9,844	$2,423	$4,361	$2,849	$4,361
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$9,844	$2,397	$4,315	$2,820	$4,315
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,432	$2,577	$1,684	$2,577
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,399	$2,518	$1,646	$2,518
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,432	$2,577	$1,684	$2,577
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$9,844	$2,419	$4,355	$2,846	$4,355
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$10,944	$2,605	$4,688	$3,063	$4,688
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$9,844	$2,415	$4,347	$2,841	$4,347
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$9,388	$3,138	$5,648	$3,690	$5,648
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$9,844	$2,396	$4,312	$2,817	$4,312
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$12,624	$2,784	$5,010	$3,274	$5,010
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,486	$545	$981	$641	$981
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$21,912	$2,962	$5,332	$3,484	$5,332
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$8,384	$2,275	$4,095	$2,676	$4,095
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$8,983	$1,344	$2,419	$1,581	$2,419
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$2,400	$332	$598	$391	$598
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$2,900	$337	$606	$396	$606
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$2,400	$343	$617	$403	$617
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$9,214	$1,728	$3,111	$2,033	$3,111
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$2,400	$342	$616	$402	$616
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,574	$2,834	$1,851	$2,834
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,398	$4,317	$2,820	$4,317
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$8,928	$1,930	$3,474	$2,270	$3,474
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$2,758	$289	$520	$340	$520
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$6,899	$1,908	$3,434	$2,244	$3,434
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,483	$2,670	$1,745	$2,670
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$10,487	$1,046	$1,882	$1,230	$1,882
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$12,839	$2,202	$3,964	$2,590	$3,964
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$10,487	$1,074	$1,934	$1,264	$1,934
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$8,926	$2,456	$4,422	$2,889	$4,422
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$291	$525	$343	$525
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$3,431	$993	$1,787	$1,167	$1,787
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,585	$662	$1,192	$779	$1,192
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$8,966	$2,302	$4,144	$2,707	$4,144
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$6,986	$3,378	$6,080	$3,973	$6,080
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$436	$785	$513	$785
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$462	$832	$544	$832
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$3,532	$1,661	$2,990	$1,954	$2,990
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$5,400	$1,580	$2,845	$1,859	$2,845
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$5,638	$1,043	$1,877	$1,226	$1,877
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$3,000	$1,478	$2,660	$1,738	$2,660
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$4,800	$1,121	$2,017	$1,318	$2,017
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,520	$398	$717	$468	$717
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,151	$2,299	$4,139	$2,704	$4,139
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,500	$693	$1,248	$815	$1,248
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,000	$773	$1,392	$910	$1,392
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$7,022	$1,488	$2,678	$1,750	$2,678
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$3,800	$1,568	$2,823	$1,845	$2,823
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,000	$1,282	$2,307	$1,507	$2,307
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,025	$296	$532	$348	$532
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,128	$476	$857	$560	$857
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$992	$292	$526	$343	$526
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,000	$834	$1,500	$980	$1,500
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$7,502	$1,602	$2,884	$1,884	$2,884
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$7,845	$1,421	$2,557	$1,671	$2,557
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$9,000	$2,061	$3,709	$2,424	$3,709
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$9,864	$2,831	$5,096	$3,330	$5,096
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$4,815	$701	$1,261	$824	$1,261
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$9,265	$1,121	$2,018	$1,319	$2,018
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$10,844	$2,489	$4,480	$2,927	$4,480
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$3,900	$396	$714	$466	$714
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$10,008	$2,308	$4,154	$2,714	$4,154
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$10,476	$2,608	$4,695	$3,068	$4,695
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$5,844	$1,804	$3,247	$2,122	$3,247
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$14,928	$3,328	$5,990	$3,914	$5,990

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 2Q11

	Origin		Destination				2Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$10,008	$2,308	$4,154	$2,714	$4,154
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$12,882	$3,018	$5,432	$3,549	$5,432
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$10,008	$2,308	$4,154	$2,714	$4,154
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$8,880	$2,075	$3,734	$2,440	$3,734
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$10,008	$2,308	$4,154	$2,714	$4,154
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$12,192	$2,759	$4,967	$3,245	$4,967
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$10,844	$2,489	$4,480	$2,927	$4,480
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$10,008	$2,308	$4,154	$2,714	$4,154
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$7,200	$1,727	$3,109	$2,031	$3,109
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$6,444	$681	$1,227	$802	$1,227

1/ From Exhibit II-A-9
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 13

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q11

	Origin		Destination				3Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves											
1.	**Removed**										
2.	Bayway	NJ	Waynesville	NC	NS	2819315	$12,855	$2,519	$4,535	$2,963	$4,535
3.	Belle	WV	Danville	IL	NS	2813980	$11,836	$1,836	$3,305	$2,160	$3,305
4.	**Removed**										
5.	**Removed**										
6.	**Removed**										
7.	**Removed**										
8.	**Removed**										
9.	Belle	WV	Wyandotte	MI	NS	2813934	$8,814	$1,368	$2,463	$1,609	$2,463
10.	Charleston	TN	Edgemoor	DE	NS	2812815	$18,562	$2,502	$4,503	$2,942	$4,503
11.	Edgemoor	DE	Chicago	IL	NS	2816130	$9,844	$2,502	$4,503	$2,942	$4,503
12.	Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,510	$2,439	$4,389	$2,868	$4,389
13.	Edgemoor	DE	Mahrt	AL	NS	2816130	$12,376	$3,220	$5,796	$3,787	$5,796
14.	Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$6,270	$2,905	$5,230	$3,417	$5,230
15.	Edgemoor	DE	Wabash	IN	NS	2816130	$6,627	$2,561	$4,610	$3,012	$4,610
16.	Lemoyne	AL	Giant	SC	NS	4810560	$5,136	$2,393	$4,307	$2,814	$4,307
17.	Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,955	$3,519	$2,299	$3,519
18.	Louisville	KY	Decatur	IL	NS	2819450	$4,596	$1,371	$2,468	$1,613	$2,468
19.	Louisville	KY	Lafayette	IN	NS	2819450	$6,139	$1,682	$3,027	$1,978	$3,027
20.	**Removed**										
21.	**Removed**										
22.	McIntosh	AL	Lemoyne	AL	NS	2812220	$1,605	$440	$791	$517	$791
23.	Reybold	DE	Detroit	MI	NS	2819315	$7,812	$2,001	$3,602	$2,354	$3,602
24.	Reybold	DE	Fort Mill	SC	NS	2819315	$6,108	$2,006	$3,611	$2,359	$3,611
25.	Reybold	DE	Morrisville	PA	NS	2819315	$3,614	$628	$1,130	$739	$1,130
Exhibit B - Joint Moves											
1.	Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$12,100	$1,710	$3,078	$2,011	$3,078
2.	Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$11,812	$2,140	$3,853	$2,517	$3,853
3.	**Removed**										
4.	Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$11,812	$2,130	$3,833	$2,505	$3,833
5.	Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$12,100	$1,710	$3,077	$2,011	$3,077
6.	Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$19,539	$2,668	$4,802	$3,138	$4,802
7.	**Removed**										
8.	Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$11,812	$1,963	$3,533	$2,308	$3,533
9.	Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$10,242	$1,857	$3,343	$2,184	$3,343
10.	Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$14,136	$2,118	$3,813	$2,491	$3,813
11.	Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$14,136	$2,011	$3,619	$2,365	$3,619
12.	**Removed**										
13.	Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$8,533	$1,680	$3,024	$1,976	$3,024
14.	Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$14,136	$2,027	$3,649	$2,385	$3,649
15.	Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$12,100	$1,701	$3,061	$2,000	$3,061
16.	**Removed**										
17.	Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$11,812	$1,872	$3,370	$2,202	$3,370
18.	Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$22,732	$3,045	$5,481	$3,581	$5,481
19.	Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$22,732	$2,795	$5,031	$3,287	$5,031
20.	Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$12,100	$1,666	$2,998	$1,959	$2,998
21.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$11,812	$2,130	$3,833	$2,505	$3,833
22.	Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$14,136	$2,130	$3,833	$2,505	$3,833
23.	Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$12,100	$1,674	$3,014	$1,969	$3,014
24.	Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$13,450	$1,900	$3,420	$2,235	$3,420
25.	Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$8,533	$1,693	$3,047	$1,991	$3,047
26.	**Removed**										
27.	Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$12,100	$1,632	$2,938	$1,920	$2,938
28.	**Removed**										
29.	Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$8,533	$1,850	$3,331	$2,176	$3,331
30.	Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$12,100	$1,724	$3,104	$2,028	$3,104
31.	**Removed**										
32.	Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$22,732	$3,035	$5,464	$3,570	$5,464
33.	Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$13,535	$2,639	$4,751	$3,104	$4,751
34.	**Removed**										
35.	Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$11,812	$2,203	$3,965	$2,590	$3,965
36.	Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$14,136	$1,808	$3,255	$2,127	$3,255
37.	Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$5,011	$1,934	$3,481	$2,275	$3,481
38.	**Removed**										
39.	Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$14,136	$2,020	$3,636	$2,376	$3,636
40.	Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$14,136	$2,107	$3,793	$2,478	$3,793
41.	Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$19,539	$2,659	$4,786	$3,127	$4,786
42.	Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$19,888	$2,571	$4,627	$3,023	$4,627
43.	Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$14,136	$2,118	$3,813	$2,491	$3,813
44.	Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,841	$3,313	$2,165	$3,313
45.	Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,599	$4,678	$3,057	$4,678
46.	**Removed**										
47.	Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$4,170	$1,134	$2,042	$1,334	$2,042
48.	Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$3,591	$703	$1,265	$827	$1,265
49.	Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$7,690	$1,627	$2,929	$1,914	$2,929
50.	Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$9,388	$3,129	$5,632	$3,680	$5,632
51.	Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$9,844	$2,395	$4,312	$2,817	$4,312

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 3Q11

	Origin		Destination				3Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$10,991	$2,768	$4,982	$3,255	$4,982
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$5,029	$1,418	$2,553	$1,668	$2,553
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$24,453	$2,745	$4,941	$3,229	$4,941
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$7,404	$1,859	$3,346	$2,186	$3,346
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,425	$2,565	$1,676	$2,565
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$9,844	$2,419	$4,354	$2,845	$4,354
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$9,844	$2,394	$4,309	$2,816	$4,309
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,430	$2,574	$1,682	$2,574
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,397	$2,515	$1,643	$2,515
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,430	$2,573	$1,681	$2,573
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$9,844	$2,416	$4,349	$2,841	$4,349
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$10,944	$2,601	$4,682	$3,059	$4,682
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$9,844	$2,412	$4,341	$2,836	$4,341
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$9,388	$3,133	$5,640	$3,685	$5,640
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$9,844	$2,392	$4,306	$2,813	$4,306
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$12,624	$2,779	$5,003	$3,269	$5,003
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,486	$544	$979	$640	$979
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$21,912	$2,958	$5,325	$3,479	$5,325
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$8,384	$2,272	$4,089	$2,672	$4,089
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$8,983	$1,342	$2,416	$1,578	$2,416
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$2,400	$332	$597	$390	$597
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$2,900	$336	$605	$395	$605
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$2,400	$342	$616	$402	$616
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$9,214	$1,726	$3,106	$2,030	$3,106
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$2,400	$342	$615	$402	$615
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,572	$2,829	$1,849	$2,829
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,395	$4,310	$2,816	$4,310
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$8,928	$1,927	$3,469	$2,267	$3,469
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$2,758	$288	$519	$339	$519
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$6,899	$1,905	$3,429	$2,240	$3,429
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,481	$2,666	$1,742	$2,666
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$10,487	$1,044	$1,879	$1,228	$1,879
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$12,839	$2,199	$3,958	$2,586	$3,958
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$10,487	$1,073	$1,931	$1,262	$1,931
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$8,926	$2,453	$4,415	$2,885	$4,415
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$291	$524	$342	$524
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$3,431	$991	$1,784	$1,166	$1,784
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,691	$661	$1,191	$778	$1,191
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$9,594	$2,299	$4,138	$2,703	$4,138
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$14,518	$3,373	$6,072	$3,967	$6,072
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$435	$784	$512	$784
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$462	$831	$543	$831
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$5,084	$1,659	$2,986	$1,951	$2,986
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$9,761	$1,578	$2,841	$1,856	$2,841
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$8,664	$1,041	$1,874	$1,225	$1,874
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$5,174	$1,476	$2,656	$1,736	$2,656
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$8,532	$1,119	$2,014	$1,316	$2,014
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,696	$398	$716	$468	$716
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,652	$2,296	$4,133	$2,700	$4,133
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,815	$692	$1,246	$814	$1,246
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,269	$772	$1,390	$908	$1,390
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,486	$2,674	$1,747	$2,674
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$4,444	$1,566	$2,819	$1,842	$2,819
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,350	$1,280	$2,303	$1,505	$2,303
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,314	$295	$531	$347	$531
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,383	$475	$855	$559	$855
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$292	$525	$343	$525
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,633	$832	$1,498	$979	$1,498
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$11,542	$1,600	$2,880	$1,882	$2,880
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$7,845	$1,419	$2,553	$1,668	$2,553
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$18,406	$2,058	$3,704	$2,420	$3,704
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$9,864	$2,827	$5,088	$3,325	$5,088
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$4,815	$700	$1,260	$823	$1,260
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$9,265	$1,119	$2,015	$1,317	$2,015
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$10,844	$2,485	$4,473	$2,923	$4,473
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$3,900	$396	$713	$466	$713
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$10,008	$2,304	$4,148	$2,710	$4,148
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$10,476	$2,604	$4,688	$3,063	$4,688
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$5,844	$1,801	$3,242	$2,118	$3,242
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$14,928	$3,323	$5,981	$3,908	$5,981

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Maximum Rates Per Car for DuPont Movements - 3Q11

	Origin		Destination				3Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$10,008	$2,304	$4,148	$2,710	$4,148
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$12,882	$3,013	$5,424	$3,544	$5,424
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$10,008	$2,304	$4,148	$2,710	$4,148
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$8,880	$2,071	$3,729	$2,436	$3,729
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$10,008	$2,304	$4,148	$2,710	$4,148
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$12,192	$2,755	$4,960	$3,241	$4,960
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$10,844	$2,485	$4,473	$2,923	$4,473
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$10,008	$2,304	$4,148	$2,710	$4,148
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$7,200	$1,725	$3,104	$2,028	$3,104
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$6,444	$680	$1,225	$800	$1,225

1/ From Exhibit II-A-10
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 14

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 4Q11

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	4Q2011 Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	$12,855	$2,501	$4,501	$2,941	$4,501
3. Belle	WV	Danville	IL	NS	2813980	$11,836	$1,823	$3,281	$2,144	$3,281
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	$8,814	$1,358	$2,445	$1,597	$2,445
10. Charleston	TN	Edgemoor	DE	NS	2812815	$18,562	$2,484	$4,470	$2,921	$4,470
11. Edgemoor	DE	Chicago	IL	NS	2816130	$9,844	$2,483	$4,470	$2,921	$4,470
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,510	$2,421	$4,357	$2,847	$4,357
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$12,376	$3,197	$5,754	$3,760	$5,754
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$6,270	$2,884	$5,192	$3,392	$5,192
15. Edgemoor	DE	Wabash	IN	NS	2816130	$6,627	$2,542	$4,576	$2,990	$4,576
16. Lemoyne	AL	Giant	SC	NS	4810560	$5,136	$2,375	$4,275	$2,793	$4,275
17. Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,941	$3,493	$2,282	$3,493
18. Louisville	KY	Decatur	IL	NS	2819450	$4,596	$1,361	$2,450	$1,601	$2,450
19. Louisville	KY	Lafayette	IN	NS	2819450	$6,139	$1,669	$3,005	$1,963	$3,005
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$1,605	$436	$786	$513	$786
23. Reybold	DE	Detroit	MI	NS	2819315	$7,812	$1,987	$3,576	$2,336	$3,576
24. Reybold	DE	Fort Mill	SC	NS	2819315	$6,108	$1,992	$3,585	$2,342	$3,585
25. Reybold	DE	Morrisville	PA	NS	2819315	$3,614	$623	$1,122	$733	$1,122
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$12,100	$1,697	$3,055	$1,996	$3,055
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$11,812	$2,125	$3,825	$2,499	$3,825
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$11,812	$2,114	$3,805	$2,486	$3,805
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$12,100	$1,697	$3,055	$1,996	$3,055
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$19,539	$2,648	$4,767	$3,115	$4,767
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$11,812	$1,948	$3,507	$2,291	$3,507
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$10,242	$1,843	$3,318	$2,168	$3,318
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$14,136	$2,103	$3,785	$2,473	$3,785
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$14,136	$1,996	$3,593	$2,347	$3,593
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$8,533	$1,668	$3,002	$1,961	$3,002
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$14,136	$2,013	$3,623	$2,367	$3,623
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$12,100	$1,688	$3,039	$1,986	$3,039
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$11,812	$1,859	$3,345	$2,186	$3,345
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$22,732	$3,023	$5,441	$3,555	$5,441
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$22,732	$2,775	$4,995	$3,263	$4,995
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$12,100	$1,654	$2,977	$1,945	$2,977
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$11,812	$2,114	$3,805	$2,486	$3,805
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$14,136	$2,114	$3,805	$2,486	$3,805
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$12,100	$1,662	$2,992	$1,955	$2,992
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$13,450	$1,886	$3,395	$2,218	$3,395
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$8,533	$1,680	$3,025	$1,976	$3,025
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$12,100	$1,620	$2,917	$1,906	$2,917
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$8,533	$1,837	$3,306	$2,160	$3,306
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$12,100	$1,712	$3,081	$2,013	$3,081
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$22,732	$3,013	$5,424	$3,544	$5,424
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$13,535	$2,620	$4,716	$3,082	$4,716
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$11,812	$2,186	$3,936	$2,572	$3,936
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$14,136	$1,795	$3,231	$2,111	$3,231
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$5,139	$1,920	$3,456	$2,258	$3,456
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$14,136	$2,005	$3,610	$2,359	$3,610
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$14,136	$2,092	$3,765	$2,460	$3,765
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$19,539	$2,639	$4,751	$3,104	$4,751
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$19,888	$2,552	$4,593	$3,001	$4,593
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$14,136	$2,103	$3,785	$2,473	$3,785
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,827	$3,289	$2,149	$3,289
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,580	$4,644	$3,034	$4,644
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$4,170	$1,126	$2,027	$1,324	$2,027
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$3,591	$698	$1,256	$821	$1,256
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$7,690	$1,615	$2,908	$1,900	$2,908
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$9,388	$3,106	$5,591	$3,653	$5,591
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$9,844	$2,378	$4,280	$2,797	$4,280

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 4Q11

	Origin		Destination				4Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$10,991	$2,747	$4,945	$3,231	$4,945
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$5,029	$1,408	$2,535	$1,656	$2,535
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$24,453	$2,725	$4,905	$3,205	$4,905
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$7,404	$1,845	$3,322	$2,170	$3,322
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,415	$2,546	$1,664	$2,546
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$9,844	$2,401	$4,323	$2,824	$4,323
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$9,844	$2,377	$4,278	$2,795	$4,278
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,419	$2,555	$1,669	$2,555
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,387	$2,496	$1,631	$2,496
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,419	$2,554	$1,669	$2,554
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$9,844	$2,398	$4,317	$2,821	$4,317
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$10,944	$2,582	$4,647	$3,037	$4,647
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$9,844	$2,394	$4,309	$2,816	$4,309
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$9,388	$3,110	$5,599	$3,658	$5,599
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$9,844	$2,375	$4,274	$2,793	$4,274
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$12,624	$2,759	$4,967	$3,245	$4,967
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,486	$540	$972	$635	$972
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$21,912	$2,937	$5,286	$3,454	$5,286
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$8,384	$2,255	$4,059	$2,652	$4,059
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$8,983	$1,332	$2,398	$1,567	$2,398
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$2,400	$329	$592	$387	$592
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$2,900	$334	$600	$392	$600
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$2,400	$340	$611	$400	$611
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$9,214	$1,713	$3,083	$2,015	$3,083
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$2,400	$339	$611	$399	$611
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,560	$2,809	$1,835	$2,809
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,377	$4,279	$2,796	$4,279
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$8,928	$1,913	$3,444	$2,250	$3,444
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$2,758	$286	$515	$337	$515
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$6,899	$1,891	$3,404	$2,224	$3,404
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,470	$2,647	$1,729	$2,647
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$10,487	$1,037	$1,866	$1,219	$1,866
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$12,839	$2,183	$3,929	$2,568	$3,929
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$10,487	$1,065	$1,917	$1,253	$1,917
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$8,926	$2,435	$4,383	$2,864	$4,383
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$289	$520	$340	$520
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$3,431	$984	$1,771	$1,157	$1,771
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,910	$657	$1,182	$772	$1,182
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$9,594	$2,282	$4,107	$2,684	$4,107
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$14,518	$3,348	$6,027	$3,938	$6,027
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$432	$778	$508	$778
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$458	$825	$539	$825
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$5,084	$1,647	$2,964	$1,937	$2,964
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$9,761	$1,567	$2,820	$1,843	$2,820
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$8,664	$1,034	$1,860	$1,216	$1,860
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$5,174	$1,465	$2,637	$1,723	$2,637
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$8,532	$1,111	$2,000	$1,307	$2,000
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,696	$395	$710	$464	$710
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,652	$2,279	$4,103	$2,681	$4,103
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,815	$687	$1,237	$808	$1,237
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,269	$767	$1,380	$902	$1,380
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,475	$2,655	$1,735	$2,655
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$4,444	$1,555	$2,798	$1,829	$2,798
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,350	$1,270	$2,287	$1,494	$2,287
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,910	$293	$527	$345	$527
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,910	$472	$849	$555	$849
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$289	$521	$340	$521
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,633	$826	$1,487	$972	$1,487
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$11,542	$1,588	$2,859	$1,868	$2,859
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$7,845	$1,408	$2,535	$1,656	$2,535
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$18,406	$2,043	$3,677	$2,402	$3,677
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$9,864	$2,806	$5,051	$3,300	$5,051
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$4,815	$695	$1,250	$817	$1,250
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$9,265	$1,111	$2,000	$1,307	$2,000
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$10,844	$2,467	$4,440	$2,901	$4,440
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$3,900	$393	$707	$462	$707
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$10,008	$2,287	$4,117	$2,690	$4,117
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$10,476	$2,585	$4,654	$3,041	$4,654
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$5,844	$1,788	$3,219	$2,103	$3,219
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$14,928	$3,299	$5,938	$3,880	$5,938

Comparison of NS Tariff Rates and
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	Origin		Destination				4Q2011				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$10,008	$2,287	$4,117	$2,690	$4,117
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$12,882	$2,991	$5,384	$3,518	$5,384
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$10,008	$2,287	$4,117	$2,690	$4,117
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$8,880	$2,056	$3,701	$2,419	$3,701
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$10,008	$2,287	$4,117	$2,690	$4,117
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$12,192	$2,735	$4,923	$3,217	$4,923
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$10,844	$2,467	$4,440	$2,901	$4,440
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$10,008	$2,287	$4,117	$2,690	$4,117
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$7,200	$1,712	$3,082	$2,013	$3,082
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$6,444	$676	$1,216	$794	$1,216

1/ From Exhibit II-A-11
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)

EXHIBIT NO. 15

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 1Q12

Origin City	ST	Destination City	ST	Railroad(s)	Commodity	1Q2012 Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
Exhibit A - Local Moves										
1. **Removed**										
2. Bayway	NJ	Waynesville	NC	NS	2819315	$12,855	$2,508	$4,515	$2,866	$4,515
3. Belle	WV	Danville	IL	NS	2813980	$11,836	$1,828	$3,291	$2,089	$3,291
4. **Removed**										
5. **Removed**										
6. **Removed**										
7. **Removed**										
8. **Removed**										
9. Belle	WV	Wyandotte	MI	NS	2813934	$8,814	$1,362	$2,452	$1,557	$2,452
10. Charleston	TN	Edgemoor	DE	NS	2812815	$18,562	$2,491	$4,484	$2,846	$4,484
11. Edgemoor	DE	Chicago	IL	NS	2816130	$9,844	$2,491	$4,483	$2,846	$4,483
12. Edgemoor	DE	Chillicothe	OH	NS	2816130	$6,510	$2,428	$4,370	$2,774	$4,370
13. Edgemoor	DE	Mahrt	AL	NS	2816130	$12,376	$3,206	$5,771	$3,664	$5,771
14. Edgemoor	DE	Riverwood Intl	GA	NS	2816130	$6,270	$2,893	$5,207	$3,306	$5,207
15. Edgemoor	DE	Wabash	IN	NS	2816130	$6,627	$2,550	$4,590	$2,914	$4,590
16. Lemoyne	AL	Giant	SC	NS	4810560	$5,136	$2,382	$4,288	$2,722	$4,288
17. Loudon	TN	Braithwaite	LA	NS	2818512	$4,125	$1,946	$3,504	$2,224	$3,504
18. Louisville	KY	Decatur	IL	NS	2819450	$4,596	$1,365	$2,458	$1,560	$2,458
19. Louisville	KY	Lafayette	IN	NS	2819450	$6,139	$1,674	$3,014	$1,913	$3,014
20. **Removed**										
21. **Removed**										
22. McIntosh	AL	Lemoyne	AL	NS	2812220	$1,605	$438	$788	$500	$788
23. Reybold	DE	Detroit	MI	NS	2819315	$7,812	$1,992	$3,586	$2,277	$3,586
24. Reybold	DE	Fort Mill	SC	NS	2819315	$6,108	$1,997	$3,595	$2,282	$3,595
25. Reybold	DE	Morrisville	PA	NS	2819315	$3,614	$625	$1,125	$714	$1,125
Exhibit B - Joint Moves										
1. Belle	WV	Anaheim	CA	NS-CHGO-UP	2813980	$12,100	$1,702	$3,064	$1,945	$3,064
2. Belle	WV	Bayport	TX	NS-ESTL-UP	2818620	$11,812	$2,131	$3,836	$2,435	$3,836
3. **Removed**										
4. Belle	WV	Brownsville	TX	NS-ESTL-UP	2818221	$11,812	$2,120	$3,817	$2,423	$3,817
5. Belle	WV	Burley	ID	NS-CHGO-UP	2813934	$12,100	$1,702	$3,064	$1,945	$3,064
6. Belle	WV	Cadet	MO	NS-KCITY-UP	2813934	$19,539	$2,656	$4,781	$3,035	$4,781
7. **Removed**										
8. Belle	WV	Channelview	TX	NS-ESTL-UP	2818130	$11,812	$1,954	$3,517	$2,233	$3,517
9. Belle	WV	City of Commerce	CA	NS-STRTR-BNSF	2818221	$10,242	$1,849	$3,328	$2,113	$3,328
10. Belle	WV	Conroe	TX	NS-ESTL-BNSF	2813934	$14,136	$2,109	$3,796	$2,410	$3,796
11. Belle	WV	Corsicana	TX	NS-ESTL-UP	2813934	$14,136	$2,002	$3,603	$2,288	$3,603
12. **Removed**										
13. Belle	WV	East Billings	MT	NS-CHGO-BNSF	2818130	$8,533	$1,673	$3,011	$1,911	$3,011
14. Belle	WV	Ethyl	AR	NS-ESTL-UP-MCNEI-LNW	2813934	$14,136	$2,019	$3,634	$2,307	$3,634
15. Belle	WV	Finley	WA	NS-CHGO-BNSF	2813934	$12,100	$1,693	$3,048	$1,935	$3,048
16. **Removed**										
17. Belle	WV	Freeport	TX	NS-ESTL-UP	2818130	$11,812	$1,864	$3,355	$2,130	$3,355
18. Belle	WV	Garyville	LA	NS-NEWOR-CN	2813934	$22,732	$3,032	$5,457	$3,464	$5,457
19. Belle	WV	Geismar	LA	NS-NEWOR-CN	2813934	$22,732	$2,783	$5,009	$3,180	$5,009
20. Belle	WV	Janesville	WI	NS-CHGO-UP	2818131	$12,100	$1,659	$2,985	$1,895	$2,985
21. Belle	WV	Laredo	TX	NS-ESTL-UP	2818221	$11,812	$2,120	$3,817	$2,423	$3,817
22. Belle	WV	Laredo	TX	NS-ESTL-UP	2818131	$14,136	$2,120	$3,817	$2,423	$3,817
23. Belle	WV	Lorenzo	IL	NS-CHGO-BNSF	2813980	$12,100	$1,667	$3,001	$1,905	$3,001
24. Belle	WV	Los Angeles	CA	NS-STRTR-BNSF	2813934	$13,450	$1,892	$3,405	$2,162	$3,405
25. Belle	WV	Los Angeles	CA	NS-CHGO-UP	2818130	$8,533	$1,685	$3,034	$1,926	$3,034
26. **Removed**										
27. Belle	WV	Millsdale	IL	NS-CHGO-CN	2818131	$12,100	$1,625	$2,925	$1,857	$2,925
28. **Removed**										
29. Belle	WV	Saint Paul	MN	NS-CHGO-BNSF	2818221	$8,533	$1,842	$3,316	$2,105	$3,316
30. Belle	WV	San Dimas	CA	NS-CHGO-UP	2813980	$12,100	$1,717	$3,090	$1,962	$3,090
31. **Removed**										
32. Belle	WV	St Gabriel	LA	NS-NEWOR-CN	2813934	$22,732	$3,022	$5,440	$3,454	$5,440
33. Belle	WV	St Joseph	MO	NS-KCITY-UP	2818130	$13,535	$2,628	$4,730	$3,003	$4,730
34. **Removed**										
35. Belle	WV	Strang	TX	NS-ESTL-UP	2818221	$11,812	$2,193	$3,947	$2,506	$3,947
36. Belle	WV	Strang	TX	NS-ESTL-BNSF	2813934	$14,136	$1,800	$3,241	$2,057	$3,241
37. Belle	WV	Strang	TX	NS-ESTL-UP	2819183	$5,139	$1,926	$3,466	$2,200	$3,466
38. **Removed**										
39. Belle	WV	Texas City	TX	NS-ESTL-UP	2813934	$14,136	$2,011	$3,620	$2,298	$3,620
40. Belle	WV	Verona	MO	NS-ESTL-BNSF	2813934	$14,136	$2,098	$3,776	$2,397	$3,776
41. Belle	WV	West Memphis	AR	NS-KCITY-UP	2813934	$19,539	$2,647	$4,765	$3,025	$4,765
42. Belle	WV	Winford Spur	LA	NS-MERID-KCS	2813980	$19,888	$2,560	$4,607	$2,925	$4,607
43. Belle	WV	Wichita	KS	NS-ESTL-BNSF	2813934	$14,136	$2,109	$3,796	$2,410	$3,796
44. Bloomington	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,833	$3,299	$2,094	$3,299
45. Bloomington	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,588	$4,658	$2,957	$4,658
46. **Removed**										
47. Charleston; Bradley	TN	Woodstock	TN	NS-MEMPH-CN	2812220	$4,170	$1,129	$2,033	$1,291	$2,033
48. Cresap	WV	Edgemoor	DE	CSXT-HAGTN-NS	2991315	$3,591	$700	$1,260	$800	$1,260
49. Dowling	TX	Fort Mill	SC	KCS-MERID-NS	2815112	$7,690	$1,620	$2,916	$1,851	$2,916
50. Edgemoor	DE	Garland	TX	NS-MERID-KCS	2816130	$9,388	$3,115	$5,608	$3,560	$5,608
51. Edgemoor	DE	Groos	MI	NS-CHGO-CN	2816130	$9,844	$2,385	$4,293	$2,725	$4,293

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 1Q12

	Origin		Destination				1Q2012				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
52.	Edgemoor	DE	Laredo	TX	NS-ESTL-UP	2816130	$10,991	$2,756	$4,960	$3,149	$4,960
53.	Edgemoor	DE	Madawaska	ME	NS-ROUPT-CN	2816130	$5,029	$1,412	$2,542	$1,614	$2,542
54.	Edgemoor	DE	Pasadena	TX	NS-ESTL-UP	2819971	$24,453	$2,733	$4,920	$3,123	$4,920
55.	Edgemoor	DE	Port Huron	MI	NS-BUFF-CN	2816130	$7,404	$1,851	$3,331	$2,115	$3,331
56.	Edgemoor	DE	Portland	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,419	$2,554	$1,621	$2,554
57.	Edgemoor	DE	Portland	OR	NS-CHGO-BNSF	2816130	$9,844	$2,409	$4,336	$2,752	$4,336
58.	Edgemoor	DE	Quinnesec	MI	NS-CHGO-CN	2816130	$9,844	$2,384	$4,290	$2,724	$4,290
59.	Edgemoor	DE	Rileys	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,424	$2,562	$1,627	$2,562
60.	Edgemoor	DE	Rumford	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,391	$2,504	$1,589	$2,504
61.	**Removed**										
62.	Edgemoor	DE	Shawmutt	ME	NS-MCV-PAS-AYERM-ST	2816130	$5,029	$1,423	$2,562	$1,626	$2,562
63.	Edgemoor	DE	Snoboy	CA	NS-CHGO-UP	2816130	$9,844	$2,405	$4,330	$2,749	$4,330
64.	Edgemoor	DE	Snoboy	CA	NS-STRTR-BNSF	2816130	$10,944	$2,590	$4,661	$2,959	$4,661
65.	Edgemoor	DE	St Paul	MN	NS-CHGO-UP	2816130	$9,844	$2,401	$4,322	$2,744	$4,322
66.	**Removed**										
67.	Edgemoor	DE	West Monroe	LA	NS-MERID-KCS	2816130	$9,388	$3,120	$5,615	$3,565	$5,615
68.	Edgemoor	DE	Wheeling	IL	NS-CHGO-CN	2816130	$9,844	$2,382	$4,287	$2,721	$4,287
69.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$12,624	$2,767	$4,981	$3,162	$4,981
70.	**Removed**										
71.	Gregory	TX	Dragon	MS	UP-NEWOR-NS	2813984	$2,486	$542	$975	$619	$975
72.	**Removed**										
73.	Gregory	TX	Royce	NJ	UP-ESTL-NS	2813984	$21,912	$2,945	$5,302	$3,366	$5,302
74.	**Removed**										
75.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$8,384	$2,262	$4,071	$2,585	$4,071
76.	Lemoyne	AL	Artesia	MS	NS-MERID-KCS	4810560	$8,983	$1,336	$2,405	$1,527	$2,405
77.	McIntosh	AL	Burnside	LA	NS-MOBIL-CN	2819330	$2,400	$330	$594	$377	$594
78.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812815	$2,900	$335	$602	$382	$602
79.	McIntosh	AL	Delisle	MS	NS-MOBIL-CN-HATBG-KCS	2812220	$2,400	$341	$613	$389	$613
80.	McIntosh	AL	Orange	TX	NS-NEWOR-UP	2812220	$9,214	$1,718	$3,093	$1,963	$3,093
81.	McIntosh	AL	Woodstock	TN	NS-MOBIL-CN	2812220	$2,400	$340	$612	$389	$612
82.	Orange	TX	Greenville	SC	UP-NEWOR-NS	2821142	$6,113	$1,565	$2,817	$1,788	$2,817
83.	Orange	TX	Washington; Warren	NJ	UP-ESTL-NS	2821142	$9,644	$2,384	$4,291	$2,724	$4,291
84.	Pascagoula	MS	Fort Mill	SC	MSE-MOBIL-NS	2815112	$8,928	$1,919	$3,454	$2,193	$3,454
85.	Pascagoula	MS	Lemoyne	AL	MSE-MOBIL-NS	2815112	$2,758	$287	$517	$328	$517
86.	Strang	TX	Lemoyne	AL	UP-NEWOR-NS	2812350	$6,899	$1,897	$3,414	$2,167	$3,414
87.	Beauharnois	PQ	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,475	$2,654	$1,685	$2,654
88.	**Removed**										
89.	Belle	WV	Gainesville	GA	NS-CINTI-CSXT	2813980	$10,487	$1,040	$1,871	$1,188	$1,871
90.	Belle	WV	Port Bienville	MS	NS-ATLA-CSXT-ANSLE-PBVR	2813934	$12,839	$2,190	$3,941	$2,502	$3,941
91.	Belle	WV	Theodore	AL	NS-CINTI-CSXT	2813934	$10,487	$1,068	$1,923	$1,221	$1,923
92.	Bellwood	VA	Dallas	GA	CSXT-PTRSB-NS	2819315	$8,926	$2,442	$4,396	$2,791	$4,396
93.	Bellwood	VA	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$290	$522	$331	$522
94.	Bellwood	VA	Rockwell	NC	CSXT-PTRSB-NS	2819315	$3,431	$987	$1,776	$1,128	$1,776
95.	**Removed**										
96.	Danville	VA	Ampthill	VA	NS-PTRSB-CSXT	3274110	$1,910	$659	$1,185	$753	$1,185
97.	Edgemoor	DE	New Johnsonville	TN	NS-CINTI-CSXT	2816130	$9,594	$2,289	$4,120	$2,615	$4,120
98.	Enid	OK	Edgemoor	DE	BNSF-ESTL-NS	2991315	$14,518	$3,358	$6,045	$3,838	$6,045
99.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,490	$434	$780	$495	$780
100.	Loudon	TN	Graingers	NC	NS-CHATT-CSXT	2818512	$1,684	$460	$827	$525	$827
101.	Miami Fort	OH	Dallas	GA	CSXT-CINTI-NS	2819315	$5,084	$1,652	$2,973	$1,887	$2,973
102.	Miami Fort	OH	Gracewood	GA	CSXT-CHATT-NS	2819325	$9,761	$1,571	$2,828	$1,796	$2,828
103.	Miami Fort	OH	McIntosh	AL	CSXT-CHATT-NS	2819340	$8,664	$1,037	$1,866	$1,185	$1,866
104.	**Removed**										
105.	**Removed**										
106.	Miami Fort	OH	Pepper	VA	CSXT-CINTI-NS	2819345	$5,174	$1,469	$2,645	$1,679	$2,645
107.	Natrium	WV	Belle	WV	CSXT-CINTI-NS	2812220	$8,532	$1,114	$2,006	$1,273	$2,006
108.	Natrium	WV	Danville	VA	CSXT-LYNCH-NS	2812220	$2,696	$396	$712	$452	$712
109.	New Johnsonville	TN	Chapman	PA	CSXT-CINTI-NS	2816130	$7,652	$2,286	$4,115	$2,612	$4,115
110.	**Removed**										
111.	New Johnsonville	TN	Morrow	GA	CSXT-CHATT-NS	2816130	$4,815	$689	$1,240	$787	$1,240
112.	Niagara Falls	NY	Belle	WV	CSXT-CLMBO-NS	2812220	$3,269	$769	$1,384	$879	$1,384
113.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812815	$12,375	$1,479	$2,663	$1,690	$2,663
114.	Niagara Falls	NY	Edgemoor	DE	CSXT-BUFF-NS	2812220	$4,444	$1,559	$2,807	$1,782	$2,807
115.	Pascagoula	MS	Fort Mill	SC	CSXT-ATLA-NS	2815112	$5,350	$1,274	$2,293	$1,456	$2,293
116.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,910	$294	$529	$336	$529
117.	Starke	FL	Huntsville	AL	CSXT-DCTUR-NS	1441325	$1,910	$473	$852	$541	$852
118.	Wurtland	KY	Fort Mill	SC	CSXT-CHLTE-NS	2819315	$1,061	$290	$523	$332	$523
119.	Wurtland	KY	McIntosh	AL	CSXT-BHAM-NS	2819315	$2,633	$829	$1,492	$947	$1,492
120.	Belle	WV	Divine	IL	NS-PINE-CN	2813980	$11,542	$1,593	$2,867	$1,820	$2,867
121.	Belle	WV	Mapleton	IL	NS-LOGPT-TPW	2813934	$7,845	$1,412	$2,542	$1,614	$2,542
122.	Burnside	LA	Gracewood	GA	CN-NEWOR-NS	2819325	$18,406	$2,049	$3,688	$2,341	$3,688
123.	Lemont	IL	Edgemoor	DE	BNSF-CHGO-NS	2991315	$9,864	$2,815	$5,066	$3,216	$5,066
124.	New Johnsonville	TN	McDonough	GA	CSXT-CHATT-NS	2816130	$4,815	$697	$1,254	$796	$1,254
125.	Charleston	TN	Woodstock	TN	NS-MEMPH-CN	2812410	$9,265	$1,115	$2,006	$1,274	$2,006
126.	Reybold	DE	Albuquerque	NM	NS-STRTR-BNSF	2819315	$10,844	$2,474	$4,454	$2,827	$4,454
127.	Reybold	DE	Baltimore	MD	NS-BALBV-CSXT	2819315	$3,900	$394	$710	$450	$710
128.	Reybold	DE	Blair	NE	NS-CHGO-UP	2819315	$10,008	$2,294	$4,130	$2,622	$4,130
129.	Reybold	DE	Brewton	AL	NS-BHAM-CSXT	2819315	$10,476	$2,593	$4,667	$2,963	$4,667
130.	Reybold	DE	Castle Hayne	NC	NS-CHLTE-CSXT	2819315	$5,844	$1,793	$3,228	$2,049	$3,228
131.	Reybold	DE	Clifton	AZ	NS-KCITY-UP	2819315	$14,928	$3,309	$5,955	$3,781	$5,955

Comparison of NS Tariff Rates and
Maximum Rates Per Car for DuPont Movements - 1Q12

	Origin		Destination				1Q2012				
	City	ST	City	ST	Railroad(s)	Commodity	Tariff Rate 1/	Phase III Cost 1/	Jurisdictional Threshold 1/	SAC Rate 2/	STB Maximum Rate 3/
	(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)	(9)
132.	Reybold	DE	Corson	SD	NS-CHGO-BNSF	2819315	$10,008	$2,294	$4,130	$2,622	$4,130
133.	**Removed**										
134.	Reybold	DE	Ferguson	MS	NS-MEMPHIS-CN	2819315	$12,882	$3,000	$5,400	$3,428	$5,400
135.	Reybold	DE	Hastings	NE	NS-CHGO-BNSF	2819315	$10,008	$2,294	$4,130	$2,622	$4,130
136.	Reybold	DE	Indianapolis	IN	NS-CINTI-CSXT	2819315	$8,880	$2,062	$3,712	$2,357	$3,712
137.	Reybold	DE	Omaha	NE	NS-CHGO-UP	2819315	$10,008	$2,294	$4,130	$2,622	$4,130
138.	Reybold	DE	Orange	TX	NS-ESTL-BNSF	2819315	$12,192	$2,743	$4,938	$3,135	$4,938
139.	Reybold	DE	Phoenix	AZ	NS-STRTR-BNSF	2819315	$10,844	$2,474	$4,454	$2,827	$4,454
140.	Reybold	DE	Sioux City	IA	NS-CHGO-BNSF	2819315	$10,008	$2,294	$4,130	$2,622	$4,130
141.	Reybold	DE	Toledo	OH	NS-TOLED-CSXT	2819315	$7,200	$1,717	$3,091	$1,962	$3,091
142.	Reybold	DE	Washington	WV	NS-HAGTN-CSXT	2819315	$6,444	$678	$1,220	$774	$1,220

1/ From Exhibit II-A-12
2/ MMM Ratio from Exhibit III-H-3 x Column (6)
3/ Greater of Column (7) or Column (8)