PUBLIC VERSION

234554

BEFORE THE
SURFACE TRANSPORTATION BOARD

E.I. DUPONT DE NEMOURS & COMPANY	)	
Complainant,	)	**Docket No. 42125**
v.	)	
NORFOLK SOUTHERN RAILWAY COMPANY	)	
Defendant.	)	

ERRATA TO REBUTTAL EVIDENCE OF COMPLAINANT
E. I. DUPONT DE NEMOURS & COMPANY

Complainant E. I. DuPont De Nemours & Company ("DuPont") submits the following errata to its Rebuttal Evidence filed in this proceeding on April 15, 2013.

I. SUMMARY OF ERRATA

On Brief, NS identified an error in DuPont's classification car counts at yards on the DRR in DuPont's Rebuttal evidence.[1] This errata corrects that error in identification of the classification car counts. The correct car classification counts are included in the electronic workpapers filed as part of this errata. As NS points out, this error by DuPont "leads to further

[1] NS Brief, pp. 23-26. NS also characterized the DuPont evidence as impermissible rebuttal. DuPont disputed this characterization because DuPont accepted NS's methodology, which is a permissible rebuttal response. See Dup. Reb. Ev. at I-80-82 (addressing the proper scope of rebuttal evidence). However, because NS applied its methodology to output from its MultiRail analysis, which DuPont contended is unsupported, infeasible, and unrealistic, DuPont applied the NS methodology to the car event data provided by NS in discovery. Id. at III-C-121-26. NS acknowledged that the procedure used by DuPont was "conceptually sound," but that DuPont's execution was flawed. NS Brief, p. 24. This errata corrects that flaw.

errors" in DuPont's rebuttal evidence. NS Brief, p. 26. Therefore, this errata demonstrates the impact of the corrected car classification counts to downstream portions of DuPont's rebuttal SAC analysis and corrects those errors.

In addition, as indicated on page III-C-25 of its Rebuttal, DuPont addressed the issue of allegedly "missing trains" serving {{[redacted]}}, and adjusted its Rebuttal Base Year train list to conservatively include 699 additional trains that allegedly serve these destinations. While DuPont included these trains in its Base Year statistics, it inadvertently failed to include 17 of these added {{[redacted]}} trains to its RTC simulation of the DRR. DuPont also corrected, in its Rebuttal RTC model, the maximum speeds of DRR trains carrying TIH material, but inadvertently did not adjust the maximum speeds for 321 "Key Trains," or trains that carry certain non-TIH hazardous materials. DuPont also inadvertently understated the speed limit of 67 trains. DuPont corrects these errors in its Eratta RTC simulation.

When the correct car classification counts are used and the RTC model is corrected, the DuPont Stand-Alone Railroad ("DRR") characteristics are slightly different. Specifically, this errata includes minor changes in the cycle times, adds classification tracks at 15 yards, accepts NS's use of hump facilities at seven (7) yards and modifies other operating statistics, operating expenses, road property investment, DCF model results and MMM model results, because of the changes to the RTC model and classification car counts. In addition, DuPont Rebuttal at III-F-133 stated that DuPont had corrected the cabling amounts for distribution of power but inadvertently failed to increase the cable lengths for lighting in Rebuttal (as pointed out in NS's Brief at pages 149-150). DuPont has corrected this error in this Errata.

In addition to the above, Rebuttal Exhibits II-A-1 through II-A-12 have been updated in this errata filing to correct an errant formula that affected the loss and damage calculations in the

variable costs presented in Rebuttal. This single minor change did not significantly affect the Rebuttal variable cost calculations or materially alter any other evidence presented in section II-A or III-H in Rebuttal. Finally, an error in a formula used to calculate yard acres was found and corrected which results in a minor increase in yard acres in five (5) yards. This change does not significantly affect the Rebuttal calculations and has been included in the workpapers underlying this Errata.

The specific changes from DuPont's Rebuttal filing are as follows:

1. Yard track miles were increased from 1,197.01 to 1,266.93, an increase of 5.8 percent;

2. Total track miles were increased from 12,015.56 to 12,085.48, an increase of 0.58 percent;

3. Yard Acres were increased from 5,541.0 acres to 5,949.8 acres, an increase of 408.8 acres;

4. Addition of "hump" facilities at seven (7) yards where the number of cars classified in the Base Year exceed 900 cars per day.[2]

5. Road property investment increased by $405 million to $27,331 million, an increase of 1.5 percent;

6. Yard crew personnel increased from 645 T&E employees to 745 T&E employees;

7. ES44 AC road locomotives increased from 639 to 641, an increase 2 ES44AC locomotives;

8. Yard locomotives increased from 94 locomotives to 104 locomotives, an increase of 10 yard locomotives;

[2] DuPont accepts the use of "hump" facilities at seven (7) of the eight (8) locations included in NS's Reply evidence. The remaining location where NS proposed a hump yard, which is not included as a hump yard in this Errata is Enola. DuPont's operating plan relies on actual NS trains moving over the DRR network and the cars classified per day at each yard are based on NS's car event data and are the actual cars classified that are associated with the actual NS trains moving on the DRR system. Based on these car counts, the volumes of cars classified at Enola do not warrant a "hump" facility. In contrast, NS's operating plan, based on MultiRail, results in far higher classification car counts at the Enola yard, thus NS's made for litigation MultiRail analysis determines that Enola requires hump facilities.

9. Maintenance of Way employees in yards with hump facilities increased. As a result total MOW employees increased from 1,050 to 1,093 employees, an increase of 43 employees;

10. Annual operating cost in the Base Year increased from $2,075.1 million to $2,098.3 million, an increase of $23.2 million;

11. The cumulative present value of the difference in overpayments in the DCF model decreased by $ 447.8 million to $10,057.7 million; and

12. The MMM ratio for the first study period (6/09 to 12/09) changed from 195.8% to 206.0%.

These changes are shown in detail in the revised Rebuttal electronic workpapers submitted with this filing. These errata workpapers replace the corresponding Rebuttal workpapers filed on April 15, 2013 in their entirety, and are located in the same folders as provided to the Board with DuPont's Rebuttal filing to preserve the links among the electronic workpapers. Also, the word "errata" has been placed at the end of each electronic workpaper that has been modified because of this errata.

II. CORRECTIONS TO THE REBUTTAL NARRATIVE AND EXHIBITS

The changes described above also result in corrections to DuPont's Rebuttal narrative and exhibits.[3] All of the corrections are described below.

A. Narrative

III-B

Page III-B-9, Table III-B-4: A corrected version is attached.

Page III-B-9, Line 5: "1,197.01" should read "1,266.93".

Page III-B-10, Table III-B-5: A corrected version is attached.

[3] Pages where the only change is adding the word "errata" at the end of the electronic workpaper reference are attached but are not included in the summary below.

Page III-B-15, Line 4: "204.38" should read "274.30".

Page III-B-18, Line 5: "1,197.01" should read "1,266.93".

III-C

Page III-C-62, Note 23: "*See* DuPont Rebuttal e-workpapers "Rebuttal Local Peak Period RTC List (With Consist Changes and Dwell).xlsx," "Rebuttal General Freight Summary (With Consist Changes, Dwells and TIH) 3-2.xlsx" and "Rebuttal Added General Freight and Local RTC List 3-7.xlsx." should read "*See* DuPont Rebuttal e-workpapers "Rebuttal Local Peak Period RTC List (With Consist Changes and Dwell).xlsx," "Rebuttal General Freight Summary (With Consist Changes, Dwells and TIH) 3-2.xlsx," "Rebuttal Added General Freight and Local RTC List 3-7.xlsx," and "Edgemoor and McIntosh Locals RTC (With Consist Changes and Dwell)_Errata.xlsx."

Page III-C-124, Line 20: "no" should read "seven (7)".

Page III-C-127, Line 5: "only one yard {{[redacted]}} has" should read "seven (7) yards have".

Page III-C-127, Line 6-7: Delete "In the Base Year the classification car count per day equals {{[redacted]}} cars."

Page III-C-127, Line 21: Delete "do not".

Page III-C-127, Line 21: Insert "seven (7)" between "construction of" and "hump yards".

Page III-C-127, Line 22-Page III-C-128, Line 3: Delete "While these car count grow to levels that may make it more efficient to utilize hump yards in later years at some locations, adding the associated dollars to the DRR capital investment, without reducing the yard crew assignments at these yards to reflect operational savings, would result in a double count of expenditures."

Page III-C-128, Line 4-5: Delete "without the use of hump yards".

Page III-C-132, Table III-C-3: A corrected version is attached.

Page III-C-139, Line 19: "94" should read "104".

Page III-C-139, Footnote 273: "DRR7.TRAIN" should read "DRR_Rebuttal_Errata.TRAIN".

Page III-C-140, Line 13: "645" should read "745".

III-D

Page III-D-2, Table III-D-1: A corrected version is attached.

Page III-D-2, Line 1: "$940.5" should read "$917.3".

Page III-D-2, Line 2: "$755.6" should read "$739.3".

Page III-D-2, Line 2: "five" should read "six".

Page III-D-2, Line 3: "Railcar Lease Train & Engine ('T&E') Personnel" should read "Railcar Lease, Train & Engine ('T&E') Personnel".

Page III-D-11, Line 2: "$156.4" should read "$156.1".

Page III-D-16, Line 3: "16" should read "20".

Page III-D-16, Line 4: Delete "flat".

Page III-D-16, Line 9: "8" should read "10".

Page III-D-16, Line 9: "28" should read "30".

Page III-D-16, Line 13: "12.4" should read "13.5".

Page III-D-16, Footnote 22: Delete footnote text.

Page III-D-24, Line 2: "0.5" should read "0.6".

Page III-D-25, Line 17: "645" should read "745".

Page III-D-25, Line 19: "3,428" should read "3,533".

Page III-D-54, Table III-D-9: A corrected version is attached.

Page III-D-56, Table III-D-10: A corrected version is attached.

III-F

Page III-F-2, Table III-F-1: A corrected version is attached.

Page III-F-5, Table III-F-2: A corrected version is attached.

Page III-F-28, Table III-F-3: A corrected version is attached.

Page III-F-35, Table III-F-4: A corrected version is attached.

Page III-F-71, Line 9: "slightly lower" should read "only slightly higher".

Page III-F-72, Table III-F-5: A corrected version is attached.

Page III-F-121, Lines 20-21: "hump yards are not necessary for the DRR and DuPont has not included these costs." should read "DuPont has included seven (7) hump yards. DuPont has accepted NS's hump yard equipment costs for these yards."

Page III-F-121, Line 2: "1,490" should read "1,678".

Page III-F-133, end of first paragraph: Add: "For its hump yards, NS used a yard at Elkhart, IN for the template and proposed sixty-four (64) high mast lights. This yard has only fourteen (14) high mast lights combined with smaller lights. On Rebuttal, DuPont has included fourteen (14) high mast lights at each hump yard combined with the lighting fixtures used by DuPont on Opening in these yards."

Page III-F-136, Line 10: After the first sentence, add: "NS included eight (8) towers at the eight (8) automotive facilities, sixteen (16) towers at its eight (8) hump yards (two (2) towers per yard) and five (5) towers at its five (5) large flat yards."

Page III-F-136, Lines 13-15: Delete "Furthermore, in addition to the towers at the eight automotive facilities, NS included two towers at each of its eight hump yards and one tower at each of its five large flat yards with no justification whatsoever. DuPont is not building any hump yards."

Page III-F-136, Line 16: "Finally" should read "Furthermore".

Page III-F-136, Lines 17-18: "extensive career nor does he see the need for them on the DRR." should read "extensive career."

Page III-F-136, Line 19: "DuPont notes" should read "Finally, DuPont notes".

Page III-F-136, Line 20: "DuPont has not included them on Rebuttal as they are not necessary." should read "On Rebuttal, DuPont has accepted NS's costs for two towers for each of the seven (7) hump yards on the DRR but has not accepted them for the automotive yards or large flat yards as NS has not demonstrated that they are necessary."

III-G

Page III-G-10, Note 23: "Exhibit III-H-1 Rebuttal.xlsm" should read "Exhibit III-H-1 Rebuttal_Errata.xlsm".

III-H

Page III-H-17, Table III-H-1: A corrected version is attached.

Page III-H-26, Table III-H-2: A corrected version is attached.

Page III-H-26, Table III-H-3: A corrected version is attached.

Page III-H-27, Line 1: "112.7%" should read "114.5%".

Page III-H-27, Line 2: "195.8%" should read "206.0%".

Exhibits

Exhibit III-D-1, Page 65, Line 17: "5,425" should read "5,573".

Exhibit III-D-2, Page 29, Line 6: Insert ", the addition of seven (7) hump yards" between "these corrections" and "and the".

Exhibit III-D-2, Page 29, Line 8: "203" should read "210".

Exhibit III-D-2, Page 29, Line 9: "23" should read "30".

Exhibit III-D-2, Page 61, Line 5: "$156.9" should read "$162.1".

Exhibit III-D-2, Appendix A, Page 6, Line 6-8: "The need for this position was not justified by NS, nor substantiated with supporting evidence. There were no hump yards in Opening on the DRR." should read "In Rebuttal DuPont has added a signal technician at each of the seven (7) hump yards."

Exhibit III-D-2, Appendix A, Page 6, Line 10-11: Delete "There were no hump yards in Opening on the DRR."

Exhibit III-F-1: see corrected version submitted in the accompanying electronic workpapers.

Exhibit III-F-2, page 11, changes to table, a corrected page is attached.

Exhibit III-F-2, page 118, changes to table, a corrected page is attached.

Exhibit III-F-2, page 119, changes to table, a corrected page is attached.

Exhibit III-H-1 through Exhibit III-H-14: see corrected versions submitted in the accompanying electronic workpapers.

Revised pages of DuPont's Rebuttal narrative and revised Rebuttal exhibit pages containing the corrections described above are submitted with this errata. These narrative and exhibit pages should be substituted for the pages in the version of DuPont's Rebuttal evidence

filed on April 15, 2013. Copies of the revised Rebuttal exhibits and electronic workpapers reflecting the above corrections are included on the DVD submitted with this errata.

Respectfully submitted,

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July 18, 2013

CERTIFICATE OF SERVICE

I hereby certify that this 18th day of July 2013, I served a copy of the Errata to Rebuttal Evidence of Complainant E.I. du Pont de Nemours & Company upon Defendant via hand delivery at the address below:

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CORRECTED REBUTTAL NARRATIVE PAGES

Table III-B-4
DuPont Opening, NS Reply and
DuPont Rebuttal DRR Track Miles

Description	DuPont Opening[1/]	NS Reply[2/]	DuPont Rebuttal[3/]	Difference Cols (3)-(4)
(1)	(2)	(3)	(4)	(5)
1. Main Line Track				
a. Single Main Line (incl. branch lines	7,276.94	7,343.55	7,293.78	49.77
b. Other Main (incl. sidings)	3,185.41	3,379.04	3,448.19	(69.15)
2. Other				
a. Helper Pocket and Setout Track	75.46	203.84	76.58	127.26
b. Customer Access Sidings	0.00	191.21	0.00	191.21
3. Yard and Interchange Track	853.10	1,787.28	1,266.93	520.35
4. Total Track Miles	11,390.91	12,904.92	12,085.48	819.44

1/ DuPont Opening Errata, p. III-B-5.
2/ NS Reply, p. III-B-10.
3/ DuPont Rebuttal e-workpapers "DUPONT RR Route Miles Rebuttal Grading.xlsx," tab "Sticks" and "DRR Yard Matrix Rebuttal Grading errata.xlsx," tab "DRR YARDS."

3. Yard And Interchange Track

The biggest difference between DuPont's Opening and NS's Reply track is in yard and interchange track. On Opening, DuPont included 853.10 miles of track for yards and interchange locations.[19] On Reply, NS included 1,787.28 miles of track for yards and interchange locations.[20] On Rebuttal, DuPont has included 1,266.93 miles of track for yard and interchange locations. Table III-B-5 below compares DuPont's Opening and Rebuttal yard and interchange track with NS's Reply yard and interchange track.[21]

[19] *See* DuPont Opening, p. III-B-5 and e-workpaper "DRR Yard Matrix errata.xlsx."
[20] *See* NS Reply, p. III-B-10.
[21] NS's yard track components were difficult to separate into the categories shown in Table III-B-5. *See* DuPont Rebuttal e-workpaper "Yard Track Comparison – DuPont v. NS errata.xlsx" for the various sources of the Table III-B-5 components.

Table III-B-5
DuPont Opening, NS Reply and
DuPont Rebuttal DRR Yard and Interchange Locations and Track Miles

Description	DuPont Opening		NS Reply		DuPont Rebuttal	
	No. of Locations	Track Miles	No. of Locations	Track Miles	No. of Locations	Track Miles
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Yard Track for Trains						
a. Yard Track For Trains	115	700.04	71	526.31	119	744.45
b. Industrial Support Yards	---	0.00	70	31.34	---	0.00
c. Intermodal Facilities	---	0.00	31	60.07	29	54.66
d. Automotive Facilities	8	28.08	8	41.68	8	41.68
e. Bulk Transfer Facilities	---	0.00	14	22.17	11	17.81
f. Interchange Tracks	---	1/	143	249.11	76	95.51
g. Subtotal	---	728.12	---	930.68	---	954.11
2. Classification Tracks	39	89.79	71	836.02	52	274.30
3. Fixed Fueling Facility Tracks	6	2.22	22	3.22	6	2.22
4. Locomotive Shop Tracks	4	4.54	10	0.00	6	6.82
5. Locomotive Servicing Tracks	38	10.08	22	3.93	36	9.54
6. Car Shop Tracks	2	2.44	2	0.00	2	2.44
7. Rip Tracks	45	15.91	27	9.97	51	17.50
8. MOW Tracks	---	1.00	26	3.45	---	0.00
9. Total	---	853.10	---	1,787.27	---	1,266.93

Source: DuPont Rebuttal e-workpaper "Yard Track Comparison – DuPont v. NS errata.xlsx."
1/ DuPont's interchange locations and tracks are included in line 1a.

Before addressing the specific differences between DuPont and NS in yard and interchange track miles shown in Table III-B-5 above, the difference in philosophies underlying the development of yard and interchange track miles must first be addressed.

On Opening, DuPont's operating plan specified the location of "major" and "minor" yards where activities such as train staging, car inspection, yard switching (for originating and terminating traffic plus intermediate blocking of cars), crew changes, local train operations and locomotive repairs, servicing and fueling would take place. At many of these locations, traffic would also be interchanged with NS and other railroads. The number and length of "running

tracks" in each yard (the tracks necessary to handle the peak period trains moving through the yards of DRR) were based on the results of the RTC Model. [22]

Additional yards were also identified from the RTC Model. These consist of tracks shown as yard track, and not siding track, in the RTC Model.[23] These tracks are present wherever trains are stopped for extended periods of time and would include interchange locations and some crew change locations located outside the yards identified by the operating plan. These locations are not yards as defined by the operating plan but are locations that are classified as yard track in the RTC Model and, therefore, classified as yard track for construction purposes.

Additional interchange locations were identified by a review of DRR carload data and interchange track was added at interchange locations where the DRR did not already have a yard.[24]

Automotive yards were also added manually to the DRR yard list.[25]

The number and length of classification tracks were estimated based on the range of car counts at each yard.[26] The number and length of tracks needed for locomotive repair and servicing facilities, fueling and car repair (rip tracks) were estimated by general yard size and included where necessary.[27]

All of the above were incorporated into the yard requirements of the DRR resulting in 853.10 miles of yard track.

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[22] *See* DuPont Opening e-workpaper "DRR Yard Matrix errata.xlsx,' tab "DRR Yards," footnotes 1 and 2.
[23] Yard track in the RTC Model is shown as gray.
[24] An example of this would be the interchange track added at Huntingburg, IN. *See* DuPont Opening e-workpaper "DRR Yard Matrix errata.xlsx," tab "DRR YARDS," Line 35.
[25] An example of this would be the automotive yard added at Shelbyville, KY. *Id,* Line 37.
[26] *See* DuPont Opening e-workpaper "DRR Yard Matrix errata.xlsx,' tab "CLASS TRK LENGTH."
[27] *See* DuPont Opening e-workpaper "DRR Yard Matrix errata.xlsx,' tab "ADDL TRACK."

III-C, DuPont also explains that it has reevaluated its classification track requirements based on the NS's criticisms. Using the number of classification tracks needed at each yard, the ladder track configuration used in Opening and the minimum and maximum track lengths of 1,000 and 3,200 feet used in Opening, DuPont has included 274.30 miles of classification track at 52 locations on Rebuttal.[38]

As shown in Table III-B-5 above, DuPont included small amounts of track on Opening at selected yards for locomotive repair, fueling and servicing facilities as well as car repair and rip track facilities (Table III-B-5, lines 4-7, Column (2) and Column (3)). NS included track for locomotive fueling and servicing facilities as well as rip and MOW tracks (Table III-B-5, lines 4-8, Column (4) and Column (5)). NS did not criticize DuPont's locations or track miles for these facilities on Reply, and in most instances DuPont included more track at more locations. Locomotive repair, car repair and fixed fueling facilities are discussed in Part III-F-8, Buildings and Facilities. The only change DuPont is making to these facilities on Rebuttal is the increase to six (6) locomotive repair facilities. The only change to DuPont's number of locomotive servicing tracks is the elimination of these tracks at two yards where the DRR no longer needs yard crews as discussed in Part III-C. Also as discussed in Part III-C, DuPont has added car inspectors at a few additional locations and DuPont has added rip tracks at those locations where rip tracks were not provided on Opening. DuPont did not include MOW tracks in yards on Opening because DuPont's maintenance of way witness, Mr. Crouch, did not deem them necessary. NS did not provide any evidence on Reply demonstrating that these tracks are necessary and DuPont has continued to exclude them in Rebuttal.

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[38] *See* DuPont Rebuttal e-workpaper "DRR Yard Matrix Rebuttal Grading errata.xlsx," tab "CLASS TRK LENGTH."

has added 95.51 miles of interchange track at these 76 locations based on the track miles NS included in Reply.[47]

c. Rebuttal DRR Yards

As discussed above, and shown earlier in Table III-B-5, DuPont has increased its yard and interchange track from 853.10 track miles to 1,266.93 track miles. This is still substantially lower than NS's overstated 1,787.27 track miles.

4. Joint Facilities

DuPont included 818.87 miles of trackage rights in Opening.[48] After reviewing NS's Reply, DuPont has made four modifications to the DRR's trackage rights miles.

NS claims that DuPont cannot move over CSXT track between Pine, IN and Burnham, IL[49] (designated by DuPont as the Chicago Connector 2). DuPont accepts this and has eliminated this segment in Rebuttal and deleted the 6.40 miles of trackage rights.[50]

NS also claims that DuPont cannot connect to the Canadian National Railway ("CN") line from Chicago, IL to Gibson City, IL at milepost 17.70 in Riverdale, IL but must connect at the 95th Street Junction at milepost 12.00.[51] DuPont accepts this and adds 5.71 miles of trackage rights over the CN.[52]

NS reduces the mileage for the TRRA segments traversed by the DRR in St. Louis by a total of 0.52 miles. DuPont accepts NS's mileage changes for these segments.

NS also reduces the mileage for the IHB segment between Argo, IL and Provo Jct., IL by 0.10 miles. DuPont accepts this change.

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47 *See* DuPont Rebuttal e-workpaper "DuPont Rebuttal RR Interchanges.xlsx."
48 *See* DuPont Opening, p. III-B-8 and e-workpaper "DUPONT RR Route Miles Opening errata.xlsx."
49 *See* NS Reply, p. III-C-146.
50 DuPont notes that NS did not delete this segment or the corresponding miles from its route mile spreadsheet. *See* NS Reply e-workpaper "DUPONT RR Route Miles Opening Grading errata Reply.xlsx."
51 *See* NS Reply, p. III-C-147.
52 DuPont notes that NS did not include this extension or the corresponding 5.71 miles in its route mile spreadsheet. *See* NS Reply e-workpaper "DUPONT RR Route Miles Opening Grading errata Reply.xlsx."

DRR routes when indicated by NS train event data for road trains and NS car event data for straight-away local trains.

In its Rebuttal RTC model, and in direct response to NS's Reply criticisms, DuPont has updated its RTC train list to include dwells for local trains operating in turn service, and to reflect changes in consists for general freight and local trains. DuPont takes this step even though it continues to believe that NS's car and train event data are of such poor quality as to make the statistics used meaningless. [133]

i. The DRR Provides The Same Or Better Service Quality Than NS

In its Opening narrative, DuPont explained how its modeling of the DRR network using the RTC simulation program proved the SARR's feasibility to handle the issue and non-issue traffic operating over the network. In its Reply, NS alleges that not only did DuPont not prove the feasibility of the DRR, but it also did not prove it was providing the same level of service as the NS provides its customers.[134] In addition, NS expands the definition of providing "better service" beyond providing the same or better transit times as the incumbent to include other factors.[135]

As DuPont explained in Opening in great detail, the numerous errors and flaws on NS provided train and car event data limited the ability to develop broad operating analyses. This includes dwell time calculations, as discussed in detail above and in DuPont's Opening Exhibit III-C-1, and transit time calculations for most trains.[136] While NS takes DuPont to task for not

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[133] *See* DuPont Rebuttal e-workpapers "Rebuttal Local Peak Period RTC List (With Consist Changes and Dwell) xlsx," "Rebuttal General Freight Summary (With Consist Changes, Dwells and TIH) 3-2 xlsx" and "Rebuttal Added General Freight and Local RTC List 3-7 xlsx." and "Edgemoor and McIntosh Locals RTC (with consist changes and Dwell).xlsx"

[134] *See* NS Reply, p. III-C-151.

[135] *See* NS Reply, pp. III-C-150-153.

[136] Train transit times are calculated by subtracting the arrival time at the trains final destination from the departure time from the origin. DuPont explained in its Opening Exhibit III-C-1 that NS's train event data contains an extreme imbalance in arrival and departure train events, with a nearly 20 to 1 ratio of departure messages to arrival messages. DuPont also explained that the arrival events that are included are in most cases out of

the peak week. NS labels this approach as a "static" capacity factor, in the hope that giving its procedure a name will justify its unreasonableness. Not satisfied that its classification car counts are sufficiently high, NS then increases these car counts by an effective 167 percent fluidity factor to yield the car counts it actually uses in determining the number of classification tracks required for each DRR yard.

An example of the impact of this procedure is the medium-size flat yard in {{[redacted]}}, where NS shows the 2010 classification car count to equal {{[redacted]}} cars per day and the 2018 classification car count to equal {{[redacted]}} cars per day. The average car count for the peak *hour* in the peak week equals {{[redacted]}} cars per hour, a {{[redacted]}} percent increase over the peak year car count per day. NS then increases this classification car count by dividing the "static" car count by its {{[redacted]}} percent fluidity factor to yield a classification car count of {{[redacted]}} cars per day, which it uses to determine the number of classification tracks in the {{[redacted]}} yard. The Board has rejected "Building a church for Easter Sunday" in the past as being unreasonable and should do so again in this proceeding.

In Reply, NS discusses yard sizing and categorizes yards into flat yards and hump yards, indicating that, when the cars requiring switching exceed 900 cars per day, it is more efficient to construct and operate a "hump" yard rather than a flat yard. [243] Based on its unsupported car counts discussed above, NS determined in Reply that eight (8) hump yards should be included on the DRR system. As discussed in a later section, DuPont, based on the car counts per day developed from NS's car event data provided in discovery for the Base Year, determines that seven (7) hump yards are required on the DRR system.

[243] *See* NS Reply, p. III-C-174.

DuPont also used the count of cars to be classified developed from NS's car event data to determine the proper configuration of the DRR yards. As stated previously, NS assumes that it is most appropriate to construct and operate a hump yard when the cars per day to be classified exceed 900 cars.[252] The car counts developed by DuPont from NS's car event data, plus the cars originating and terminating in yards show that in the Base Year seven (7) yards have classification car counts that exceed 900 cars per day.[253]

NS's 900 car per day threshold is not a requirement but an approximate classification car count where efficiencies begin that permit a significant reduction in yard crew assignments when the capital funds are expended to construct a hump yard. Alternatively, a railroad can elect to add yard crew assignments when classification car count exceeds this threshold rather than to expend the capital resources to construct a hump yard.

Yard crew assignments are developed using Base Year traffic volumes and classification car counts. The resulting yard crew expense is increased throughout the life of the DCF model to account for the growth in traffic volumes over the DCF period. In effect the yard crew personnel are grown throughout the life of the model to reflect increases in traffic volume. If the DRR were to construct a hump yard when justified by increased volume in later years, the associated crew expense would not reflect the savings resulting in the greater efficiency afforded by use of hump yard operations and thus operating expenses would be overstated.

In summary, the classification car counts based on NS's car event data associated with the actual trains moving on the DRR system warrant the construction of seven (7) hump yards on the DRR in the Base Year. In Rebuttal, DuPont provides adequate yard crews to handle

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[252] *See* NS Reply, p. III-C-174.
[253] *See* DuPont Rebuttal e-workpaper "DRR Yard Matrix Rebuttal v8_Errata.xlsx," col. 21 + col. 22.

classification of cars in all yards on the DRR and effectively grows these crews to provide classification service in yards over the life of the DCF model.

ii. Intermodal Facilities

As discussed in Part III-B, NS included thirty-one (31) intermodal facilities.[254] DuPont agrees that the DRR needs intermodal facilities but has included only twenty-nine (29) of the facilities identified by NS. DuPont has excluded the facility in Elizabeth, NJ because NS stated that this facility is private and the DRR did not need to construct it.[255] DuPont has excluded the facility in Morrisville, PA because this facility is located on a Conrail Shared Asset line that the DRR is not constructing. DuPont has accepted NS's track miles for the intermodal facilities it has included.

iii. Automotive Facilites

As explained in Part III-B, in Opening, DuPont identified and included eight (8) automotive yards.[256] In Reply, NS also included eight (8) automotive yards, seven (7) of which are the same as those included by DuPont in Opening. The eighth automotive yard included by NS is in Chicago rather the Avon Lake, Ohio auto yard included by DuPont. In Rebuttal, DuPont accepts NS's Chicago auto yard and eliminates the Avon Lake yard. DuPont has also accepted NS's track miles at each of these facilities.

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[254] *See* NS Reply, pp. III-C-195- 197 and e-workpaper "DRR Yard List Reply.xlsx," tab "IM Yards."
[255] *Id,* p. III-C-196, note 307.
[256] *See* DuPont Opening e-workpaper "DRR Yard Matrix errata.xlsx," tab "DRR YARDS."

Table III-C-3
Base Year Locomotive Unit Requirements

Unit Type	DuPont Opening	NS Reply	DuPont Rebuttal
(1)	(2)	(3)	(4)
ES44AC	481	977	641
GP38	101	291	180
SW1500	80	--	104
SD40-2	--	173	--
Total Units	662	1,441	925

Source: "DRR Operating Statistics_Errata.xls," "DRR Operating Statistics Reply.xlsx," and "DRR Operating Statistics_Rebuttal_Errata.xlsx."

(1) Road Locomotives

NS asserts that the DRR should purchase and service a fleet similar in size to the one NS operates today.[260] This assertion is incorrect because it is wholly unsupported by NS's evidence and it ignores the fundamental rules of stand-alone rate cases. In fact, NS acknowledges that DuPont will "employ higher-horsepower AC units than NS typically runs,"[261] and it is illustrated clearly in NS's own records that the ES44AC locomotives are more reliable and more efficient than the locomotives predominantly owned by NS today.[262] Furthermore, the DRR is the least cost, most efficient railroad designed from the ground up to function properly with the fewest number of locomotives that is reasonable. Therefore, it is clear that the DRR should not, under any circumstances, expect to have a fleet comparable in size to what NS uses today.

The difference in count of road locomotives among the parties is due to: 1) the number of trains on the system; 2) cycle times produced by the RTC model; 3) NS's inclusion of yard dwell

[260] *See* NS Reply, p. III-D-5.
[261] *Id.*
[262] *See* DuPont Rebuttal e-workpaper "Loco Utilization_Rebuttal.xlsx," tab "Bad Order by Type," which contains NS locomotive utilization data provided in discovery and a tab summarizing the data by loco type.

trains and unit coal trains which DuPont reroutes from the Heartland corridor route to the DRR line between Chillicothe, OH and PD Junction, via Dickinson, WV, would require helper service between Dickinson and Elmore, WV. NS includes these five additional helper districts and the associated locomotives and crews.

NS's arguments regarding the additional helper districts are meritless. DuPont is fully aware of the need for increased power for trains moving in each of these districts. In Opening, DuPont determined that, at the five locations NS identified as requiring additional helper service, it was operationally preferable to increase the locomotive power on trains moving through these areas for entire crew districts, rather than to add helper service for a portion of the crew district.[273] Therefore helper service is not required. As demonstrated by the fact that no trains stall in the RTC simulation in any of these locations, all DRR trains have sufficient power to navigate these locations.

In Rebuttal, DuPont continues to provide helper service in the five locations where helper service is provided in its Opening evidence.

(4) Switch Locomotives

In Opening, DuPont provided 80 switch locomotives on the DRR. As discussed earlier in Part III-C, DuPont has adjusted classification switching services provided on the DRR in Rebuttal. This adjustment results in an increase in yard crew assignments in many yards and thereby an increase in the number of yard locomotives. In Rebuttal, the DRR has a total of 104 yard locomotives.[274]

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[273] *See* DuPont Rebuttal e-workpaper "DRR_Rebuttal_Errata.TRAIN." This workpaper shows the locomotive configuration on DRR trains and the RTC simulation demonstrates that no trains stalled en route due to a lack of power.

[274] NS also disputes DuPont's use of SW1500 switch locomotives for DRR yard switching service and instead uses SD40-2 road locomotives for yard switching service. This issue is fully addressed in Part III-D.

d. Crew Districts and Requirements

i. Road Crews

In Opening, DuPont provided for 28 road crew districts. In Reply, NS accepts DuPont's road crew districts. The difference in the number of road crews in the parties' evidence is due to the number of trains in the parties' evidence and NS's artificially inflated road crew requirements by unnecessarily rebalancing DRR road crews. The number of road crews required by the DRR are fully addressed in Part III-D-3.

ii. Yard Crews

In Opening, DuPont provided 496 yard crew personnel on the DRR. As discussed earlier in Part III-C, DuPont has adjusted classification switching services provided on the DRR in Rebuttal. This adjustment results in an increase in yard crew assignments in many yards and thereby an increase in the number of yard crew personnel. In Rebuttal, the DRR has a total of 745 yard personnel. The development of yard crew personnel is fully addressed in Part III-D-3.

iii. Helper Crews

In Opening, DuPont provided for a total of 62 helper crew personnel to assist trains moving in five (5) helper districts. As discussed above with regard to helper locomotives, NS incorrectly argues that DuPont failed to provide helper service in five (5) additional helper districts. In Rebuttal, DuPont retains the same helper districts as used in Opening and the same number of helper crews.

Rebuttal Table III-D-1
DuPont Opening, NS Reply and
DuPont Rebuttal DRR 2009 Operating Expenses
($ Millions)

	Item	DuPont Opening	NS Reply	DuPont Rebuttal
	(1)	(2)	(3)	(4)
1.	Locomotive Lease	$58.3	$145.3	81.2
2.	Locomotive Maintenance	124.0	151.1	157.1
3.	Locomotive Operations	394.1	458.2	437.9
4.	Railcar Lease	307.5	420.1	356.9
5.	Materials & Supply Operating	3.8	11.1	4.6
6.	Train and Engine Personnel	314.0	586.0	348.6
7.	Operating Managers	53.7	128.5	63.6
8.	General & Administrative	57.6	172.1	77.4
9.	Loss & Damage	14.1	12.8	12.8
10.	Ad Valorem Tax	56.7	84.2	56.9
11.	Maintenance-of-Way	156.6	377.1	162.1
12.	Trackage Rights	42.3	74.0	58.9
13.	Intermodal Lift and Ramp	90.8	110.4	108.0
14.	Insurance	35.1	64.6	40.3
15.	Startup and Training	112.4	207.9	125.2
16.	Motor Vehicles	6.9	6.9	6.9
17.	Total	$1,828.0	$3,015.6	$2,098.3

Source: "DRR Operating Expense_Errata.xls," DRR Operating Expense Reply.xlsx" and DRR Operating Expense_Rebuttal_Errata.xlsx."

Of the $917.3 million total remaining differences in the parties' calculations of annual operating expense the bulk ($739.3 million) is accounted for by six categories: Locomotive Lease, Railcar Lease, Train & Engine ('T&E') Personnel, Operating Managers, General & Administrative, Maintenance of Way. Most of the difference in these items results from NS's more complex operating plan for the DRR, which involves more locomotives, more crews, more yards, and more switching activity than were provided in DuPont's operating plan. As discussed in Part III-C-1 above, NS's operating plan must be rejected by the Board because it does not meet customer service requirements and because it does not provide an appropriate basis for determining the DRR's annual operating expenses. Accordingly, NS's proposed new yards and

locomotive unit-mile. This amount applied to the locomotive unit-miles from trains moving over the DRR in Rebuttal yields annual locomotive maintenance cost of $157.1 million.[13] The remaining difference in the parties' locomotive maintenance cost results from the difference in locomotive unit miles.

In Reply, NS notes that the DRR has only four locomotive shops on its 7,300 mile rail network and speculates that the DRR is required to have a total of 10 shops, seven Division shops and three System shops.[14] The basis for NS's comment is not identified and therefore not supported. However, NS's website shows that NS has a total of eight (8) locomotive shops on its 20,063 mile rail network, or two (2) fewer locomotive shops that NS claims are required by the DRR.[15] NS's requirement that the DRR have 10 locomotive shops is not only unsupported, it is unreasonable based on a comparison of NS own experience.

c. Locomotive Servicing (Fuel, Sand and Lubrication)

Locomotive servicing cost is based on the price of fuel, fuel consumption and sand and lubrication costs. The DRR's fuel cost is based on the average consumption per locomotive unit mile calculated from NS's 2009 R-1 Annual Report for road and yard locomotives and the actual price for fuel paid by NS in 2Q2009. The components of locomotive servicing costs are discussed below.

i. Fuel Cost

On Opening, DuPont used NS's actual price of fuel paid by NS for 2Q2009 of $1.545 per gallon as reported by NS in its Quarterly Review. NS accepted DuPont's fuel price in Reply[16] and DuPont continues to rely on this price per gallon Rebuttal.

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[13] *See* DuPont Rebuttal e-workpaper "DRR Operating Expense_Rebuttal_Errata.xlsx."
[14] *See* NS Reply, p. III-D-24.
[15] *See* DuPont Rebuttal e-workpaper "progressive railroading.com – Norfolk_Southern.pdf."
[16] *See* NS Reply, p. III-D-25.

forwarded and interchange received. Local carloads are assigned 40 hours of yard dwell, based on a movement between a road train and a local train on both the origin and destination ends of the movement, or 20 hours at each end of the move. Bridge traffic carloads are assigned 20 hours of dwell time as they are assumed to move through a yard when they are interchange received and when interchange forwarded.[22] As bridge traffic is not handled by local trains, it is not assigned any time for moving "between arrival and departure on local trains." Finally, interchange received and interchanged forwarded carloads are assumed to move between a local train and a road train at the origin end of the move or termination end of the move and in interchange at the other end of the move, thus receiving 20 hours plus 10 hours for a total of 30 hours.

Application of the yard dwell hours more properly reflect the time DRR provided cars dwell in yards and results in a reduction in dwell time from the 18.4 million hours assigned by NS to 13.5 million hours in the Base Year.

iii. Intermodal Car Costs

To determine freight car costs for intermodal traffic in Opening, DuPont assumed all intermodal shipments moved using DRR provided flat cars. This assumption was made for two reasons. First, ownership of the railcar used in intermodal shipments is not evident from the NS's traffic data. Ownership of the container or trailer is available from plan codes included in the traffic data, however, this data does not indicate ownership of the railcar. NS's car event data does include a field for ownership information for railcars, however, in many instances this field is not populated for intermodal traffic. Therefore, DuPont employed the method used by the parties in previous stand-alone cost proceedings and accepted by the STB, which is to assume all

[22] Text Deleted

re-crew rate from the number of crews that expire from its RTC simulation. Based on DuPont's Rebuttal RTC simulation, the re-crew rate equals 0.5 percent.[32]

iv. DuPont Includes All Necessary Helper Service

In Opening DuPont provided 62 T&E personnel to provide helper service and in Reply NS included 90 T&E personnel providing helper service. As fully discussed on Part III-C related to helper locomotives, in Opening, DuPont provide helper service in all locations necessary. As stated in Part III-C, DuPont provides helper service at five (5) locations on the DRR. NS adds helper service at five (5) additional locations. As shown in DuPont's RTC simulation, DuPont provides sufficient locomotive power on all trains at each of the five (5) locations where NS adds helper service; the difference is that DuPont's operating plan adds and removes the power at the beginning or end of crew districts, thereby eliminating the need for helper crews at these locations. In Rebuttal, DuPont continues to include 62 T&E employees to provide helper service.

v. Yard Crews

In Opening, DuPont included 496 yard crew personnel located at 40 yards on the DRR. In Reply, NS claims that DuPont significantly understated the yard crew requirements because it failed to provide necessary classification switching services. NS included 1,071 yard crew personnel and switching services at 54 yards on the DRR. In Part III-C *supra*, DuPont addressed the omission of classification of cars in yards in its Opening evidence, which resulted in an understatement of yard crews.

Also fully discussed in Part III-C, the yard classification car counts provided by NS in Reply were developed through its flawed MultiRail process and are unsupported. Moreover, the workpapers containing the car counts included with NS's Reply evidence are only hardcoded

[32] *See* DuPont Rebuttal e-workpaper "Base Year Train List_Statistics_Rebuttal_Errata.xlsx."

numbers which cannot be verified. When asked for supporting workpapers NS provided an additional spreadsheet with more unverifiable hardcoded numbers and the classification car counts in this spreadsheet differed from those included with NS's Reply workpapers. When NS finally provided DuPont's experts limited access to its MultiRail programs and procedures, the read only MultiRail documents provide yet a third set of unverifiable classification car counts.

Rather than relying on any of NS's unsupported car counts and NS's flawed MultiRail procedures in Rebuttal, DuPont developed classification car counts in each yard from the car event data provided by NS in discovery. This actual car event data corresponds to NS's actual train data, which DuPont relies on for its operating plan and not NS's made for litigation MultiRail data. In developing the classification car counts from the car event data, DuPont included all cars moving between trains in each individual yard and excluded cars moving in blocks between trains (i.e., "block swaps"). Cars originating or terminating in the individual yards were then added to the cars being classified. This is the procedure NS identifies as being appropriate for identifying cars for classification purposes in yards.[33]

The number of yard crew assignments and yard crew starts per shift were determined for each yard based on a combination of the cars requiring classification plus cars originating and terminating in each yard. Based on the procedures described above, DuPont includes 745 yard crew personnel providing switching services in 49 yards in Rebuttal.[34]

In Rebuttal DuPont includes a total of 3,533 T&E employees to provide road, helper and yard switching services.

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[33] *See* NS Reply e-workpaper "Terminal Capacity Requirement Tracking Process for Hump Classification Yards.doc," pp. 10-11.

[34] *See* DuPont Rebuttal e-workpaper "DRR Yard Crew Personnel_Rebuttal_Errata.xlsx."

Third, NS claims "[t]he DRR assumes that at locations with 1 to 3 trains requiring inspection, the train crew will perform this service; for 4 - 6 trains, 2 car inspectors are required; the maximum is for 18 trains, 8 car inspectors are required. NS also claims that DRR provided no consideration for train size (i.e.: railcar counts) in the inspection assumptions."[67] Contrary to NS assertion, DuPont's inspector assignments assume that the DRR has one inspector on duty where 3 trains are to be inspected, and where 1 or 2 trains require inspection, the respective train crew will perform the required inspection. Usually these trains are small to mid-size, meaning 30 to 60 cars in total. Where 4-5 trains require inspection, two (2) car inspectors are required. Where 6 trains are inspected, three car inspectors are required. Where 18 trains require inspection, DRR has nine (9) inspectors (one serves as lead foreman/manager at that location).

Fourth, NS claims "Car Inspectors are required to undergo quarterly training, with one annual training session being full day," and that "[s]ome of this is not accounted for in the DRR proposal."[68] DRR is in agreement with NS's comments regarding timely training of Car Inspectors as mandated by the FRA's "Federal Power-Brake Law," as defined in CFR Title 49, Part 232, Subpart C. Contrary to NS's statement, DuPont has provided for both initial and ongoing training of inspectors in its Opening evidence and also in its Rebuttal evidence.[69]

Fifth, NS claims "[t]he DRR only has car inspectors at 15 locations," and there are "18 terminals where DRR is going to permit train crews to do the train inspections/brake tests."[70] NS also says "the DRR is providing car inspector services at less than 50% of the terminals that they are operating."[71] DuPont agrees with NS that certain terminals should be staffed with qualified

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[67] *Id.*
[68] *Id.*
[69] *See* DuPont Opening workpaper "DRR Operating Expense_Errata.xls" and DuPont Rebuttal workpaper "DRR Operating Expense_Rebuttal_Errata.xlsx"
[70] *Id.*
[71] *Id.*

car inspectors to ensure that cars being inspected by train crews receive more than a typical brake test and FRA Appendix D inspection. In Rebuttal, DuPont accepts NS's approach of having inspectors available to inspect all originating trains with more than 25 cars, all originating local trains and all through trains requiring additional inspections. In Rebuttal, DuPont has assigned 377 car inspectors (71 of these inspectors are car foremen discussed above) at 47 locations on the DRR to inspect trains using these criteria. In contrast, NS has assigned inspectors at only 29 locations, with 15 other locations covered by "Line of Road Carmen for a total of 44 locations."

In Rebuttal, DuPont has increased the Equipment Inspection staff to a total of 377 foremen and inspectors,[72] which is completely adequate to meet the DRR's needs. NS's staffing is overstated.

iii. Operations Support Department

NS claims that "[t]here are a variety of other positions required to support the operating functions of a Class I railroad, which DuPont has failed to make adequate provision for. These functions include Budgeting; Joint Services; Service Measurement; Service Design; Safety and Training; Terminal Management; Damage Prevention and Claims; and Car and Train Reporting."[73] This is yet another example of duplicative and unneeded forces. Based on Mr. McDonald's experience, the functions mentioned here are all adequately accounted for in DuPont's evidence and is discussed below.

(1) Operations Service and Support (OSS)

NS identifies an OSS department which is responsible for car and train reporting and all activities related to the first and last mile of the car movement. These DRR functions are

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[72] *See* DuPont Rebuttal e-workpaper "DRR Yard Matrix_Inspectors and Yard Crew Assignments_Errata.xlsx." All inspection teams have one Inspection foreman assigned to the team. The Inspection foremen perform the same function as NS's Car Managers, without adding an unnecessary layer of supervisory staff.

[73] *See* NS Reply Exhibit III-D-1, p. 16.

Rebuttal Table III-D-6
DuPont Opening, NS Reply and DuPont Rebuttal 2010 G&A Expense
($ in millions)

Source	2010 G&A Expense
(1)	(2)
1. DuPont Opening	$57.6
2. NS Reply	$172.2
3. DuPont Rebuttal	$ 77.4

Source: DuPont e-workpapers "DRR Operating Expense_Errata.xlsx," "DRR Operating Expense Reply.xlsx" and "DRR Operating Expense_Rebuttal_Errata.xlsx."

The G&A expenses for the DRR have been developed on the basis of the experience of DuPont's witnesses McDonald, Hunter, Kruzich, and Burris. Mr. McDonald in particular has held a number of senior management positions at Class I railroads and has 35 years of experience in railroad operations, engineering, and management. Mr. Hunter also has extensive experience, 36 years, in management and has been involved in several railroad mergers.

DuPont's other two (2) G&A witnesses include Mr. Kruzich, who has 38 years of experience in railroad accounting, executive administration, and information technology, and Mr. Burris, who has more than 30 years of consulting experience related to railroad economics.

a. Staffing Requirements

As discussed above, Mr. McDonald has extensive experience in dealing with Class I railroads. Mr. McDonald spent a large portion of his career with C&NW, a railroad very similar in size to DRR. C&NW was a very cost effective, efficient railroad, much like that of the DRR. Table III-D-7 below summarizes how similar DuPont's G&A managerial staff is to C&NW, as well as how different and excessive NS's managerial staffing is:

DuPont has increased IT staffing to 51 on Rebuttal. This will be more than sufficient given the quality of technology and personnel in today's market.

b. Compensation

NS accepted DuPont's use of NS's Wage Forms A and B to calculate employee compensation. However, NS did not accept DuPont's approach of only including salaries and bonuses for the President, Vice Presidents, and Marketing Managers. DuPont stands by this approach and does not believe that stock awards, stock options, non-equity incentive plan compensation, and "all other compensation" should be included when calculating the total compensation for these positions. The DRR is a new startup railroad and should not be forced to overpay employees prior to its establishment.

c. Material, Supplies, and Equipment

NS accepts DuPont's proposed unit costs for the materials, supplies and equipment needed by the DRR's employees. The revised employee count on Rebuttal requires a corresponding revision in the total expenditure for materials, supplies and equipment.[87]

d. Other

i. IT Systems

DuPont's expert witness Kruzich was responsible for developing the DRR's IT systems. Much of the technology provided (94 percent of IT Operating Cost) is through RMI outsourcing. DuPont's IT systems are very similar to those used by other Class I railroads and will allow DRR employees to work efficiently and effectively.

The total Capital and Operating Costs for IT and Communications Systems proposed by NS in Reply are more than three times that of DuPont's Opening costs. DuPont has made adjustments to the costs submitted in Opening and has increased the DRR Capital and Operating

[87] *See* DuPont Rebuttal e-workpaper "DRR Operating Expense_Rebuttal_Errata.xlsx" for details.

Costs. Based on the DRR operating plan and G&A staff departments, the capital requirements for IT and communications systems equal $26,090,841. The annual operating cost for IT and related communications equals $30,557,474.The expenses associated with IT systems are shown in Table III-D-8 below.

Rebuttal Table III-D-8
DuPont Opening, NS Reply and DuPont Rebuttal
Capital And Operating Costs For DRR IT and Communications Systems

		DuPont Opening		NS Reply		DuPont Rebuttal	
	Item	Capital Cost	Operating Expense	Capital Cost	Operating Expense	Capital Cost	Operating Expense
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	IT	$10,624,960	$24,883,951	$86,743,510	$31,723,904	$26,021,565	$29,684,936
2.	Communications	$67,168	$760,338	$286,170	2,136,291	$69,276	$872,539
3.	Total	$10,692,128	$25,644,290	$87,029,680	$33,860,195	$26,090,841	$30,557,474

Source: "DRR – Capital Budget.xls," "DRR – Operating Budget.xls," "DRR Operating Expense Reply.xlsx," tabs, "IT Operating" and "IT Capital," DRR – Capital Budget–Rebuttal – Final," and "DRR – Operating Budget–Rebuttal – Final."

The DRR's computer and IT communications systems are fully described in Exhibit III-D-1.

e. Other Out-Sourced Functions

The DRR will be able to outsource several of the functions that large railroads, such as NS, normally conduct in-house. 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.

The functions DRR will be out-sourcing include: 1) Payroll Processing; 2) Internal and External Auditing; 3) Claims; 4) Tax preparation; and 5) Outside Counsel. Estimated annual costs of $12.1 million have been developed for outsourcing all of the functions described above.[88]

[88] *See* DuPont Rebuttal e-workpaper "DRR G&A Outsourcing_Rebuttal_Errata.xlsx" for details.

experience with NS's predecessors. NS claims DuPont's plan is "patently insufficient to serve DRR's needs and is far less extensive than the MOW workforces that the Board has approved in recent SAC cases.[89] NS proposes a MOW staff of 2,133.[90] A comparison of the parties' MOW staffing is provided in Table III-D-9 below.

Rebuttal Table III-D-9
DuPont Opening, NS Reply and DuPont Rebuttal MOW Staff

Source	MOW Staff
(1)	(2)
1. DuPont Opening	1,006
2. NS Reply	2,270
3. DuPont Rebuttal	1,093

Source: "Exhibit III-D-3 DRR MOW errata.xls," "Exhibit III-D-3 NS DRR MOW.xlsx" and "Exhibit III-D-2 MOW_Errata.xls"

While Mr. Crouch has designed the MOW plan specifically for a brand new DRR system with no track or bridge defects, NS has designed a MOW plan for the existing NS system that will more than double the MOW staff proposed by DuPont on Opening. To compare the new DRR system with NS's existing system, that was laid may years ago, is completely unreasonable. Costs for maintaining a newly constructed system will be considerably lower than costs for an older, aging track system. Mr. Crouch's plan has a substantial field staff to perform day-to-day inspection and maintenance activities.

NS's experts argue that DuPont's staffing does not conform to past cases in terms of MOW staff-to-track miles. NS claims "DuPont's proposed DRR MOW workforce is vastly smaller on a track-mile basis than MOW workforces accepted by the Board."[91] NS's attempt to

[89] *See* NS Reply, p. III-D-198.
[90] *Id.* p. III-D-199.
[91] *Id.* p. III-D-198.

artificially increased the need for supervision and management. NS also increased the number of MOW employees by adding more infrastructure, and related maintenance needs.

In summary, NS failed to provide adequate reasoning or evidence for the additional, unnecessary MOW staff and departments. DuPont stands by its Opening MOW staffing and equipment configurations and maintenance needs for the DRR with minor changes. DuPont's staffing will be more than capable of handling the MOW tasks required for the DRR, and NS's excessive staffing is not how an efficient Class I railroad would operate. DuPont's changes, along with NS's reply, are discussed in length in Exhibit III-D-2. A comparison of the parties' 2009 MOW expenses is provided in Table III-D-10 below.

Rebuttal Table III-D-10
DuPont Opening, NS Reply and DuPont Rebuttal 2009 MOW Expense
($ in millions)

Source	2009 MOW Expense
(1)	(2)
1. DuPont Opening	$156.6
2. NS Reply	$377.1
3. DuPont Rebuttal	$162.1

Source: "Exhibit III-D-3 DRR MOW errata.xls," "Exhibit III-D-3 NS DRR MOW.xlsx" and "Exhibit III-D-2 MOW Errata.xls"

6. Leased Facilities

In Opening, DuPont listed thirty two (32) separate locations where the DRR "steps into the shoes of NS" and utilizes existing joint use, trackage rights, haulage rights, and switching agreements. DuPont included $42.3in operating expenses for 818.87 miles.[92] On Reply, NS criticizes DuPont's use of joint use, trackage rights, haulage rights, and switching agreements,

[92] *See* DuPont Opening e-workpapers "DuPont Joint facility charges.xlsx" and "DuPont RR Route Miles Opening Grading errata.xlsx."

a. Hobson Jct., OH to Conco, OH (NS Trackage Segment No. 10)
b. Ivorydale Jct., OH to Winton Place, OH (NS Trackage Segment No. 11)
c. Argo, IL to Provo Jct., IL (NS Trackage Segment No. 17)
d. Provo Jct., IL to Proviso Yard., IL (NS Trackage Segment No. 18)
e. Riverdale, IL to Blue Island Yard, IL (NS Trackage Segment No. 20)
f. Binghamton, NY to Rouses Point, NY (NS Trackage Segment Nos. 21 and 22)[97]
g. Hoffmans, NY to Mechanicville, NY (NS Trackage Segment No. 23)
h. Buffalo (CP Draw), NY to Black Rock, NY (NS Trackage Segment No. 24)
i. CP Arsenal, PA to CP River, PA (NS Trackage Segment No. 27)
j. Kalb / SEPTA (HN 17.15), PA to Ford, PA (NS Trackage Segment No. 28)

DuPont has reviewed the traffic moving over each of these segments and revised the traffic counts based on information contained in the Rebuttal Base Year train list. The calculations of expenses for the following 11 locations are revised in Rebuttal solely due to the number of cars, trains or car miles utilizing each of these trackage rights segments in Rebuttal. These 11 segments listed above accounted for $13.3 million in operating expenses in DuPont's Opening and are revised to equal $14.4 million in operating expense in Rebuttal.[98]

ii. Terminal Railroad of St. Louis

In Opening, DuPont included $3.8 million in trackage right fees for use of trackage rights segments over the Terminal Railroad of St. Louis ("TRRA"). In Reply, NS argues that there are two separate fees for use of TRRA lines in St. Louis, a trackage right fee and a switch fee. While NS accepts the trackage rights fee DuPont included in Opening, it argues that a switch fee of $106 should be charged for all cars moving over the May Street Interlocking to WP Interlocking. NS applies the fee to 23,085 cars moving between the DRR and its connecting carriers.

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[97] NS lists this segment in its text on page III-D-270 and in response DuPont has modified the trains and all necessary operating expenses for shipments going to/from Rouses Point, NY. *See* DuPont Rebuttal e-workpaper "Base Year Train List_Statistics_Rebuttal_Errata.xlsx," tab "Base Year Statistics" rows 595, 930 and 1120.

[98] *See* DuPont Rebuttal e-workpaper "Rebuttal Trackage Rights Costs.xlsx."

Table III-F-1
DRR Road Property Investment Costs
($ in millions)

	Item	DuPont Opening	NS Reply	DuPont Rebuttal
	(1)	(2)	(3)	(4)
1.	Land	$3,374	$5,324	$3,897
2.	Roadbed Preparation	3,969	9,173	4,338
3.	Track Construction	8,242	10,628	8,261
4.	Tunnels	444	1,096	1,081
5.	Bridges	1,928	4,348	2,273
6.	Signals & Communications	1,247	2,070	1,678
7.	Buildings & Facilities	229	2,636	1,095
8.	Public Improvements	122	256	177
10.	Subtotal	$ 19,555	$ 35,531	$22,800
11.	Mobilization	437	917	510
12.	Engineering	1,618	2,981	1,890
13.	Contingencies	1,824	3,371	2,131
14.	Total Road Property Investment Costs	$ 23,434	$ 42,800	$27,331

Source: DuPont Rebuttal Errata Exhibit III-F-1.

Prior to addressing the specific differences between DuPont and NS, it is necessary to address a theme that is prevalent in NS's Reply evidence. Throughout its Reply, NS questions the competence of several of DuPont's expert witnesses. DuPont's expert witnesses supporting the road property investment costs of the DRR have a vast array of experience.

The DRR's land valuation evidence is sponsored by Richard R. Harps, John G. Pinto, Elizabeth W. Vandermause, Daniel C. Vandermause and Philip H. Burris. Each of these individuals has a minimum of 30 years experience and as much as 45 years experience. Mr. Harps has over 35 years of experience, is a past president of several real estate organizations and has valued property for acquisition by a large transit authority. Mr. Pinto has over 45 years of experience and has performed real estate appraisals related to railroad property and rights-of-way for government agencies, railroads, transit authorities and private sector entities. Ms.

Modifications and additions to the land required for yards and other supporting facilities[1]

Taking the above two modifications into account, Table III-F-2 below summarizes our valuation of the land required for the DuPont SARR.

Table III-F-2
Land Valuation for DuPont Stand-Alone Railroad

Item	Total Miles	Total Acres	Estimated Value as of 6/1/09 ($000)
(1)	(2)	(3)	(4)
1. Land Valuation for DRR (Opening)	7,276.9	81,682.3	$3,373,900
2. Additions to DRR (7 Locations)	16.8	190.8	25,200
3. Modifications to Yards/Supporting Facilities	xxx	2,199.8	496,987
4. Total Land Valuation for DRR	7,293.8	84,072.9	3,896,087
5. Easements (Opening)	xxx	Xxx	535
6. Total Including Easement Fees	7,293.8	84,072.9	$3,896,622

Source: DuPont Opening e-workpaper "DuPont SAR Land Valuation – April 24, 2012.pdf," Rebuttal Exhibit III-F-2_Errata and DuPont Rebuttal Errata e-workpaper "DuPont Yards-Land Valuation FINAL 4-2-13 ERRATA.xlsx."

a. Review of Norfolk Southern's Land Valuation

In support of the proceeding before the Surface Transportation Board, the following base land values[2] were submitted:

$3,052,100,000	DuPont base land valuation
$4,154,519,000	NS appraiser's base land valuation
$1,102,419,000	Difference in base land valuation

[1] Acres in yards were modified in Rebuttal in order to accommodate increased yard sizes as a result of the addition of classification tracks. In addition, yard acres were increased to reflect acres for intermodal yards, auto distribution yards and bulk transfer facilities. Acres for these facilities are equal to those relied on by NS in Reply, unless documents provided by NS in discovery show that a specific facility is comprised of fewer acres. For example, in Reply, NS included 274.3 acres for the Voltz Auto facility based on the actual acres required for its auto facility in Shelbyville, KY. However, in discovery, NS provided a diagram of the Voltz facility. From this diagram it was calculated that the Voltz facility requires 188.0 acres. The Rebuttal yard acres are shown in e-workpaper "DRR Yard Acreage Requirements.xlsx" and the calculation of acres from discovery documents are included in Rebuttal e-workpaper "DRR Yard Diagram Acres.pdf."

[2] Base land value equals the fee simple value of the land underlying the DuPont SARR, before consideration of other factors, such as land needed for communications facilities, land needed for yards and other support facilities, and adjustments to land value for partially-owned lines and land easements/agreements.

Rebuttal Table III-F-3 below summarizes the differences in the parties' roadbed preparation costs.

Table III-F-3
Comparison of Roadbed Preparation Costs
($ in thousands)

Item	DuPont Opening[1/]	NS Reply[2/]	DuPont Rebuttal[3/]
(1)	(2)	(3)	(4)
1. Earthwork			
a. Common	$666,288	$2,382,946	$707,513
b. Loose Rock	507,986	690,839	539,461
c. Solid Rock	1,265,234	1,977,648	1,322,526
d. Borrow	674,182	742,922	678,569
e. Subtotal	$3,113,690	$5,794,355	$3,248,069
2. Clearing & Grubbing	$81,191	$127,954	$84,566
3. Drainage			
a. Lateral Drainage	$49,919	$50,086	$50,086
b. Yard Drainage 4/	0	135,385	0
4. Culverts	131,919	746,813	217,924
5. Retaining Walls	346,129	938,032	377,274
6. Rip Rap	36,908	36,989	36,943
7. Road Surfacing for Detours	524	524	524
8. Relocation of Utilities	147	147	147
9. Topsoil Placement / Seeding	1,439	867	1,440
10. Land for waste quantities	206,860	611,365	320,332
11. Environmental Compliance	177	177	177
12. Subgrade Preparation	0	76,476	0
13. Finish Grading	0	68,592	0
14. Lighting	0	267,146	0
15. Dust Control	0	7,250	0
16. Total	$3,968,903	$8,862,160	$4,337,482

1/ DuPont Opening errata, p. III-F-7, Table III-F-4.
2/ NS Reply e-workpaper "DRR Open Grading errata NS Reply.xlsx," Tab "Summary"
3/ DuPont Rebuttal e-workpaper "DRR Rebuttal Grading errata.xlsx" and "Culvert Construction Costs Rebuttal.xlsx."
4/ Costs included by DuPont in building site development costs.

Table III-F-4
DRR Earthwork Quantities by Type of Material Moved
(Cubic yards in thousands)

Type of Earth Moved	DuPont Opening[1/]	NS Reply[2/]	DuPont Rebuttal[3/]	NS Reply Over / (Under) DuPont Rebuttal[4/]
(1)	(2)	(3)	(4)	(5)
1. Common (incl. yards)	373,698	407,471	385,333	22,138
2. Loose Rock	49,245	51,293	50,296	997
3. Solid Rock	92,078	109,419	93,512	15,907
4. Borrow	43,245	47,343	43,526	3,817
5. Total	558,266	615,526	572,667	42,859

1/ DuPont Opening e-workpaper "DRR Open Grading errata.xlsx," tab "EW Cost."
2/ NS Reply e-workpaper "DRR Open Grading errata NS Reply.xlsx," tab "EW Cost."
3/ DuPont Rebuttal e-workpaper "DRR Rebuttal Grading errata.xls," tab "EW Cost."

ii. Earthwork Unit Costs

(1) Common Excavation

As noted previously, DuPont used the Trestle Hollow Project earthwork unit cost to develop its Opening common earthwork costs, which DuPont has shown to be a valid and feasible unit cost to apply to the DRR's construction. NS used the Means Handbook costs for common excavation contained in DuPont's Opening workpapers.[67]

As discussed above in the response to NS's attack on the Trestle Hollow Project costs, the Means Handbook costs overstate the common earthwork costs that the DRR would be able to obtain for several reasons. DuPont continues to use its Opening unit cost based on the Trestle Hollow Project.

[67] As discussed below in the section on adverse territory excavation costs, DuPont included the Means Handbook unit costs for both common excavation and common excavation – adverse only to develop the ratio used to adjust the Trestle Hollow Project unit cost to reflect work in adverse territory.

While preparing for Rebuttal, DuPont realized that it had significantly overstated track construction costs for many components due to incorrect references in three locations. Specifically, DuPont double-counted three categories of track miles and failed to include three other categories of track miles.[175] This resulted in an 11 percent overstatement on Opening in track feet causing corresponding overstatements in the costs for ballast, sub-ballast, ties, field welds, other track material and track labor and equipment. DuPont also realized that it had inadvertently allocated track miles into the wrong rail weight categories on Opening.[176] Both of these issues have been corrected on Rebuttal. This results in total track construction costs that are only slightly higher than Opening despite the additional track miles included by DuPont on Rebuttal.

Table III-F-5 below compares the track construction costs developed by DuPont and NS in Opening, Reply and Rebuttal.

[175] *See* DuPont Opening e-workpaper "Track Construction Costs errata.xls," tab "Summary." Tab "Summary" Cell E40 incorrectly referenced tab "User Input" cell D51 instead of D44; tab "Summary" Cell E41 incorrectly referenced tab "User Input" cell D52 instead of D45; and tab "Summary" Cell E42 incorrectly referenced tab "User Input" cell D53 instead of D46. As a result, tab "User Input" cells D51, D52 and D53 were included twice and cells D44, D45 and D46 were omitted.

[176] Track miles with 115 lb. rail were classified as 136 lb. rail and vice versa.

Table III-F-5
DRR Track Construction Costs
($ in thousands)

Item	DuPont Opening [1/]	NS Reply [2/]	DuPont Rebuttal [3/]
(1)	(2)	(3)	(4)
1. Geotextile Fabric	$2,328	$4,809	$3,743
2. Ballast and Subballast	1,152,318	2,354,887	1,130,117
3. Ties	1,635,780	1,820,758	1,630,441
4. Track (rail)			
a. Rail (all track)	2,501,080	3,253,914	2,563,794
b. Field Welds	33,356	33,964	31,808
c. Switches (turnouts)	503,563	575,227	589,346
5. Rail Lubricators	2,167	12,068	12,068
6. Plates, Spikes and Anchors	852,751	882,650	801,617
7. Derail and Wheel Stops	1,289	85,446	13,425
8. Track Labor and Equip	1,557,178	1,585,570	1,484,695
9. Total	$8,241,810	$10,609,293	$8,261,053

1/ DuPont Opening Errata (May 17, 2012), Table III-F-7.
2/ NS Reply, Table III-F-13.
3/ Rebuttal e-workpaper "Track Construction Costs Rebuttal Errata.xls."

a. Geotextiles

NS argues that DuPont understated the amount of geotextile fabric that is required under the DRR's turnouts, and that DuPont did not provide detailed calculations for its fabric quantities.[177] NS then claims it recalculated the quantities for all of the turnouts. NS misunderstood DuPont's unit costs and its calculation methodology.

In reviewing NS's criticisms, DuPont discovered one error and one mislabeling in its geotextile quantity and cost calculations. DuPont's unit cost for geotextile fabric, $1.20 per square yard (which NS accepted), was intended to be a cost per track foot ($1.60). The unit cost was then applied to the track feet quantities which were inadvertently mislabeled as square yards. Thus, when DuPont showed 236 as the quantity for a No. 10 turnout (117 feet long), DuPont

[177] *See* NS Reply, pp. III-F-118-119.

g. Summary

Based on the above, DuPont's signals and communications costs have increased to $1,678 million on Rebuttal.

7. Buildings and Facilities

DuPont's buildings and facilities were detailed in its Opening Part III-F-7. Briefly summarized, DuPont included facilities at six major yards, a headquarters building, fixed fueling facilities, facilities for direct-to-locomotive ("DTL") fueling, facilities for locomotive servicing and four locomotive shops. In addition, DuPont included crew, yard and MOW buildings and various other facilities as required.[331]

NS's Reply buildings and facilities costs are much higher than those developed by DuPont on Opening. NS changed the design and costs of virtually every building on the DRR. NS also added many buildings never before included in a SAC proceeding. In addition, NS greatly increased the costs for lighting and paving. DuPont addresses NS's Reply below.

a. Headquarters Building

On Opening, DuPont specified a two-story 31,803[332] square foot building to house 142 headquarters personnel (in 103 offices) and with space for additional facilities.[333] NS argues that DuPont's building size is insufficient because, according to NS, the DRR headquarters building will house 1,233 personnel. NS estimates the size of the DRR headquarters building by dividing 31,803 square feet by 142 personnel and then multiplying the result by 1,233 personnel. Using this methodology, NS estimates that the DRR headquarters building would need to be 276,192 square feet in size and five stories high.[334]

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[331] *See* DuPont Opening, pp. III-F-43-48 and supporting workpapers.
[332] On Opening, DuPont inadvertently included costs for a 20,000 square foot headquarters building. DuPont has used the correct square footage figure on Rebuttal.
[333] *See* DuPont Opening, p. III-F-44 and e-workpaper "DRR Facilities Cost errata.xlsx," tab "HQ Building."
[334] *See* NS Reply, pp. III-F-255-256.

its medium classification yard and proposed twelve (12) high mast lights. There are no high mast lights at this yard either. NS used a yard at Sheffield, AL as the template for its large classification yard and proposed forty-four (44) high mast lights. There are only six (6) high mast lights at this yard (with eight (8) fixtures on the poles instead of twelve (12) specified by NS) and the rest of the yard is lit by single lights on timber poles. Based on the above, DuPont has not accepted NS's grossly overstated lighting requirements for yards and continued to rely on the lighting included on Opening. For its hump yards, NS used a yard at Elkhart, IN for the template and proposed sixty-four (64) high mast lights. This yard has only fourteen (14) high mast lights combined with smaller lights. On Rebuttal, DuPont has included fourteen (14) high mast lights at each hump yard combined with the lighting fixtures used by DuPont on Opening in these yards.

NS used a yard at Greensboro, NC as the template for its small intermodal facility and proposed eight (8) high mast lights. There are no high mast lights at this yard. NS used a yard in Charlotte, NC as the template for its medium intermodal facility and proposed ten (10) high mast lights. There are currently two high mast lights at this yard (one at each end) and single lights on poles for the rest of this yard. NS used an unidentified yard as the template for its large intermodal yard and proposed fifty (50) high mast lights. DuPont identified this yard using the coordinates contained in NS's workpapers and determined that the existing facility only has twenty-five (25) high mast lights. On Rebuttal, DuPont has used its Opening lighting configuration applied to the small intermodal yard with no high mast lights. For the medium intermodal yard, DuPont has included two high mast lights (one at each end) with the Opening lighting configuration used in the remaining portion of the yard.[376] For the large intermodal yard, DuPont has included twenty-five (25) high mast lights.

NS failed to provide the location information for the small automotive yard used by NS as a template for which NS proposed ten (10) high mast lights. DuPont reviewed NS's diagram and determined that three (3) high mast lights provide sufficient coverage. For the medium

[376] DuPont notes that NS's high mast light cost includes twelve (12) fixtures. As noted above, the actual high mast fixtures identified by DuPont include only seven (7) or eight (8) fixtures. On Rebuttal, DuPont has used NS's overstated high mast cost with twelve (12) fixtures even though this is an overstatement of the requirements.

a locomotive facility would be repaired at that facility. NS has not supported the need for any mechanic repair shops and DuPont has not included them on Rebuttal.

l. Mechanical Offices

Although not discussed in NS's Reply evidence, NS included the costs for 26 mechanical offices.[383] NS provided no explanation of the purpose of these facilities. These facilities are not needed as car repair personnel report to the contractor-provided car repair facilities and locomotive repair personnel report to the locomotive repair facilities. Furthermore, DuPont has placed yard offices at all locations with mechanical (car inspection) personnel.[384]

m. Observation/Yard Master Towers

NS included 29 observation buildings / yard master towers. NS included eight (8) towers at the eight (8) automotive facilities, sixteen (16) towers at its eight (8) hump yards (two (2) towers per yard) and five (5) towers at its five (5) large flat yards. NS attempts to justify their inclusion by claiming that they are present in two NS automotive yards.[385]

DuPont disagrees with NS. The mere presence of these facilities in two NS yards does not justify their need on the DRR. Furthermore, DuPont's operating witness McDonald does not recall any such facilities on any of the railroads he worked for during his extensive career. Finally, DuPont notes that these towers have never before been included in a SAC proceeding.

On Rebuttal, DuPont has accepted NS's costs for two towers for each of the seven (7) hump yards on the DRR but has not accepted them for the automotive yards or large flat yards as NS has not demonstrated that they are necessary.

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[383] *See* NS Reply e-workpaper "DRR Facilities List Reply.xlsx," tab "Facilities Costs," Line 27, Columns (J) and (K).
[384] *See* DuPont Opening, p. III-F-47.
[385] *See* NS Reply, pp. III-F-277-278.

consistent with STB precedent, indexed back to the years of construction based on the actual changes in land inflation.[23]

On Opening, DuPont showed that 100 percent of the DRR land would be acquired in 2007 and in its DCF model DuPont used the 2007 values of DRR land in its investment calculations. For the reasons described above, DuPont continues to use the land indices presented on Opening in this Rebuttal.

3. Tax Liability

NS accepts DuPont's assumed Federal tax rate of 35 percent and its calculated composite state income tax rates for the DRR. However, NS claims that "DuPont's DCF incorporates three errors affecting the calculation of DRR income tax liability."[24] The three "errors" claimed by NS are: "1) that DuPont misapplied bonus depreciation, 2) DuPont used the wrong tax life for certain DRR property assets, and 3) that DuPont did not amortize the DRR debt over a 20-year financing term." DuPont addresses each of the issues raised by NS in Part III-H below.

4. Capital Cost Recovery

NS accepts DuPont's capital recovery calculations except for the issues raised above and certain other issues NS addresses in Part III-H. The other issues raised by NS in Part III-H will be addressed in DuPont's Rebuttal Part III-H.

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[23] *See* DuPont Rebuttal Section III-F-1, and Rebuttal e-workpaper "Exhibit III-H-1 Rebuttal_Errata.xlsm," worksheet "Investment."

[24] *See* NS Reply, p. III-G-7.

Table III-H-1
Summary of NS Reply and DuPont Rebuttal SAC Results for the DRR
($ in millions)

	NS Reply[1/]			DuPont Rebuttal[2/]		
Year	SAC	SARR Revenue	Overpayments (Shortfall)	SAC	SARR Revenue	Overpayments (Shortfall)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
6/09-12/09	$4,733.3	$2,851.7	($1,881.6)	$2,776.9	$3,109.7	$332.8
2010	8,712.4	5,611.2	(2,101.1)	5,422.8	6,152.8	730.0
2011	9,310.5	6,074.8	(3,253.7)	5,849.9	6,718.2	868.4
2012	9,614.8	6,561.6	(3,053.2)	6,036.3	7,238.1	1,201.7
2013	9,981.4	7,024.4	(2,957.0)	6,239.4	7,721.8	1,482.4
2014	10,315.9	7,444.6	(2,871.2)	6,515.6	8,349.7	1,834.2
2015	10,760.8	7,825.8	(2,935.0)	6,773.2	8,916.5	2,143.2
2016	11,176.5	8,353.0	(2,823.5)	7,137.0	9,713.2	2,576.2
2017	11,619.1	8,930.9	(2,688.2)	7,550.1	10,642.3	3,092.2
2018	12,077.1	9,547.4	(2,529.8)	7,994.7	11,660.5	3,665.8
1/19-5/19	5,202.0	4,254.4	(947.7)	3,502.8	5,320.1	1,817.3

[1/] NS Reply 12/12/12 Errata, p. III-H-12.
[2/] DuPont Rebuttal e-workpaper "Exhibit III-H-1 Rebuttal Errata.xlsm."

As shown in Table III-H-1 above, contrary to NS's calculation of shortfalls in every year, the DRR revenues exceed the stand alone costs in each year of the study period. Where stand-alone revenues are shown to exceed costs, rates for the members of the traffic group must be adjusted to bring revenues and SAC into equilibrium.

2. Maximum Rate Calculations

In *Major Issues,* the Board adopted MMM as its rate prescription approach for use in proceedings under the *Coal Rate Guidelines.*[35] Consistent with that decision, DuPont has used the MMM as required under the Board's *Major Issues* decision to bring SAC and stand-alone revenues into equilibrium. NS claims that DuPont's MMM calculations include three "errors." Each of these issues is addressed below.

[35] *See Major Issues*, pp. 14-23.

3. Maximum Reasonable Rates

The SAC analysis summarized in Parts III-A through III-G and the accompanying Rebuttal Exhibits, and displayed in Rebuttal 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-2 below shows the measure of excess revenue over SAC in each year of the DCF period for this case.

Table III-H-2
Summary of DuPont Rebuttal DCF Results for the DRR – June 2009 to May 2019
($ in millions)

Year	Annual Stand-Alone Requirement	Stand-Alone Revenues	Overpayments (Shortfall)	PV Difference	Cumulative PV Difference
(1)	(2)	(3)	(4)	(5)	(6)
6/09-12/09	$2,776.9	$3,109.7	$332.8	$324.6	$324.6
2010	5,422.8	6,152.8	730.0	637.0	961.6
2011	5,849.9	6,718.2	868.4	673.4	1,635.0
2012	6,036.3	7,238.1	1,201.7	849.8	2,484.8
2013	6,239.4	7,721.8	1,482.4	942.2	3,427.0
2014	6,515.6	8,349.7	1,834.2	1,047.9	4,475.0
2015	6,773.2	8,916.5	2,143.2	1,100.7	5,575.6
2016	7,137.0	9,713.2	2,576.2	1,189.2	6,764.9
2017	7,550.1	10,642.3	3,092.2	1,283.0	8,047.9
2018	7,994.7	11,660.5	3,665.8	1,367.2	9,415.1
1/19-5/19	3,502.8	5,320.1	1,817.3	642.6	10,057.7

Source: DuPont Rebuttal e-workpaper "Exhibit III-H-1 Rebuttal_Errata.xlsm."

Application of MMM yields the following maximum R/VC ratios for each year of the DCF model.

Table III-H-3
Rebuttal MMM Results

Year	Maximum R/VC
(1)	(2)
6/09-12/09	206.0%
2010	180.0%
2011	174.0%
2012	156.7%
2013	145.4%
2014	139.6%

2015	136.2%
2016	129.1%
2017	123.8%
2018	119.4%
1/19-5/19	114.5%

Source: Errata Rebuttal Exhibit III-H-2

As indicated in Table III-H-3, the maximum R/VC ranges from 114.5% percent to 206.0% percent over the 10-year DCF period.

The maximum lawful rates for the DuPont traffic equal the greater of the jurisdictional threshold or the MMM maximum rates. Rebuttal Exhibits III-H-3 through III-H-14 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.

CORRECTED REBUTTAL EXHIBIT PAGES

GENERAL & ADMINISTRATIVE EXPENSE

C. MATERIALS, SUPPLIES AND EQUIPMENT

NS accepts DuPont's proposed unit costs for the materials, supplies and equipment needed by the DRR's employees. The revised employee count on Rebuttal requires a corresponding revision in the total expenditure for materials, supplies and equipment.[91]

D. OTHER

1. IT Systems

The DRR's Opening IT systems, as developed by DuPont Witness Kruzich, were designed on the basis of currently available technology best suited for the DRR's needs. Much of the technology provided (94 percent of IT Operating Cost) is through RMI outsourcing. NS devoted much of the IT response to claims that DuPont's IT systems would be superior to other Class I railroads. This is totally unfounded and should be rejected. DuPont has provided IT systems that are equal to those of other Class I Railroads, and is using many of the same packages as Class I railroads. DuPont's claim is not that DRR IT systems are superior to other Class I Railroad's, but rather are efficient IT systems that will provide DRR employees the most complete means of accomplishing their daily activities. NS has accepted the IT systems proposed by DuPont on Opening but has made several adjustments that significantly increase IT costs. DuPont has made adjustments to the DRR IT systems on Rebuttal and will discuss each below. The expenses associated with IT systems are shown in Table 7 below.

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[91] *See* DuPont Rebuttal e-workpaper "DRR Operating Expense_Rebuttal_Errata.xlsx" for details.

range from $1.3 billion to $540.2 billion. The audit fees for these companies will vary greatly and should not be relied upon when calculating DRR's external audit fees.

Instead, DuPont has used NS's actual audit fees and revenue for the past three years to calculate a more reasonable and reliable cost for the DRR. DuPont did so by calculating the percent of NS revenue that was spent on audit fees for the years 2009 through 2011.[102] After averaging the results, DuPont came to the conclusion that 0.0257 percent of NS's revenue goes towards external audits.[103] Applying this percent to the $5.673 billion 2009/2010 revenues of the DRR produces external audit costs of $1,458,050.

3. Start-up and Training Costs

On Reply, NS accepts DuPont's calculations of the average cost to train individual employees, but makes three adjustments: 1) NS adjusts total training costs to incorporate additional staff; 2) NS uses its incorrect fringe benefit ratio of 49.2 percent; and 3) NS modifies DuPont's attrition rates. DuPont's position on each adjustment is discussed below.

a. Number of Employees

On Opening, DuPont proposed the DRR be staffed with 4,971 employees. NS proposes between 8,800 and 9,000 DRR employees.[104] DuPont has adjusted the total number of employees and on Rebuttal staffs the DRR with 5,573 employees.

b. Fringe Benefit Ratio

In Opening, DuPont proposed a fringe benefit ratio of 37.5 percent of wages. NS contends DRR must use a fringe benefit ratio of 49.2 percent. As discussed in Part III-D,

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[102] Audit fees were found in NS's annual proxy statement; Revenue was found in NS's annual report.
[103] *See* DuPont Rebuttal workpaper "External Audit.xlsx."
[104] NS staffs DRR with 8,978 employees in Table III-D-17 of NS Reply, III-D-76 and 8,808 employees in "DRR Operating Expense Reply.xlsx."

MAINTENANCE OF WAY

Signal Maintainer requirements on the number of AAR signal units to be maintained[34] and in the absence of better information it should continue to follow that approach here.[35]

In Reply, NS claims that the signal unit count was not done properly.[36] The signal unit count provided by DuPont in Rebuttal is based on final changes to the DRR system and the final track configuration meeting the system requirements. On Rebuttal, DuPont has revised the number of AAR signal units to reflect these corrections, the addition of seven (7) hump yards and the additional interchange and other tracks that have been added on Rebuttal. The revised AAR signal units total 405,045.[37] Using the Opening criterion of 2,000 AAR units per Signal Maintainer, the DRR requires 210 Signal Maintainers, or an increase of 30 employees from Opening.

ii. Communications Technicians

In Opening, DuPont provided for 18 Communications technicians, one for each yard, and two relief technicians. This is appropriate for the DRR and more than adequate for radio maintenance. The Communications system annual cost of maintenance was included in Opening (2% of the cost to construct the system); therefore, NS experts' claim that there are not sufficient Communications technicians is simply an unsupported opinion, and should not be considered.[38] Any attempt by NS experts to increase the number of staff related to communications related maintenance should be recognized as an attempt by NS experts to ignore or omit the annual communications maintenance costs provided in Opening.

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[34] *See WFA/Basin,* p. 63.

[35] NS also asserts that DuPont's assumed number of AAR signal units per maintainer is unsupported, but it is based on the direct experience of DuPont's C&S expert, Victor Grappone, at the Long Island Railroad which has a more complex signal system than the DRR. *See* DuPont Opening Exhibit III-D-3, p.13.

[36] *See* NS Reply, p. III-D-224.

[37] *See* DuPont Rebuttal e-workpaper "DuPont C&S Estimate Rebuttal.xlsx," tabs "AREMA Counts" and "ReplyXing Inventory."

[38] *See* NS Reply, p. III-D-232.

five years).[79] NS added 65 major bridges in this item, which DuPont experts accept, for a revised total annual cost of $380,000, based on 95 major bridges.

E. EQUIPMENT

As stated above, NS overstated the amount of equipment required for the DRR in Reply for a number of reasons, including the arbitrary doubling of the work crews associated with the increased number of Roadmasters and smaller Roadmaster territories proposed by NS.

DuPont recognizes the need to correct some overstated numbers of equipment and some understated numbers, and has made the proper changes.[80]

1. Hi-Rail vehicles and Other Vehicles

In Reply, NS criticizes the DRR staff as inadequate for the maintenance of equipment required for the MOW Department.[81] There are three major flaws in the NS Reply. First, NS fails to acknowledge when discussing the equipment staffing, that there is already a cost of annual equipment maintenance provided in Opening,[82] representing an annual maintenance dollar amount that is 5% of the cost of the equipment (but then later accepts the inclusion of 5% for annual maintenance costs when presenting its proposed annual maintenance cost).[83]

Second, NS fails to acknowledge the Manager of Mechanical Operations presented in the MOW staffing spreadsheet, the two (2) Managers of Work Equipment, and the 18 Roadway Mechanics when discussing the appropriate staff size.

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79 *See* NS Reply, p. III-D-264.
80 *See* Rebuttal e-workpaper "Rebuttal Exhibit III-D-2 MOW_Errata.xlsx."
81 *See* NS Reply, p. III-D-243.
82 *See* Opening e-workpaper "III-D-3 DRR MOW.xls."
83 *See* NS Reply, pp. Reply III-D-243, 257.

MAINTENANCE OF WAY

Third, NS overstates the amount of equipment required for the DRR, which has much less MOW equipment than the proposed NS MOW Department, for reasons stated herein, and therefore required a much smaller staff than the NS plan provides.

The maintenance of automobiles, trucks, backhoes, dump trucks, etc. will be minimal for new, leased vehicles, and will be performed by local dealerships. Daily maintenance of roadway machines, such as lubrication and testing, is performed by the machine operators. This is a standard practice on railroads. The Roadway Mechanics will make repairs, such as replacing damaged motors and electrical components, welding damaged machine parts, and performing major maintenance items. Again, DuPont provided for the annual maintenance cost for the MOW equipment, which NS's experts ignored.

NS has generally accepted DuPont's listing of vehicles and other equipment for the DRR's MOW personnel, except that NS used some different models of vehicles for certain functions and used some higher value lease rates from Danella.[84] Where NS did not provide monthly lease rates, DuPont used the purchase price of equipment gathered from manufacturers or retailers, and assumed a financing cost of 5% over 5 years. DuPont reaffirms its use of NS monthly lease rates for the respective equipment provided as set forth on Opening.

DuPont Experts agree that the trucks for the Roadway Mechanics were not included in the DRR MOW plan on Opening and have added 18 trucks for this purpose.[85] DuPont has checked the vehicle lists for the required MOW staff, and has made corrections to some quantities that were both understated, and overstated.[86]

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[84] *See* NS Reply, pp. III-D-264, 265.
[85] *See* NS Reply, p. III-D-265.
[86] *See* Rebuttal e-workpaper "Rebuttal Exhibit III-D-2 MOW_Errata.xlsx."

based solely on NS increasing the number of Roadmasters (which was not supported, nor realistic); and other factors outlined in the Introduction herein.

The additional comments by NS are listed and addressed in Appendix B to Rebuttal Exhibit III-D-2.

In summary, DuPont's revised annual MOW expense for the DRR equals $162.1 million at the 2009 level.[97]

[97] *See* DuPont Rebuttal e-workpaper "Rebuttal Exhibit III-D-2 MOW_Errata.xlsx."

REBUTTAL TO NS REPLY COMMENTS

25) NS adds an Assistant Superintendent of Communications and Signals. The need for this position was not justified by NS, nor substantiated with supporting evidence.

26) NS adds 8 Terminal Supervisors, C&S. The need for this position was not justified by NS, nor substantiated with supporting evidence.

27) NS adds 8 Signal Technicians, Hump. In Rebuttal DuPont has added a signal technician at each of the seven (7) hump yards.

28) NS adds 48 Signalmen, Hump. The need for this position was not justified by NS, nor substantiated with supporting evidence.

29) NS adds 38 Signal Technicians. The need for this position was not justified by NS, nor substantiated with supporting evidence.

30) NS essentially doubles the DuPont number of Signal Maintainers, based on claims made regarding the number of signal units covered by each signal maintainer, and rejecting DuPont's assignment of one Signal Maintainer for every 2,000 signal units. DuPont disagrees with NS's Claims. The final number of Signal Maintainers in Rebuttal is based on the final number of signal units provided for in Rebuttal. The number of Signal Supervisors is adjusted based on the change in the number of required Signal Maintainers.

31) NS adds 19 relief signal maintainers. The need for this position was not justified by NS, nor substantiated with supporting evidence.

32) NS adds 5 CTC Center Technicians. DuPont Experts accept the need for these 5 positions, as reflected on the MOW staffing plan in Rebuttal Exhibit III-D-2 DRR MOW_Errata.xls.

33) NS adds 10, for a total of 28 Communications Technicians. The need for this higher number of technicians was not justified by NS, nor substantiated with supporting evidence.

34) NS adds 5 Control Center Supervisors. The need for this position was not justified by NS, nor substantiated with supporting evidence.

35) NS adds a Director of Advanced Train Control. The need for this position was not justified by NS, nor substantiated with supporting evidence.

36) NS adds an Engineer of Train Control. The need for this position was not justified by NS, nor substantiated with supporting evidence. The DRR signal

PUBLIC VERSION

DRR ROAD PROPERTY INVESTMENT

($ in Millions)

Item	DuPont Opening 1/	NS Reply 2/	DuPont Rebuttal 3/
(1)	(2)	(3)	(4)
1. Land	$3,374	$5,324	$3,897
2. Roadbed Prep 5/	3,969	9,173	4,338
3. Track construction	8,242	10,628	8,261
4. Tunnels	444	1,096	1,081
5. Bridges	1,928	4,348	2,273
6. Signals and Communications	1,247	2,070	1,678
7. Buildings and facilities	229	2,636	1,095
8. Public Improvements	122	256	177
9. Subtotal	$19,555	$35,531	$22,800
10. Mobilization	437	917	510
11. Engineering	1,618	2,981	1,890
12. Contingencies	1,824	3,371	2,131
13. Total Road Property Investment	$23,434	$42,800	$27,331

1/ DuPont Opening, Exhibit III-F-1, May 17, 2012 Errata
2/ NS Reply, Table III-F-1, December 12, 2012 Errata
3/ DuPont Rebuttal Errata e-workpaper "III-F Total Rebuttal errata.xlsx"

SUMMARY OF CONCLUSIONS

Land Valuation: Summary

Based on our review, we have concluded that the NS Appraiser's land valuation is based on a flawed approach, and the land value conclusions produced by this flawed analysis are not supported and do not produce a realistic land valuation for the DuPont SARR.

We conclude that our original land valuation, presented in the April 30, 2012 Opening Evidence, is the best representation of the value of the land required for the DuPont SARR. However, based on the Norfolk Southern response, two adjustments are required for the land valuation:

- Addition of 16.84 miles, in seven locations.
- Modifications and additions to the land required for yards and other supporting facilities

Taking the above two modifications into account, the following table summarizes our valuation of the land required for the DuPont SARR:

Land Valuation for DuPont Stand Alone Railroad

	Total Miles	Total Acres	Estimate of Value as of June 1, 2009
Land Valuation for DuPont Stand Alone Railroad (Opening Evidence)	7,272.9	81,624.3	$3,370,300,000
3 Changes as of May 11, 2012	4.0	58.2	$3,600,000
OPENING EVIDENCE	7,276.9	81,682.5	$3,373,900,000
Plus: Additions to DuPoint Stand Alone Railroad (7 locations)	16.8	190.8	$25,200,000
Plus: Modifications to Yards/Supporting Facilities		2,179.1	$497,000,000
Total Land Valuation for DuPont Stand Alone Railroad	7,293.8	84,052.4	$3,896,100,000
Rounded			**$3,896,000,000**

Land Valuation of DuPont SAR Yards

City	State	Length (miles)	Yard Name	Dupont Opening Acres	Dupont Rebuttal Acres	Route Name	Land Value for Yard
Birmingham	AL	1.87	Birmingham - IM Facility		**25.89**	AL-2 BIRMINGHAM	**$3,669,033**
Birmingham (Irondale)	AL	3.83	Norris	130.00	**130.00**	AL-2 BIRMINGHAM	**$11,060,863**
Decatur	AL	3.01	New Decatur		**32.04**	AL-6 Chattanooga, TN to Memphis, TN	**$3,818,288**
Huntsville	AL	1.34	Huntsville		**31.15**	AL-6 Chattanooga, TN to Memphis, TN	**$4,472,575**
Mobile	AL	2.34	South	45.00	**45.00**	AL-4 Burstall, AL to Mobile, AL	**$2,694,763**
Selma	AL	2.49	North Selma	50.00	**50.00**	AL-4 Burstall, AL to Mobile, AL	**$902,861**
Sheffield	AL	2.40	Sheffield	50.00	**56.69**	AL-6 Chattanooga, TN to Memphis, TN	**$124,718**
Edgemoor	DE	1.18	Edgemoor	45.00	**45.00**	DE-2 Ragan, DE to Edgemore, DE	**$4,511,250**
Atlanta	GA	2.67	Inman -IM Facility	130.00	**130.00**	GA-1 ATLANTA - Austell, GA to Howell, GA	**$33,023,408**
Augusta	GA	1.45	Nixon	45.00	**45.00**	GA-9 Macon, GA to Gracewood, GA	**$4,500,000**
Augusta	GA	0.93	Augusta		**3.35**	GA-9 Macon, GA to Gracewood, GA	**$446,465**
Austell	GA	2.92	Whitaker Yard	85.00	**85.00**	GA-5 Chattanooga, TN to Atlanta, GA	**$10,200,000**
Chamblee	GA	1.37	Chamblee		**18.25**	GA-2 ATLANTA Howell, GA to Duluth, GA	**$12,445,070**
Dalton	GA	1.42	Dalton		**5.30**	GA-5 Chattanooga, TN to Atlanta, GA	**$530,303**
Doraville	GA	1.38	Doraville		**5.15**	GA-2 ATLANTA Howell, GA to Duluth, GA	**$3,508,070**
Gainesville / Midland	GA	0.76	Gainesville		**8.08**	GA-6 Lynchburg, VA to Atlanta, GA	**$767,600**
Hapeville	GA	1.78	Hapeville Auto		**30.45**	GA-4 ATLANTA Spring Street to Morrow, GA	**$23,687,860**
Macon / CGA Jct.	GA	2.10	Brosnan	50.00	**99.67**	GA-6 Macon, GA to Mahrt, AL	**$7,132,338**
A&S Jct. (E. St Louis)	IL	2.20	Coapman	80.00	**80.00**	IL-7 E St Louis, IL to Danville, KY	**$4,600,000**
Chicago	IL	1.26	Landers - IM Facility	50.00	**122.41**	IL-1 CHICAGO, IL	**$105,651,488**
Chicago	IL	1.78	Chicago Auto		**30.45**	IL-1 CHICAGO, IL	**$22,836,000**
Chicago	IL	2.07	Calumet - IM Facility	50.00	**50.00**	IL-1 CHICAGO, IL	**37,500,000**
Chicago	IL	2.44	55th Street	50.00	**50.00**	IL-1 CHICAGO, IL	**$47,050,000**
Chicago	IL	1.60	Ashland Ave.	50.00	**50.00**	IL-1 CHICAGO, IL	**$25,000,000**
Chicago	IL	4.07	Chgo-47th		**169.69**	IL-1 CHICAGO, IL	**$158,967,830**
Chicago	IL	1.74	Chicago		**6.59**	IL-1 CHICAGO, IL	**$3,618,939**
CP 513	IL	2.25	Park Manor/63rd St - IM Facility	20.00	**54.36**	IL-1 CHICAGO, IL	**$50,214,914**
Decatur	IL	2.83	Decatur - IM Facility	45.00	**88.24**	IL-4 St. Louis, MO to Ft. Wayne, IN	**$6,972,645**
Burns Harbor	IN	2.15	Burns Harbor	45.00	**45.00**	IN-8 Chicago,IL to Cleveland,OH	**$3,150,000**
Elkhart	IN	2.70	Elkhart	130.00	**166.30**	IN-8 Chicago IL to Cleveland OH	**$16,525,440**
Ft. Wayne	IN	1.99	Fort Wayne	130.00	**130.00**	IN-3 Chicago, IL to Bellevue, OH	**6,849,563**
NE Tower	IN	2.75	NE Tower		**37.16**	IN-3 Chicago, IL to Bellevue, OH	**$2,194,965**
Princeton	IN	2.40	Princeton	45.00	**45.00**	IN-7 East St Louis, IL to Danville, KY	**$1,203,675**
Van Loon	IN	2.69	Van Loon	50.00	**50.00**	IN-3 Chicago, IL to Bellevue, OH	**4,640,228**
Danville	KY	2.35	Danville	45.00	**45.00**	KY-1 Cincinnati, OH to Chattanooga, TN	**$299,718**
Ferguson (Somerset)	KY	2.41	Ferguson (Somerset)		**9.25**	KY-1 Cincinnati, OH to Chattanooga, TN	**$138,807**
Georgetown	KY	1.95	Georgetown - IM Facility		**28.06**	KY-1 Cincinnati, OH to Chattanooga, TN	**$1,527,687**
Louisville	KY	2.28	Louisville		**31.55**	KY-2 CP Jct. to Danville, KY	**$4,270,666**
Louisville	KY	1.34	Appliance + Buechel		**31.15**	KY-2 CP Jct. to Danville, KY	**$4,673,100**
Shelbyville	KY	1.78	Shelbyville Auto		**30.45**	KY-2 CP Jct. to Danville, KY	**$106,568**
New Orleans	LA	1.28	New Orleans Auto		**26.62**	LA-1 NEW ORLEANS	**$9,981,375**
New Orleans	LA	0.97	New Orleans		**28.06**	LA-1 NEW ORLEANS	**$10,522,500**
New Orleans (NE Tower)	LA	1.85	Oliver	80.00	**80.00**	LA-1 NEW ORLEANS	**$25,238,095**
Baltimore	MD	0.75	Baltimore IM Facility	0.00	**28.06**	MD-3 BALTIMORE Bayview to Dundalk	**$9,933,240**
Baltimore	MD	1.95	Coal Yard		**34.18**	MD-3 BALTIMORE Bayview to Dundalk	**$11,963,636**
Hannibal	MO	2.30	Hannibal		**24.18**	IL-6 Kansas City, MO to Decatur, IL	**$139,913**
Kansas City	MO	1.34	Voltz		**31.15**	MO Kansas City MO to Decatur IL	**$42,837**
Kansas City (Block 222)	MO	2.03	Avondale	50.00	**50.00**	MO-1 KANSAS CITY, MO	**$16,250,000**
Moberly	MO	1.95	Moberly		**20.18**	MO Kansas City MO to Decatur IL	**$1,465,252**
St Louis	MO	1.34	St Louis		**31.15**	IL-5 SAINT LOUIS METRO MO and IL	**$6,230,800**
Voltz	MO	30.22	Voltz Auto		**188.01**	MO Kansas City MO to Decatur IL	**$367,071**
Meridian	MS	2.63	Meridian	50.00	**50.00**	MS-2 Birmingham, AL to New Orleans, LA	**$2,151,099**
Asheville	NC	1.85	Asheville	45.00	**45.00**	NC-6 New Line, TN to Ashville, NC	**$4,395,454**
Charlotte	NC	1.76	Coach	50.00	**50.00**	NC-2 Lynchburg, VA to Atlanta, GA	**$10,000,000**
Charlotte	NC	1.34	Charlotte		**31.15**	NC-2 Lynchburg, VA to Atlanta, GA	**$6,230,800**
Greensboro	NC	0.97	Greensboro		**28.06**	NC-2 Lynchburg, VA to Atlanta, GA	**$3,367,200**
Hayne Jct	NC	1.37	Spartanburg	50.00	**50.00**	SC-2 Lynchburg, VA to Atlanta, GA	**$3,547,445**
Linwood	NC	2.90	Spencer	130.00	**130.00**	NC-2 Lynchburg, VA to Atlanta, GA	**$585,000**
Buffalo	NY	2.30	Bison	45.00	**45.00**	NY-1 BUFFALO, NY	**$3,561,782**
Buffalo	NY	1.34	Buffalo		**31.15**	NY-1 BUFFALO, NY	**$2,336,550**
Buffalo	NY	1.78	Buffalo		**6.72**	NY-1 BUFFALO, NY	**$504,261**
Cheektowaga	NY	1.78	Cheektowaga Auto		**30.45**	NY-1 BUFFALO, NY	**$2,100,998**
Bellevue	OH	2.75	Bellevue	130.00	**130.00**	OH-5 Bellevue, OH to Pittsburgh, PA	**$1,643,584**
Chillicothe	OH	2.50	Renick	45.00	**45.00**	OH-9 - Columbus, OH to Chillicothe, OH	**$839,504**
Cincinnati	OH	2.10	Sharonville - IM Facility	55.00	**55.00**	OH-11 CINCINNATI, OH	**$7,425,000**
Cincinnati	OH	2.00	Gest Street	30.00	**50.53**	OH-11 CINCINNATI, OH	**$6,821,550**
Cincinnati	OH	1.34	Cincinnati		**31.15**	OH-11 CINCINNATI, OH	**$4,205,790**

Land Valuation of DuPont SAR Yards

Page 2 of 2

City	State	Length (miles)	Yard Name	Dupont Opening Acres	Dupont Rebuttal Acres	Route Name	Land Value for Yard
Columbus	OH	2 05	Buckeye Yard Interchange	50.00	**50.00**	OH-8 COLUMBUS, OH	**$4,750,000**
Columbus	OH	2 50	Columbus		**9.63**	OH-8 COLUMBUS, OH	**$914,375**
Columbus	OH	1 34	Rickenbacker		**31.15**	OH-9 - Columbus, OH to Chillicothe, OH	**$118,385**
Fostoria	OH	1 28	Fostoria Auto		**26.62**	OH-4 Chicago, IL to Bellevue, OH	**$189,438**
FS Tower	OH	1.45	Wilson		**19.49**	OH-4 Chicago, IL to Bellevue, OH	**$295,542**
Maple Heights (Cleveland)	OH	1.67	Maple Heights - IM Facility	45.00	**45.00**	OH-6 CLEVELAND, OH	**$2,633,308**
Toledo	OH	2 03	Airline - IM Facility	45.00	**45.00**	OH-1 TOLEDO, OH	**$2,763,991**
Watkins	OH	2 07	Watkins	30.00	**30.00**	OH-8 COLUMBUS, OH	**$2,579,315**
Allentown	PA	2.40	Allentown	50.00	**57.32**	PA-5 Harrisburg, PA to Bayway, NJ	**$5,946,950**
Altoona	PA	2.65	Rose	60.00	**72.25**	PA-3 Pittsburgh, PA to Harrisburg, PA	**$9,103,624**
Bethlehem	PA	1 34	BethIntermodal		**31.15**	PA-5 Harrisburg, PA to Bayway, NJ	**$9,346,200**
Conemaugh	PA	2 20	Woodvale		**58.04**	PA-3 Pittsburgh, PA to Harrisburg, PA	**$1,733,836**
Conpit (Pittsburgh)	PA	1 90	Conpit	45.00	**45.00**	PA-3 Pittsburgh, PA to Harrisburg, PA	**$225,000**
Conway	PA	2 90	Conway	150.00	**288.33**	PA-2 PITTSBURGH, PA	**$9,908,747**
Enola	PA	2 85	Enola	60.00	**83.86**	PA-2 HARRISBURG, PA	**$12,412,521**
Harrisburg	PA	2.70	Harrisburg	85.00	**85.00**	PA-2 HARRISBURG, PA	**$16,534,730**
Harrisburg	PA	2.70	Harrisburg		**130.68**	PA-4 HARRISBURG, PA	**$25,021,590**
Norristown	PA	1 95	Abrams		**28.36**	PA-9 Edgemoor, DE to Morrisville, PA	**$3,447,273**
Pittsburgh	PA	1 34	Pitcairn		**31.15**	PA-2 PITTSBURGH, PA	**$2,530,333**
Reading	PA	2 00	Reading	45.00	**45.00**	PA-5 Harrisburg, PA to Bayway, NJ	**$5,394,375**
Rutherford	PA	2 30	Rutherford - IM Facility	85.00	**118.73**	PA-2 HARRISBURG, PA	**$22,875,570**
Greenville	SC	3 87	Greenville	45.00	**45.00**	SC-2 Lynchburg, VA to Atlanta, GA	**$3,150,000**
Spartanburg	SC	1 94	Spartanburg		**7.36**	SC-2 Lynchburg, VA to Atlanta, GA	**$490,213**
Bulls Gap	TN	2 20	Bulls Gap	45.00	**45.00**	TN-2 Chattanooga, TN to Walton, VA	**$216,307**
Chattanooga	TN	3.20	Debutts	130.00	**221.19**	TN-5 CHATTANOOGA, TN	**$28,400,109**
Chattanooga	TN	0.87	Chattanooga		**3.11**	TN-5 CHATTANOOGA, TN	**$379,166**
Emory Gap	TN	1.85	Emory Gap	30.00	**30.00**	TN-1 Cincinnati, OH to Chattanooga, TN	**$1,559,189**
Knoxville	TN	2.50	Sevier	55.00	**78.02**	TN-2 Chattanooga, TN to Walton, VA	**$19,505,000**
Memphis	TN	2.56	Forrest	105.00	**105.00**	TN-6 Chattanooga, TN to Memphis, TN	**$8,533,378**
Memphis	TN	1.34	Memphis		**31.15**	TN-6 Chattanooga, TN to Memphis, TN	**$2,336,550**
Bristol	VA	2.38	Bristol		**39.45**	VA-1 Chattanooga, TN to Walton, VA	**$2,822,326**
Front Royal	VA	1.34	Front Royal		**31.15**	VIRGINIA - Harrisburg, PA to Roanoke, VA	**$3,010,778**
Oaks	VA	2.62	Crewe		**34.68**	VA-3 Cincinnati, OH to Petersburg, VA	**$1,893,727**
Petersburg	VA	2 04	Secoast		**21.16**	VA-3 Cincinnati, OH to Petersburg, VA	**$1,414,229**
Petersburg	VA	1.78	Petersburg Auto		**30.45**	VA-3 Cincinnati, OH to Petersburg, VA	**$2,101,682**
Roanoke	VA	2.70	Roanoke	130.00	**149.16**	VA-3 Cincinnati, OH to Petersburg, VA	**$28,626,227**
Shenandoah	VA	1.70	Shenandoah	45.00	**45.00**	VA-4 - Harrisburg, PA to Roanoke, VA	**$675,000**
Dickinson	WV	1.63	Dickinson	45.00	**45.00**	WV-2 Cincinnati, OH to Petersburg, VA	**$4,789,856**
Elmore	WV	1 95	Elmore	40.00	**40.00**	WV-2 Cincinnati, OH to Petersburg, VA	**$104,000**
PD Jct.	WV	2.12	PD Jct. Yard		**22.87**	WV-2 Cincinnati, OH to Petersburg, VA	**$94,965**
TOTAL				3,600.00	**5,904.05**		**$ 1,036,166,238**

OPENING EVIDENCE	**3,725.00**		**$ 539,179,382**
CHANGE FROM OPENING EVIDENCE		**2,179.05**	**$ 496,986,856**

The value of the land required to support the revised yards for the DuPont SARR totals 5,904.05 acres with a land valuation of $1,036,000,000 (rounded). The Opening Evidence included a land value of 3,725.0 acres with an overall value of $539,200,000 (rounded).

The change in land valuation required to support the yards for the DuPont SARR is an increase in 2,179.05 acres, with an increase in the land value of $497,000,000 (rounded).