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September 25, 2026

Danielle Gosselin
Director
Office of Environmental Analysis
Surface Transportation Board
395 E Street, SW
Washington, DC 20423

Re: Docket No. FD 36873, Response to Information Request No. 4

Dear Ms. Gosselin:

I am writing on behalf of Union Pacific Railroad Company (UP) to respond to the Office of Environmental Analysis's (OEA) Information Request No. 4. UP developed this data package in cooperation with its co-applicant, Norfolk Southern Corporation and Norfolk Southern Railway Company (NS). The substantive answers to OEA's requests are included in the accompanying Master Data Tables. The respondents are submitting both PDF and Excel versions of the Master Data Tables (Master Data Tables for Req4.xlsx). This letter supplements those data tables by explaining how they were prepared.

Where OEA's request calls for pre-acquisition and post-acquisition estimates, the Applicants have applied the same methodology used in prior Information Request responses. Pre-acquisition metrics represent the "Year 5 No Transaction" scenario and consist of baseline pre-merger operating metrics adjusted to reflect five years of organic growth. Post-acquisition metrics represent the "Year 5 With Transaction" scenario and reflect a fully integrated UP/NS network operating five years after the transaction, including the effects of organic growth. Presenting the estimates on this basis allows OEA to evaluate the impacts of the transaction within the context of future traffic volumes that account for expected organic growth.

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A.1 REQUEST: For all rail segments that would exceed the Board's thresholds¹ for environmental analysis, provide the following information:

- i. Estimated average number of locomotives per train, the average number of railcars per train, and the average and maximum total length (in feet) of trains pre- and post-acquisition
- ii. Pre- and post-acquisition average speed
- iii. Pre- and post-acquisition proportion of locomotives in each EPA emissions tier
- iv. Pre- and post-acquisition fleetwide locomotive average fuel economies (in gross ton miles per gallon of diesel)

A.1.i – A.1.ii RESPONSE:

The data table “Locomotives, Consists & Track” provides, for each applicable rail segment, the pre-acquisition and post-acquisition estimates of average locomotives per train, average railcars per train, average train length, max train length, and the average train speed. The table includes all 207 rail segments that exceed one or more of the Board's thresholds.

Locomotives per train represents the average estimated number of working locomotives assigned to trains operating on each rail segment. For train length, both the average and maximum values represent trailing train length, meaning the combined length of all railcars in the train and excluding working locomotives. For reference, each working locomotive has an average estimated length of approximately 74 feet.

For some segments, Applicants anticipate that the average number of railcars per train will decrease following the acquisition, while average train length is expected to increase. This outcome is primarily driven by projected changes in traffic composition, with a larger share of growth attributable to intermodal traffic relative to other commodity groups. For reporting purposes, an articulated intermodal railcar is counted as a single railcar, consistent with the treatment of a manifest railcar. However, for modeling purposes, Applicants' growth modeling was based on an average length of 191 feet for an articulated intermodal railcar, compared to 59 feet for a manifest railcar. As a result, increases in intermodal traffic can produce a proportionately greater increase in train length than in railcar counts. Moreover, there are some scenarios where overall train length increases even though railcar counts decrease, because articulated intermodal railcars are anticipated to increase while manifest railcars are projected to decrease.

Average train speed is influenced by numerous operational and network conditions, including track speed limits, temporary speed restrictions, signal conditions, weather, interactions with other train traffic, dispatching priorities, and maintenance activities. While these factors make it impractical to quantify a specific change in average train speed attributable to the transaction, Applicants anticipate operational efficiencies and network benefits will support improvements in average train speeds across the affected rail segments.

¹ 49 C.F.R. § 1105.7(e)(5)(i)(A), (ii)(A).

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A.1.iii – A.1.iv RESPONSE:

As outlined in the Merger Application's Operating Plan, Exhibit 13, the Applicants expect the existing locomotive fleets of the two railroads will be sufficient to accommodate projected post-merger traffic volumes. In addition, the Applicants anticipate an increase in excess locomotive capacity resulting from optimized train routing and reductions in interchanges and yard handling events. The combined railroad's ability to optimize locomotive assignments is expected to provide sufficient flexibility to remanufacture older locomotives to meet future operational requirements.

The Applicants' projected post-acquisition locomotive requirements are based on forecasted increases in gross ton-miles and account for locomotives expected to be returned to service, as identified in Table 12 of the Operating Plan.

The table below presents the estimated proportion of road freight locomotives, by EPA emissions tier, expected to be in service on rail segments where projected traffic volumes exceed one or more of the Board's environmental review thresholds. The table provides that data with respect to both pre-acquisition and post-acquisition scenarios.

Approximate % of Locomotives in Each EPA Emissions Tier		
EPA Tier	Pre-acquisition	Post-acquisition
N/A	0.4%	0.3%
Tier-0	0.5%	0.4%
Tier-0+	11.4%	12.0%
Tier-1	0.2%	0.2%
Tier-1+	48.0%	43.4%
Tier-2	0.2%	5.2%
Tier-2+	19.6%	17.5%
Tier-3	14.7%	16.4%
Tier-4	5.0%	4.8%
Total	100%	100%

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The table below represents the estimated fleetwide average road freight locomotive fuel economy, measured in gross ton-miles per gallon of diesel fuel, under pre-acquisition and post-acquisition conditions. The post-acquisition estimate reflects anticipated fuel-efficiency improvements resulting from implementation of the Optimized Operating Plan, including network operating efficiencies and other fuel-conservation initiatives.

Fleetwide Locomotive Average Fuel Economies (gross ton miles per gallon of diesel)		
	Pre-acquisition	Post-acquisition
GTMs/Gallon	915	927

B.1 REQUEST: For all rail yards that would exceed the Board's thresholds² for environmental analysis, provide the following information:

- i. Estimated pre- and post-acquisition daily switch engine operating hours
- ii. Representative number of rail cars switched per hour of switch engine operation pre- and post-acquisition (e.g., 20 rail cars switched per switch engine-hour pre-acquisition and 24 rail cars switched per switch engine-hour post-acquisition)
- iii. Pre-and post-acquisition switch engine EPA tiers and average fuel efficiency (gal/hour)
- iv. Whether line-haul engines are used for block swapping within yards
- v. Hump yards that use wheel retarders, if any

B.1.i – B.1.ii RESPONSE:

The data table "Manifest Yards" provides, for each applicable rail yard, estimates of pre- and post-acquisition daily switch engine operating hours and the representative number of railcars switched per hour. The table includes all 36 manifest yards that exceeded one or more of the Board's thresholds. The Applicants do not expect to require additional switch engine resources to handle the estimated future capacity.

² 49 C.F.R. § 1105.7(e)(5)(i)(B), (ii)(B).

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B.1.iii RESPONSE:

The following table shows the estimated proportion of switch engines, by EPA emissions tier, expected to be in service at rail yards where projected traffic volumes exceed one or more of the Board's environmental review thresholds. The table provides that data with respect to both pre-acquisition and post-acquisition scenarios.

Approximate % of Switch Engines in Each EPA Emissions Tier		
EPA Tier	Pre-acquisition	Post-acquisition
N/A	5.6%	5.5%
Tier-0	11.9%	12.7%
Tier-0+	78.1%	77.4%
Tier-1	0.0%	0.0%
Tier-1+	0.0%	0.0%
Tier-2	1.5%	1.5%
Tier-2+	0.0%	0.0%
Tier-3	2.0%	2.0%
Tier-4	0.9%	0.9%
Total	100%	100%

The table below reflects the estimated average switch engine fuel economy, measured in gallons per hour, under pre- and post-acquisition conditions.

Estimated fleetwide switch engine average fuel efficiency (gal/hr.)		
	Pre-acquisition	Post-acquisition
Gallons/Hour	9.62	9.62

B.1.iv – B.1.v RESPONSE:

The data table "Manifest Yards" identifies those applicable manifest yards where line-haul locomotives are used in block swapping activities. In addition, only one hump yard (Debutts in Chattanooga, TN) that exceeds one or more of the Board's thresholds utilizes wheel retarders, which is identified in the same data table.

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C.1 REQUEST: For all intermodal facilities that would exceed the Board's thresholds³ for environmental analysis, provide the following information with and without the proposed transaction. The information should be provided in table format as shown in the template in Attachment 1.

- i. Railroad (e.g., UP or NS)
- ii. Intermodal facility name (including U.S. state)
- iii. Origin/destination lifts per day
- iv. Switch lifts per day
- v. Total lifts per day (including secondary lifts)
- vi. Over the road trucks per day
- vii. Truck dwell times
- viii. Average number of truck movements per hour
- ix. Intermodal facility operating days/hours

C.1.i – C.1.ix RESPONSE:

The data table "Intermodal & Auto Ramps" identifies the applicable railroad, facility name, and state for each intermodal facility and auto ramps that exceeded one or more of the Board's thresholds. The table includes all 66 facilities that exceeded one or more of the Board's thresholds.

Both UP and NS account for all intermodal facility lifts in either their origin or destination lift counts and do not perform switch lifts at those facilities. Accordingly, the Applicants have provided total daily facility lift count under "Total Lifts Per Day". Auto Ramps do not perform container lifts and, therefore, there is no lift activity to report for those facilities.

The Applicants calculated over the road trucks per day based on gate events recorded at each intermodal terminal. For purposes of this analysis, a single drayage truck entering and exiting a facility is counted as one over-the-road truck movement.

Truck dwell times and average truck movements per hour were calculated for over the road drayage trucks at each applicable intermodal terminal using best available data. The Applicants do not anticipate a meaningful difference between pre- and post-acquisition dwell times or truck movements per hour.

The Applicants also evaluated the activities of captive hostler trucks operating within applicable facilities to estimate average truck movements per hour. Hostlers move containers and chassis throughout a terminal to facilitate the transfer of freight between trains and over-the-road trucks. These movements are directed through facility work-order systems, so work-order volumes were used to estimate hostler truck activity levels.

General operating days and hours have been identified for currently operating intermodal facilities that exceed one or more of the Board's thresholds and are intended to represent periods during which terminal activities may occur. Published gate hours may differ

³ 49 C.F.R. § 1105.7(e)(5)(i)(C), (ii)(C).

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from actual facility operating schedules, and some terminals may conduct operations outside of posted gate hours, including continuous operations. Because of the way Auto Ramp facilities operate, drayage trucks can enter and leave the facility at any time, so the Applicants have indicated 24 hours a day operating hours. For the three facilities that are not currently operating as intermodal ramps, the Applicants developed reasonable estimates of operating days and hours based on facilities with similar anticipated activity levels.

D.1 REQUEST: Provide a summary of the types of hazardous materials transported on the UP and NS networks pre-acquisition and to be transported on the combined network post-acquisition.

D.1 RESPONSE:

Rail transportation is among the safest modes of transportation for hazardous materials, with more than 99.99 percent of hazardous materials shipments reaching their destination without a release. The types of hazardous materials transported over the UP and NS networks are determined by customer demand and shipping requirements, not by the railroads. As common carriers, UP and NS are legally obligated under federal law to provide transportation service for shipments tendered by shippers in accordance with applicable regulations. As a result, the railroads currently transport commodities representing all nine DOT hazard classes.

Following the transaction, the combined railroad is expected to handle additional volumes of certain hazardous materials commodities.

D.2 REQUEST: Provide NS and UP records of hazardous materials releases and derailments and accident/incident frequencies for the years 2021 through 2025.

D.2 RESPONSE:

Both UP and NS maintain comprehensive hazardous materials inspection and monitoring programs designed to identify and prevent Non-Accident Releases (NARs). An NAR is an unintended release of hazardous materials during transportation that occurs without a collision, derailment, or other rail-related accident.

UP and NS also track, report, and respond to all Accident Related Releases (ARRs). An ARR is a release of hazardous materials resulting from a rail-related accident, such as a derailment, collision, infrastructure failure, equipment defect, or other operational incident.

The data table “Hazardous Materials” provides records of UP’s and NS’s hazardous material releases for the years of 2021 through 2025. The information below is based upon the best available data. In some instances, the data reflects the information available at the time each release was initially reported. In other instances, subsequent investigation and corrective actions may result in updates to the characterization, cause, or volume of an individual release and are reflected in this reporting, when available. During the five-year period, UP and NS recorded and responded to approximately 2,126 hazardous materials releases, approximately 77 percent of which involved less than 50

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gallons (or gallon equivalent), and 61 percent involved less than 10 gallons (or gallon equivalent) of material released.

The table below presents the FRA-reportable derailment rates for UP and NS from 2021 through 2025, expressed as derailments per million train miles.

Railroad	2021	2022	2023	2024	2025
UP	2.875	3.022	3.040	2.408	1.793
NS	2.224	2.063	1.950	1.443	1.054

D.3 REQUEST: For all rail yards that would experience transaction-related increases in rail yard activity of at least one hazmat carload processed per day, provide the following information with and without the proposed transaction. The information requested can be provided using the table format shown in the template in Attachment 2.

- i. Baseline hazmat carloads processed per day
- ii. Year 5 No Transaction hazmat carloads processed per day (including organic growth)
- iii. Year 5 With Transaction hazmat carloads processed per day
- iv. Difference (Year 5 With Transaction – Year 5 No Transaction)

D.3.i – D.3.iv RESPONSE:

The data table “HM Manifest Yards” identifies all manifest yards that are expected to experience an increase of at least one hazardous material carload per day. There are 98 such manifest yards across the combined UP/NS network, all of which are included in this data table.

For each identified yard, the table provides volumes for baseline hazardous materials carloads, Year 5 No Transaction (including organic growth), Year 5 With Transaction (including organic growth), and the resulting difference between the two scenarios.

E.1 REQUEST: Provide the following information regarding the construction and use of main line capital improvements referenced in Section IV of the Service Assurance Plan:

- i. Whether bridges over waterways would be clear span or require piers and if any additional in-water construction is needed
- ii. The expected train speed on planned double track capital improvements for the Mohawk to Stoval Double Track, North End Meridian Double Track, and Decatur Second Main Line
- iii. Expected average post-acquisition dwell time for sidings that would be extended that have at-grade crossings

E.1.i – E.1.iii RESPONSE:

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The data table “Capital Improvement Projects” provides responses for each applicable capital improvement project and includes all 32 projects identified in the Service Assurance Plan. “N/A” is provided where a requested item is not applicable.

UP and NS have made diligent efforts to identify the scope and characteristics of the proposed capital improvements. However, because detailed engineering and final design have not been completed for all project locations, some project-specific information remains preliminary. Therefore, the responses provided herein reflect the Applicants’ best available information at this time. As project development advances and additional engineering, environmental review, and field investigation activities are completed, certain project elements may be modified or refined.

Please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Thomas Brugato", with a stylized flourish at the end.

Thomas Brugato