

Request No. 9: Describe what steps (if any) UP took, starting January 1, 2018 to: (a) reduce the accelerating use of congestion embargoes over the last five years (e.g., by increasing crew or locomotives or changing CIMS-related methodologies); and

(b) for customers over their “Maximum Inventory Threshold” (MIT), including by more than five cars, reduce or eliminate the probability of a “congestion” embargo when the serving area as a whole is not showing to be congested by the overall inventory for all customer locations in that serving area.

### Union Pacific’s Response

9(a): The Board’s Request No. 9(a) could be read to incorrectly imply that Union Pacific actions to increase crews or locomotives might have reduced the number of congestion embargoes implemented over the last five years. As discussed in response to Request No. 8, Union Pacific’s increased use of congestion embargoes from 2018 through 2021 resulted largely from changes to our Customer Inventory Management System (CIMS) as part of our broader efforts beginning in 2018 to reverse decreases in train velocity and increases in terminal dwell that were impairing our performance, and thus our ability to provide consistent and reliable service to customers, and then our additional efforts in 2021 to address rising levels of inventory across our system. Union Pacific imposes congestion embargoes in serving areas when customers are unable to accept the number of cars we are delivering to their facilities—that is, when customers are accumulating more inbound cars in their serving area than they have historically been able to process and are currently unable to process those cars. Under these circumstances, Union Pacific’s provision of more service between serving yards and customer facilities typically would not prevent the issue from arising.<sup>1</sup> Moreover, as discussed below in more detail, Union Pacific does not impose congestion embargoes if our local service has fallen short and might be a cause of serving area congestion.

Since 2022, Union Pacific implemented several refinements to CIMS designed to hold Union Pacific more accountable to higher service standards and to provide our customers with more flexibility and opportunity to self-correct. To understand the refinements adopted by Union Pacific, it is helpful to understand certain base-line elements of CIMS that existed in the first part of 2022.

First, for each manifest customer, Union Pacific calculated a Maximum Inventory Threshold (MIT). The MIT reflects the maximum serving area inventory the customer could be expected to accumulate based on:

- A. the customer’s maximum number of consecutive days per week without scheduled rail service from Union Pacific (e.g., a customer served 7 days per week would have a maximum of 0 consecutive days without service; a customer served on Monday and Tuesday would have a maximum of 5 days-of-week without rail service);

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<sup>1</sup> However, Union Pacific will in some circumstances provide additional switches to reduce inventory when the customer’s self-correction action plan includes increasing throughput at its facility.

- B. two buffer days for customers in most serving areas, or one buffer day for customers in one of the four serving yards Union Pacific has designated as “constrained” (out of a total of 418 serving yards identified by Union Pacific); and
- C. the customer’s 56-day average daily release rate (*i.e.*, the average number of cars a customer releases for Union Pacific to pull from its facility each day over a 56-day period).

The MIT calculation, which Union Pacific has not changed, is a simple algorithm:  $[A+B] \times C$ .<sup>2</sup>

Union Pacific also had a process for escalating serving area congestion issues. If Union Pacific projected a customer was likely exceed its MIT based on a 4-day projection of inbound traffic, its current inventory status, and its current release rate, Union Pacific would create an internal “warning.” The “warning” alerted Union Pacific managers to the potential issue.

If a customer exceeded its MIT and Union Pacific projected the customer’s inventory was likely to remain above MIT for at least 4 days (based on the customer’s projected inbound traffic, current inventory, and release rate), Union Pacific would generally create a “worklist.” However, Union Pacific excepted customers from the worklist process if the customer had less than 6 cars in the serving area *and* the serving area was not flagged as “congested,” meaning the aggregate volume in the serving area for all customers did not exceed the aggregate MIT for all customers. For the customers to whom the exception did not apply, Union Pacific would review its Industry Spot and Pull (ISP) performance for the customer. If Union Pacific’s ISP was below 80%, Union Pacific would create an “internal worklist,” that is, an internal notification to review and improve ISP performance. If Union Pacific’s ISP was 80% or higher, Union Pacific would generate a “customer worklist.” In the case of a customer worklist, Union Pacific would warn the customer that its inventory was exceeding its MIT and ask the customer to take corrective action to reduce its inventory to or below its MIT within seven days.

If the customer did not reduce its inventory as requested, Union Pacific would embargo the facility until the inventory was at or below the customer’s MIT.

### **August 2022 Refinements**

Union Pacific implemented a first set of refinements in August 2022.<sup>3</sup>

*First*, Union Pacific increased by one week (from 7 to 14 days) the time between asking a customer to take corrective action to reduce inventory levels and imposing an embargo if the customer’s corrective actions had failed to reduce inventory levels below the customer’s MIT, if: (a) the customer initially exceeded the MIT by only five or fewer cars; (b) the customer was projected to show improvement towards reducing excess inventory by the fourth day after receiving the warning; and (c) the customer’s serving area was not flagged as “congested” (based on aggregate volume versus aggregate MIT). This change allows customers that were close to their MIT and

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<sup>2</sup> See STB DC Primus Visit May 11 2023 (UP-EP 772-0635-0650).

<sup>3</sup> See CCSmsCIMcolab8.5.22 (UP-EP 772- 0612)

projected to show improvement towards reducing their excess inventory more time to self-correct if their serving yard was not flagged as congested.

*Second*, Union Pacific increased by one week (from 7 to 14 days) the time between asking a customer to take corrective action to reduce inventory levels and imposing an embargo if the customer's corrective action failed to reduce the inventory levels below the customer's MIT, if: (a) the customer had not been issued a customer worklist in the prior 120 days; (b) the customer's serving area was not flagged as "congested" (based on aggregate volume versus aggregate MIT); and (c) Union Pacific personnel concluded the excess inventory above MIT was not inhibiting operations in the serving area. This change allows any customer that had not recently experienced similar inventory issues more time to self-correct if their serving yard was not flagged as congested.

### **February and March 2023 Refinements**

Union Pacific implemented a second set of refinements in February and March 2023.<sup>4</sup>

*First*, Union Pacific increased the minimum ISP threshold for issuing customer worklists (and thus for imposing serving area congestion embargoes) from 80% to 85%. The change makes Union Pacific accountable for providing a higher level of local service before we ask customers to take corrective action.

*Second*, Union Pacific raised the minimum MIT from 2 cars to 3 cars. This change provides more flexibility for smaller customers (who generally have less impact on shared serving areas). As a result of this change, even in serving areas among those flagged as congested, Union Pacific will not send smaller customers a worklist if they have fewer than six cars in the serving area.

*Third*, Union Pacific increased by one week (from 7 to 14 days) the time between asking a customer to take corrective action to reduce inventory levels and imposing an embargo if corrective actions fails to reduce inventory levels below the customer's MIT, if: (a) the customer is actively engaged in reducing its inventory levels; and (b) the customer reduced its excess inventory to 5 cars or less after the first week. This change allows customers who are engaged in corrective action to have more time to self-correct before an embargo is imposed. As a result, even customers with more than 5 cars of inventory over their MIT by the fourth day after receiving a warning, as well as customers in serving areas among those flagged as congested, have more time to take corrective action.

*Fourth*, Union Pacific enhanced our shipment management tool to provide customers more data to effectively manage inventory in their serving yards. The new tool displays, among other things, a customer's MIT, cars on hand, MIT available, estimated 4-day MIT, average release rate over a 7-day period, and number of days of inventory in the serving area (based on the average daily release rate over the previous 28 days).<sup>5</sup>

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<sup>4</sup> See CIMS Enhancement Highlights for STB – Lance mtg with Oberman and Primus Feb 15 2023 (UP-EP 772-0614).

<sup>5</sup> See STB DC Primus Visit May 11 2023 (UP-EP 772-0635-0650).

## May 2023 Refinements

Union Pacific implemented a third set of refinements in May 2023.<sup>6</sup>

*First*, Union Pacific addressed customer concerns about “bunching”—that is, concerns that broader Union Pacific performance issues might result in a sudden influx of deliveries to the customer’s serving area that could produce inventory levels in excess of their MIT, Union Pacific implemented a special “bunching” rule. Under the “bunching” rule, Union Pacific increased by one week (from 7 to 14 days) the time between asking a customer to take corrective action to reduce inventory levels and imposing an embargo if corrective actions fails to reduce inventory levels below the customer’s MIT, if: (a) Union Pacific’s current trip plan compliance (TPC) for the customer is below a defined threshold, and (b) the customer’s serving area is not flagged as “congested” (based on aggregate volume versus aggregate MIT).

*Second*, Union Pacific implemented a new customer notification regarding the number of cars en route and scheduled to arrive in the serving area in the next seven days. This change pro-actively provides customers additional information and encourages them to plan and adjust inbound shipments. In other words, whereas Union Pacific would previously provide internal warnings based on a 4-day projection of inbound traffic, Union Pacific is now providing an advanced warning to customers, so they have more notice of the potential need to take corrective action.

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9(b): The Board’s Request 9(b) asks what Union Pacific has done to reduce the use of embargoes when a customer is over its MIT but the customer’s serving area as a whole is not showing to be congested. Union Pacific originally designed CIMS to focus on individual customer performance to ensure one customer’s behavior does not impose costs on other customers using shared network facilities. MITs do not represent allocations of serving area capacity to individual customers. However, customers reasonably expect their ability to use serving areas according to established longer-term patterns will not be impaired by allowing others to accumulate excess inventory even when serving areas are not currently congested.

As discussed above, CIMS originally incorporated consideration of constrained serving areas in calculating each customer’s MIT. Accordingly, Union Pacific used (and still uses) a 2-day buffer in calculating the MIT for customers in all but four serving areas that have been designated as congested. In addition, Union Pacific did not (and still does not) create an “exception” if the customer had less than 6 cars in the serving area and the serving area was not flagged as congested (based on aggregate volume versus aggregate MIT).

Moreover, as also discussed above, Union Pacific has implemented several refinements to CIMS designed to allow customers additional flexibility when a customer is above its MIT but the customer’s serving area is not flagged as congested.

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<sup>6</sup> CIMS TPC Enhancement (UP-0617-0618).

First, Union Pacific's August 2022 and February 2023 refinements to CIMS provided customers additional time to engage in corrective action if their serving area is not flagged as congested and certain other conditions apply.

Second, Union Pacific's May 2023 refinements to CIMS provided customers additional time to engage in corrective action when Union Pacific's current TPC for the customer is below a defined threshold and their serving area is not flagged as congested.

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As a result of a combination of the refinements described above, enhanced customer engagement and customer self-corrective action, and other changes affecting railroad operations, Union Pacific has substantially reduced the number of serving area embargoes we have imposed. As of June 11, 2023, Union Pacific issued approximately 70% fewer serving area embargoes as compared with the prior year, and since implementing the February 2023 refinements, we are trending greater than an 80% year-over-year reduction in serving area embargoes. Union Pacific is trending at an average of 3 serving area embargoes per week for the past 12 weeks.

Union Pacific's serving area embargoes continue to have a very short duration: they currently average just 14 days. Union Pacific imposes serving area embargoes in a highly targeted manner to address congestion in serving areas after allowing time for corrective action to work, then we lift the embargoes once the congestion issue has been mitigated.<sup>7</sup>

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<sup>7</sup> See Embargo Data, UP-EP 772-643-645.