AMTRAK

OFFICE of INSPECTOR GENERAL
NATIONAL RAILROAD PASSENGER CORPORATION

# ASSET MANAGEMENT:

## Company Has Opportunities to More Effectively Manage and Safeguard Maintenance-of-Equipment Inventory

**OIG-A-2024-004 | February 22, 2024**

This page intentionally left blank.

# Memorandum

**To:** Tracie Winbigler
Executive Vice President, Business Transformation and Chief Financial Officer

Gerhard Williams
Executive Vice President, Service Delivery & Operations

**From:** James Morrison
Assistant Inspector General, Audits

**Date:** February 22, 2024

**Subject:** *Asset Management: Company Has Opportunities to More Effectively Manage and Safeguard Maintenance-of-Equipment Inventory* (OIG-A-2024-004)

Amtrak's (the company) rolling stock includes more than 2,000 locomotives and passenger cars, many of which are near the end of their useful service lives. The company estimates it will spend over $11 billion of Infrastructure Investment and Jobs Act[1] funding to replace its aging rolling stock over the coming years. Maintenance-of-Equipment (MoE) inventory—the parts and materials the company uses to maintain its rolling stock—is vital for keeping both old and new locomotives and passenger cars in a safe and reliable operating condition to serve customers.

As of December 31, 2022, the company's Procurement and Supply Chain department managed $239 million in MoE inventory at 21 storage facilities across the country. We previously reported on challenges the company faced managing its MoE inventory, including unnecessarily drawing down its own inventory of parts instead of using those available under a vendor support contract.[2] In addition, in recent years our office has investigated instances of inventory mismanagement and theft that resulted in criminal charges and convictions of company employees.[3] Given the importance of MoE

[1] Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).
[2] *Acquisition and Procurement: Improved Management and Oversight of GE Diesel Locomotive Service Contract Could Lead to Savings* (OIG-A-2017-005), February 3, 2017; and *Acquisition and Procurement: Opportunities Exist to Improve Management of Technical Support Services Contracts* (OIG-A-2016-013), September 30, 2016.
[3] For a list of prior investigations, see Appendix A.

inventory to company operations, our objective was to evaluate the effectiveness of the company's processes and controls for managing and safeguarding its inventory.

To understand these processes and obtain a wide range of perspectives on them, we visited 10 storage facilities.[4] These facilities—eight of which are located within Mechanical shops and two of which are distribution centers—hold inventory that accounts for approximately 83 percent of the value of the company's total MoE inventory. We interviewed 145 Material Control group[5] and Mechanical department employees who are directly involved with inventory on site including employees and management.[6] We also interviewed knowledgeable officials from the Procurement and Supply Chain, Mechanical, Finance, Digital Technology and Innovation, and Corporate Security departments. Additionally, we analyzed the company's MoE inventory data and related reports, and we reviewed company policies and standards for inventory management, as well as internal control guidance from private- and public-sector organizations.[7] For more information on our scope and methodology, see Appendix A.

## SUMMARY OF RESULTS

The Procurement and Supply Chain and the Mechanical departments recently began efforts to improve inventory management. They continue to face challenges, however,

[4] We visited facilities in Bear, Delaware; Beech Grove, Indiana; New Castle, Delaware; Chicago, Illinois; Indianapolis, Indiana; New Orleans, Louisiana; Oakland, California; Seattle, Washington; and Wilmington, Delaware. We visited three storage facilities co-located with Mechanical shops and one distribution center during the initial (survey) phase of our audit—when we performed our preliminary research—and five storage facilities co-located with Mechanical shops and one distribution center during our latter (analysis) phase.

[5] The Material Control group is within the Procurement and Supply Chain department.

[6] We conducted interviews with 113 employees and 32 managers. During our initial 4 site visits, we used a semi-structured interview tool to interview 21 Material Control employees and 49 Mechanical, and we conducted interviews with 6 Material Control management employees. During our latter 6 visits, we used a semi-structured interview tool to interview 43 Mechanical employees and 10 Material Control management employees. In addition, we interviewed 16 Mechanical management employees without using the tool. For more information on our interview methodology, see Appendix A. For our semi-structured interview questions, see Appendix B.

[7] Committee of Sponsoring Organizations of the Treadway Commission, *Internal Control-Integrated Framework*, May 2013; Government Accountability Office, *Standards for Internal Control in the Federal Government* (GAO-14-704G), September 2014; and Council of Supply Chain Management Professionals, *The Definitive Guides to Inventory Management and Warehousing*, April 2014 and December 2013.

strategically managing MoE inventory in ways that have operational, customer service, and financial impacts.

- **Achieving an appropriate inventory balance**. The company has significant surpluses of some items, but it is regularly out of stock of others. As of September 2023, the company held $49 million in surplus and obsolete MoE inventory. At the same time, Mechanical employees we spoke with told us parts are frequently out of stock, which regularly impacts their work. These imbalances are partly due to the company's use of distorted consumption data to predict future needs—an issue that is exacerbated by employee workarounds such as cannibalizing parts from other trains. The company also has no strategic inventory goals, and no full assessment of the costs of carrying surplus and obsolete inventory. Without an appropriate balance, surpluses can limit storage and create unnecessary costs—such as the $14.4 million in inventory that it will likely never use again. Conversely, shortages can limit rolling stock available for service and delay trains.

- **Providing an effective ordering system**. Almost all of the Mechanical employees we spoke with told us that the names and descriptions of items in the company's inventory system are vague or unclear, or the accompanying photographs are wrong or missing. This is occurring because the company has not assessed the costs and benefits of clarifying and standardizing this data. As a result, Mechanical employees sometimes spend significant time searching for inventory.

- **Safeguarding inventory from risk of loss or theft**. The company has taken some steps to safeguard its MoE inventory, but 9 of the 10 storage facilities we visited had at least 1 security vulnerability. These vulnerabilities occurred because the company has not implemented plans to physically secure some of its facilities. Additionally, it does not regularly monitor for abnormal inventory use, or consistently apply ordering limits, exposing it to greater risk of loss or theft.

To more strategically manage MoE inventory, we recommend that the company implement processes to improve inventory data, develop strategic inventory goals, assess the costs and benefits of carrying surplus and obsolete inventory to determine which materials to sell or scrap, and implement processes to safeguard inventory.

In commenting on a draft of this report, the Executive Vice President, Business Transformation and Chief Financial Officer, and the Executive Vice President, Service

Delivery & Operations, agreed with our recommendations and detailed actions the company plans to take to address them. For management's complete response, see Appendix E.

## BACKGROUND

MoE inventory is a subset of the company's inventory.[8] The Mechanical department uses MoE inventory to maintain company rolling stock, including the following:[9]

- train car and locomotive parts such as wheels, brakes, and seat cushions
- tools such as drills and wrench sets
- chemicals and lubricants
- consumable items such as personal protective equipment, batteries, and cleaning supplies

Figure 1 shows examples of MoE inventory items.

***Figure 1. Examples of MoE Inventory Items***

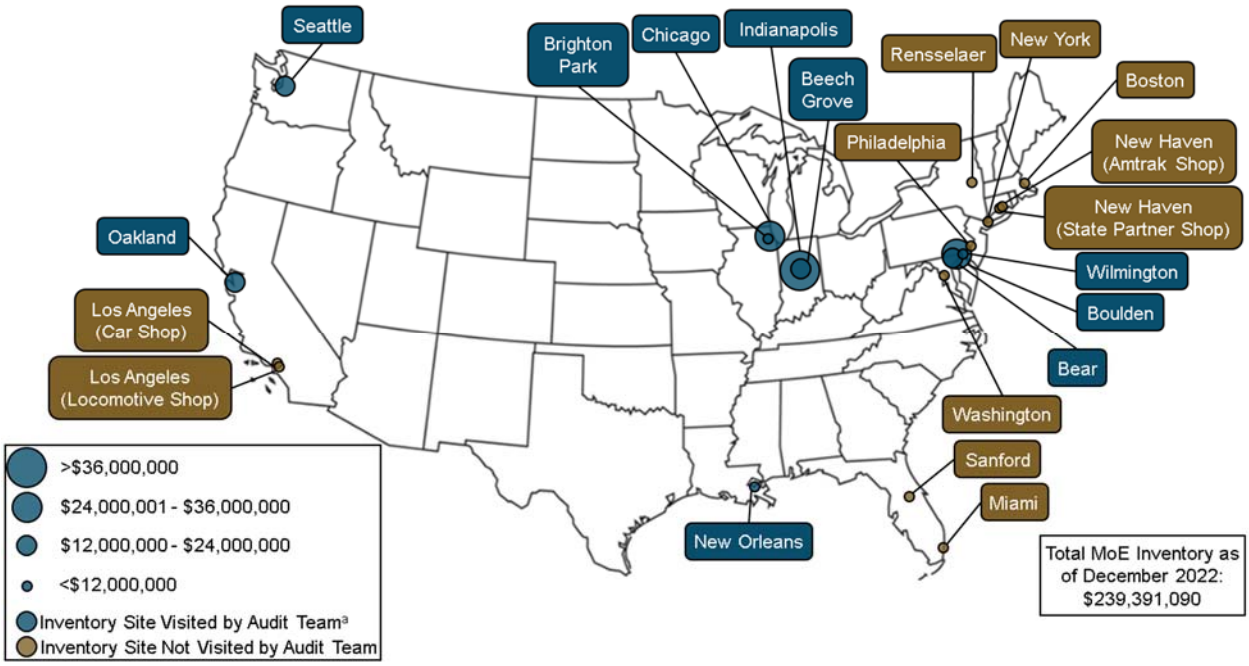
*Source:* Amtrak and Office of Inspector General (OIG), June 2023

[8] The company defines inventory as parts, supplies, components, tools, materials, and consumable items that are maintained for future use. See *Amtrak Policy and Instruction Manual, P/I Number: 11.28.2, Inventory Management, July 16, 2019.*

[9] The company's remaining inventory includes the items it uses to maintain tracks and other infrastructure.

As of December 31, 2022, the company reported that it managed $239 million in MoE inventory at 21 facilities across the country,[10] as Figure 2 shows. Of this, the company owned $182 million and managed the remaining $57 million on behalf of the states and other transportation agencies it partners with to provide rail service.

***Figure 2. Value of MoE Inventory at Storage Facilities, as of December 2022***




*Source*: OIG analysis of company data. Locations are approximate.
*Note:* [a]For additional details on the storage facilities we visited, see Appendix C.

Three departments share responsibility for managing MoE inventory:

- **The Procurement and Supply Chain department** is responsible for keeping appropriate inventory levels on hand and safeguarding inventory.[11] Two groups in the department primarily support this function:
  - **The Supply Chain group** conducts forecasting and replenishment activities to ensure that inventory is available for employees.

[10] Amtrak, *Stock Status Report*, December 2022.
[11] *Amtrak Policy and Instruction Manual, P/I Number: 11.28.2, Inventory Management, July 16, 2019.*

  - **The Material Control group** manages the inventory at the storage facilities across the country. Its duties include receiving, shipping, storing, securing, counting, and issuing inventory.

- **The Mechanical department** orders inventory from the Material Control group's warehouses and uses it to maintain the company's rolling stock. For a description of the ordering process, see Appendix D. The department also plans regular maintenance work for company rolling stock, including the inventory items necessary to conduct this work.
- **The Finance department's** Material Accounting group provides financial oversight of the company's inventory by preparing reports such as those that show inventory balances over time and that summarize any adjustments made to the inventory balance. The group also conducts periodic reviews of inventory storage facilities.

The company holds its MoE inventory at three types of storage facilities: distribution centers, back shops, and terminal maintenance facilities.[12] The Material Control group maintains inventory at distribution centers to ship to Mechanical facilities across the country. It maintains inventory at back shops and terminal maintenance facilities primarily to issue to Mechanical employees co-located on site.

## THE COMPANY HAS OPPORTUNITIES TO BETTER BALANCE ITS INVENTORY

In recent years, the Procurement and Supply Chain and the Mechanical departments have undertaken initiatives to better manage the company's MoE inventory, including implementing a more automated planning process and hiring staff to assist with inventory planning. Nonetheless, we identified challenges that hinder the company's ability to maintain enough inventory to support operations but avoid excess costs from maintaining too much.

[12] In some instances, the company also stores inventory directly at the location where it will be consumed or installed.

## Surpluses and Shortages of MoE Inventory Pose Operational, Customer Service, and Financial Impacts

The company has an imbalance of MoE inventory, which is contrary to its policy and industry standards.[13] Specifically, it has significant surpluses of some inventory items, but is regularly out of stock of others.

As of September 2023, the company held more than $49 million in surplus and obsolete MoE inventory, according to a company report.[14] This includes inventory that exceeds historical or forecasted demand[15] and inventory that no longer has a practical or functional use. For example, as of September 2023, the company reported it had approximately $2 million in obsolete MoE inventory for its Heritage fleet, which it acquired from other railroads when it began operating in 1971 and is no longer in revenue service. As another example, it reported that as of September 2023 it had a surplus of cabinet frames valued at approximately $37,000 that, based on historical use, it would expect to last 1,545 years.[16] Surplus and obsolete inventory accounts for approximately 19 percent of the company's total MoE inventory value.[17]

At the same time, Mechanical employees we spoke with noted that parts are frequently out of stock, which regularly impacts their work. Most Mechanical employees we spoke with during our latter site visits (34 of 39, 87 percent)[18] told us that, within the last year, a part they needed was not available at least weekly. In addition, one-third of the employees we spoke with during our initial site

**34 of 39 (87 percent)**
of Mechanical employees said within the last year, a part they needed was not available at least weekly

[13] Company policy and industry standards define an appropriate balance as the amount of inventory that adequately supports operations without incurring unnecessary costs. See *Amtrak Policy and Instruction Manual, P/I Number: 11.28.2, Inventory Management, July 16, 2019;* and Council of Supply Chain Management Professionals, *The Definitive Guide to Inventory Management*, April 2014.
[14] Surplus and obsolete inventory are defined in company policy. See *Amtrak Policy and Instruction Manual, P/I Number: 11.46.5, Sale and Disposal of Material and Equipment, June 14, 2017*.
[15] The company calculates years of supply on hand based on an inventory item's historical usage over a five-year period.
[16] In commenting on this report, one Supply Chain official told us they anticipated these items will likely be needed in the future. However, a Material Accounting official told us the items had been stored for over two years.
[17] This percentage is based on the total value of company-managed MoE inventory as of September 2023.
[18] We excluded four employees from this analysis because their positions did not entail ordering inventory.

visits (15 of 49, 31 percent)[19] told us—without us specifically asking—that at least one inventory item they needed was out of stock at least daily.

This imbalance has the following impacts on operations, customer service, and finances:

**Operational impacts.** Inventory shortages limit the rolling stock available for service, increase employee workload, and decrease employee morale. Moreover, excess inventory can pose storage challenges.

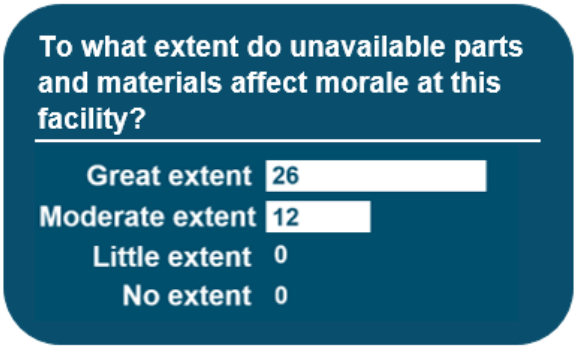
- ***Service capacity.*** Unavailable inventory limits the company's service capacity—the number of trains the company can operate at any given time. The company reduces its service capacity from planned levels when it sees an increase in individual pieces of rolling stock—known as units—held out of service. It is holding some of these units from service because it does not have the inventory necessary to maintain them. For example, in calendar year (CY) 2022, the company took at least 900 units out of revenue service for a total of approximately 13,000 unit-days[20] while it waited to receive out-of-stock inventory items via expedited shipping.[21] Senior Mechanical officials agreed that unavailable inventory limits service capacity, but the company does not know the extent to which unavailable inventory impacts operations because it does not track this information.

- ***Employee workload and morale.*** When we asked Mechanical employees what they do when MoE inventory is out of stock, the majority we spoke with (67 of 88, 76 percent)[22] told us they take parts from one unit to repair another—known as "cannibalizing." In fact, employees told us they must cannibalize parts every day while they wait for the facility to receive more stock, which can sometimes take several months. Time spent removing parts from other units increases Mechanical employees' workloads, but many told us they continue doing this to avoid

**67 of 88 (76 percent)**
of Mechanical employees said they cannibalize parts

[19] We used the information we learned from our initial site visits to revise our questions for our latter site visits. Therefore, we sometimes report these populations separately.
[20] A unit day is each day that a given piece of rolling stock is out of service.
[21] The company does not track the extent to which it holds units out of revenue service due to unavailable inventory unless they require expedited shipping.
[22] We excluded four employees from this analysis because their positions did not require inventory ordering.

holding units from service and to ensure that trains leave their facility on time. Additionally, all of the Mechanical employees we spoke with during our latter site visits (38 of 38, 100 percent)[23] told us unavailable parts and materials affect morale at their facility to at least a moderate extent. Mechanical employees we spoke with during our initial site visits (12 of 49, 24 percent) also told us—without us specifically asking—that unavailable inventory affects morale.




- ***Available space.*** Material Control management and employees we spoke with at 6 of the 10 facilities we visited (17 of 31, 55 percent)[24] told us their facility is running out of storage space. A senior Material Accounting official told us this issue will get worse as the company acquires new fleets unless it reduces its surplus and obsolete inventory.

**Customer service impacts.** Unavailable inventory negatively impacts customers by delaying trains and limiting onboard service and amenities.

- ***On-time performance.*** The company does not know the extent to which unavailable inventory results in train delays because it does not track this information. Several Mechanical employees and management officials we spoke with, however, (18 of 103, 17 percent)[25] and half of the Material Control management we spoke with (5 of 10, 50 percent) during our latter site visits told us unavailable inventory has resulted in train delays even though they are not responsible for tracking this. For example, management officials at one facility stated that this occurs "every few days."

[23] We excluded five employees from this analysis—four because their positions did not entail ordering inventory and one because the employee did not understand the question.
[24] We excluded six employees from this analysis because we did not ask about space available to store items.
[25] We excluded five employees from this analysis because we did not ask them about the impacts of inventory shortages.

- ***Customer experience.*** The company does not know the extent to which unavailable inventory impacts the customer experience because it does not track this information. Several of the Mechanical employees we spoke with (25 of 92, 27 percent), however, told us—without us specifically asking—that unavailable inventory negatively affects the customer experience. Additionally, at 7 of the 8 facilities we visited, at least one Mechanical employee we spoke with told us they have had to forgo maintenance on in-service units due to out-of-stock inventory items, which can directly impact the customer experience.[26] For example, Mechanical employees from two different facilities told us they did not have the parts needed to repair sleeper cars, and as a result the company had to downgrade passengers to coach. In addition, a Mechanical management employee told us they frequently have had to forego maintenance on equipment needed to provide food service due to unavailable parts, which results in the company not offering traditional food service to customers.

**Financial impacts.** An imbalance of inventory also has financial impacts. Of the company's $49 million worth of surplus and obsolete inventory, we identified $14.4 million that it will likely never use again.[27] These are funds the company could have put to better use. A senior Material Accounting official told us that much of this inventory is for rolling stock the company no longer operates and for which it has no use. Additionally, the company incurs excess costs to manage this inventory. For example, a senior Material Accounting official told us that handling this material—such as during routine counts—incurs labor costs. In addition, the company uses expedited shipping when a facility does not have the part necessary to service a unit and would otherwise have to hold the unit out of revenue service. In CY 2022, the company spent approximately $2 million on expedited shipping for MoE inventory items.

We identified **$14.4 million** worth of MoE inventory the company will likely never use again—funds it could have put to better use

[26] Mechanical employees provided us with specific examples of units placed in service without needed maintenance; however, we did not identify any instances where safety critical maintenance was foregone.
[27] As of September 2023, a company report identified an additional $7.5 million of obsolete inventory for trainsets the company plans to retire in the near future. Because the company still operates these trainsets, we did not include the value of this inventory in our calculation.

## Three Key Challenges Hinder the Company's Ability to Achieve a More Appropriate Inventory Balance

In some instances, the company's imbalance of MoE inventory occurs because of factors that it cannot fully control, such as global supply chain and vendor issues. Independent of these factors, however, the company faces three key challenges that are largely within its control.

**Weaknesses in processes for planning and fulfilling inventory needs**. We identified the following weaknesses in the company's processes to accurately plan for and fulfill its MoE inventory needs, which partly led to the inventory imbalance. Specifically, the company:

- ***Relies on distorted consumption data to predict future needs.*** To predict future inventory needs, the company relies on historical consumption data—data showing how much MoE inventory it used and when and where it used it. It also uses historical consumption data to set reorder points—the minimum stock levels that trigger it to reorder an item.[28] We identified several practices that distort these data, however, making them appear higher or lower than actual consumption. For example, almost half of the Mechanical employees we spoke with (40 of 88, 45 percent)[29] told us they order larger quantities of inventory items than they need and store the excess for later use—known as "hoarding."[30] In addition, approximately one-third of the Mechanical employees we spoke with (27 of 88, 31 percent)[31] told us they do not always return extra or unused inventory when they accidentally order the wrong part or receive too much of an item. These actions are generally driven by Mechanical employees' desire to ensure that locomotives and cars are repaired on time and, according to the Chief Procurement and Supply Chain Officer, their perception that they

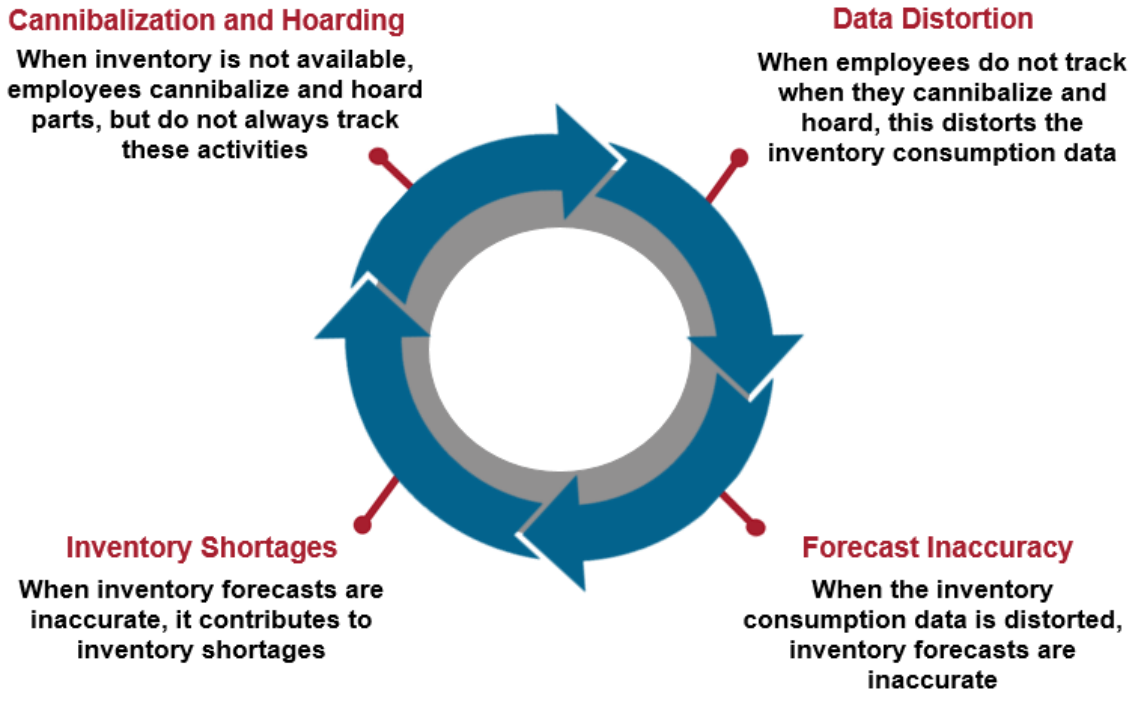
**40 of 88 (45 percent)**
of Mechanical employees said they hoard parts

[28] Reorder points help ensure that the company keeps enough inventory on hand to satisfy demand.
[29] We excluded four employees from this analysis because their positions did not entail ordering inventory.
[30] Employees also told us they hoard parts for other reasons, including to save time by avoiding having to place multiple orders for items.
[31] We excluded four employees from this analysis because their positions did not entail ordering inventory.

cannot trust the Procurement and Supply Chain department to provide the parts when they need them.

Further distorting the consumption data is that Mechanical employees do not always track when they cannibalize parts from another unit. The department requires employees to track their use of cannibalized parts, and its work management system (WMS) allows employees to do so, but a senior Mechanical official told us the department does not enforce this requirement. Accordingly, the consumption data do not reflect when employees needed these items, and Senior Mechanical officials told us the department has no way of knowing that those additional items were necessary. These actions create a self-perpetuating cycle that persists because the company does not have a process to ensure that the data it uses to forecast demand and replenish its MoE inventory accurately and reliably reflect actual consumption, as Figure 3 shows.

***Figure 3. Self-perpetuating Cycle of Cannibalizing and Hoarding Inventory***




*Source:* OIG analysis of interviews with company officials, reports, and processes

- ***Does not consistently update key attributes of inventory items.*** Notwithstanding the challenges with the accuracy of the company's historical consumption data,

the Supply Chain group does not regularly and consistently review and update key inventory attributes—such as reorder points and lead times—that it relies on for replenishment actions. For example, an official in the Supply Chain group told us the group has set custom reorder points for many inventory items[32] but has not updated them to ensure that they continue to align with the Mechanical department's evolving needs. Without such updates, many reorder points are higher or lower than needed, resulting in further imbalances. This is occurring because the group has not developed or implemented a process to regularly review these attributes. Supply Chain officials also told us that vendors sometimes lengthen their lead times in response to supply chain issues. Without a process to update lead times when this occurs, however, the company risks running out of stock before the vendor can supply more. Supply Chain officials told us the group tries to review these attributes multiple times per year, but it is not doing so consistently.

The company is implementing new planning software to automate aspects of inventory demand forecasting and replenishment.[33] For example, it expects the software to automatically review and update reorder points monthly. Additionally, the Mechanical department has begun hiring staff to assist with inventory planning. Their responsibilities will include providing input into demand forecasts, among other duties. Nonetheless, inaccurate consumption data and outdated attributes could limit the reliability of the software's forecasts, which could hinder the company's return on these investments. Further, even if the software automates parts of the company's forecasting and replenishment activities, other key attributes that the software cannot automatically review, such as changes in vendors' lead times, might not be updated regularly without a process for doing so.

**No common strategic inventory management goals.** The Procurement and Supply Chain and the Mechanical departments have not collaborated to develop and document common strategic goals and metrics for inventory management that align with the company's broader goals. For example, goals and metrics related to how many times an MoE inventory shortage caused a train to be delayed leaving a station and how long the delay lasted could help the company understand and address inventory's impact on on-time performance. As another example, a goal related to the extent to which MoE

[32] In accordance with company standards, the Supply Chain group will set custom reorder points based on information the Mechanical department provides instead of historical consumption.
[33] As of October 2023, the software was not fully operational.

inventory shortages limit the company's operations could help it understand and address the impact of inventory on its service capacity.[34]

The Chief Mechanical Officer and the Chief Procurement and Supply Chain Officer agreed that their departments could benefit from establishing joint inventory management goals. For example, the Chief Mechanical Officer told us the two departments have different inventory-related objectives. This official told us, however, that the departments could work together to better align their goals. Similarly, further collaboration between the two departments could help build Mechanical employees' trust in the system to supply inventory in a timely manner. More broadly, measuring the impacts that inventory has on operations could help the Mechanical department better communicate its inventory needs to the Supply Chain group and proactively plan to ensure that rolling stock is available for revenue service, according to senior Mechanical officials. The company, however, does not measure the operational, customer service, and financial impacts of out-of-stock inventory. As a result, it does not have a means to determine whether the balance of inventory on hand is appropriate and, if not, to use that information to inform its efforts to achieve one that better aligns with the company's goals.

**Costs of carrying surplus or obsolete inventory not identified.** The company's imbalance of MoE inventory also persists in part because it has not established a process to regularly assess the costs of carrying surplus and obsolete inventory compared to the benefits of selling or scrapping it. In some cases, there may be valid reasons for keeping some of this inventory; for example, if the vendor that provides a part is no longer in business, the company may choose to maintain a surplus of that vendor's parts. Without regularly assessing the costs and benefits of maintaining surplus inventory, however, the company may continue to incur unnecessary costs to manage items it should have discarded. Additionally, without such an assessment, the company cannot determine what portion, if any, of the $14.4 million of obsolete MoE inventory that we identified could be recovered by selling or scrapping it.

[34] In September 2023, Amtrak's President stated that the company wants to double its ridership by 2040. To accomplish this, it would need to annually increase its customer base by 5 percent and improve its customer satisfaction scores, according to this official.

## THE COMPANY COULD IMPROVE ITS SYSTEM FOR ORDERING MOE INVENTORY

The company does not provide employees with an effective system for ordering MoE inventory, contrary to common private- and public-sector management standards.[35] Most of the Mechanical employees we spoke with during our latter site visits (37 of 39, 95 percent)[36] told us that the names and descriptions of items in the system they use to order inventory are vague or unclear, or the accompanying photographs are wrong or missing.[37] Mechanical employees we spoke with during our initial site visits (34 of 49, 69 percent) told us—without us specifically asking—that they had similar issues with ordering inventory. Further, several Material Control employees we spoke with (8 of 37, 22 percent) told us—again without us specifically asking—that the units of measure for inventory items were vague or unclear, such as whether the inventory is a single item, a box, or a case.

**37 of 39 (95 percent)**
of Mechanical employees said names and descriptions of items were vague or unclear, or pictures were wrong or missing

Without an effective ordering system, Mechanical employees spend time searching for inventory instead of performing repairs on rolling stock. Almost all of the Mechanical employees we spoke with during our latter site visits (37 of 39, 95 percent)[38] told us that searching for inventory had delayed their work. For example, one employee said it delays their work by 10 hours per week on average, and some items can take days to find. In addition, other employees told us confusion over items in the system leads them to order more than they need to ensure that they get the correct item. One employee gave the example of ordering one of each type of a particular part because they could not determine from the ordering system which one they actually needed. Such

**37 of 39 (95 percent)**
of Mechanical employees said searching for inventory delayed their work

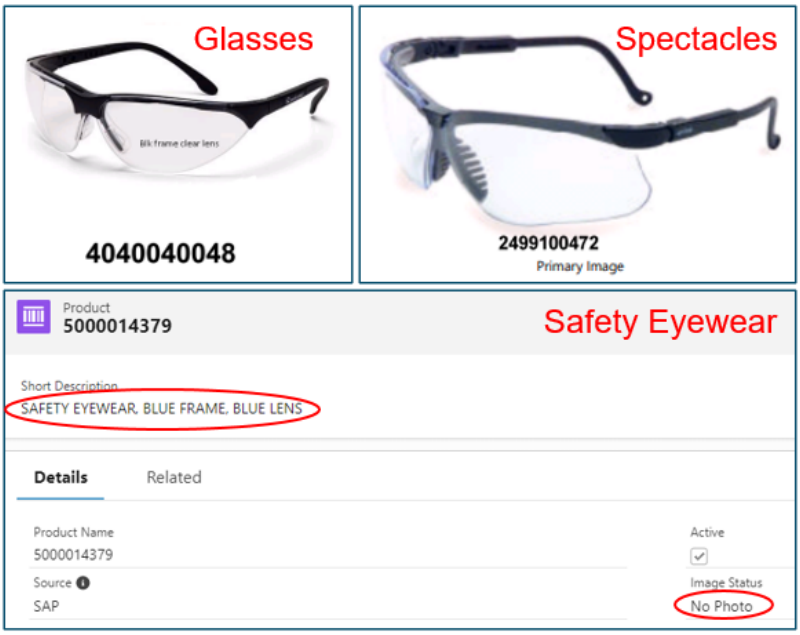
[35] Committee of Sponsoring Organizations of the Treadway Commission, *Internal Control-Integrated Framework*, May 2013; and Government Accountability Office, *Standards for Internal Control in the Federal Government* (GAO-14-704G), September 2014.
[36] We excluded four employees from this analysis because their positions did not entail ordering inventory.
[37] For additional details on the ordering process and systems the company uses to manage MoE inventory, see Appendix D.
[38] We excluded four employees from this analysis because their positions did not entail ordering inventory.

overordering can further undermine the accuracy of the company's inventory consumption data.

Senior company officials in the Supply Chain group and Mechanical department acknowledge that the names, descriptions, and units of measure in the ordering system are vague and unclear. One senior company official in the Supply Chain group told us these issues result in delays and inefficiencies—including employees ordering incorrect items—which delays repairs. This official could not, however, quantify the impact or cost of these delays and inefficiencies.

The issues with the ordering system occur because the Mechanical department does not have a standardized convention for naming and describing its over 100,000 MoE inventory items. The Procurement and Supply Chain department employees who are responsible for processing names and descriptions for new inventory items rely on Mechanical employees to name and describe items. Mechanical employees, however, do not always use consistent nomenclature. For example, Mechanical employees have named similar safety glasses as "glasses," "safety eyewear," and "spectacles." When we searched for glasses and spectacles in the ordering system, we found more than 50 results. Figure 4 shows three examples, including one for which the accompanying photograph is missing.

***Figure 4. Examples of Inconsistent Names and Pictures for Safety Glasses from MoE Ordering System***




*Source*: OIG analysis of company ordering system

This issue persists because the company has not assessed the costs and benefits of updating, clarifying, and standardizing names, descriptions, units of measure, and accompanying photographs. A senior Supply Chain official told us their group has tried to update inventory items' names and descriptions in recent years, but these efforts are resource-intensive, and the group does not have enough staff to dedicate to it. Moreover, there has been significant turnover in staff available for this effort. For example, over an 18-month period, 5 different employees worked in the position responsible for processing new inventory items. This official told us the group has also considered working with a third party to update names and descriptions but has not taken any formal steps to begin this process.

Regardless, the company's Chief Procurement and Supply Chain Officer agreed that the company needs to update the names and descriptions in the ordering system. An assessment could help the company identify the following: 1) the costs and benefits of updating names, descriptions, and units of measure, and 2) the options for doing so, such as hiring a third party or hiring staff with the appropriate skills. Without such an assessment, the company cannot determine the advantages or disadvantages of updating the names, descriptions, and units of measure and, if it determines to do so, the best way to proceed.

## THE COMPANY COULD IMPROVE ITS CONTROLS FOR SAFEGUARDING MOE INVENTORY

The company has some measures in place to protect and monitor its MoE inventory, including secure distribution machines for storing smaller items at some facilities and a process for routinely counting inventory items to ensure that its records are accurate. We found gaps, however, in its controls for safeguarding the inventory it holds at storage facilities, which is contrary to company policy and common private- and public-sector management standards.[39] These gaps occurred because the company has not implemented processes to fully secure some of its inventory storage facilities, consistently and regularly monitor for abnormal inventory usage, and consistently apply ordering limits to inventory. Without these processes, the company is at increased risk of theft or fraud.

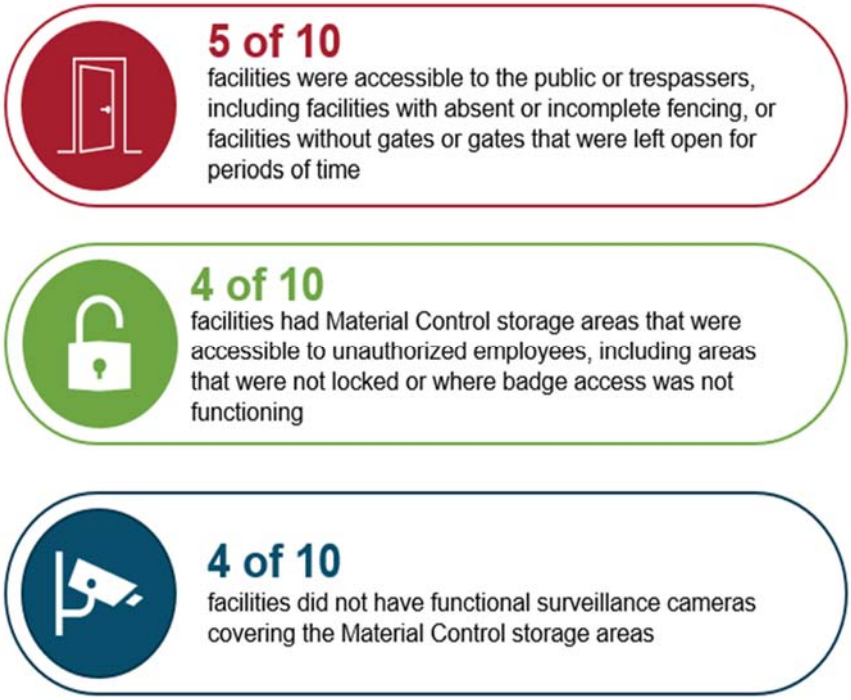
**Company has not fully implemented plan to address security vulnerabilities at inventory storage facilities.** We have previously reported that controlling access to inventory storage locations can help reduce the risk of fraud.[40] In addition, common private- and public-sector management standards call for entities to have controls in place, such as supervision and physical monitoring of inventory usage. Company policy states that inventory facilities should be locked and secured.[41] During our site visits, however, we identified gaps in the company's physical security of its inventory storage facilities: 9 of the 10 facilities we visited had at least 1 security vulnerability, as Figure 5 shows.

[39] Committee of Sponsoring Organizations of the Treadway Commission, *Internal Control-Integrated Framework*, May 2013; and Government Accountability Office, *Standards for Internal Control in the Federal Government* (GAO-14-704G), September 2014.

[40] *AMTRAK: Insights on Fraud Risks as the Company Expands Its Mission* (OIG-SP-2023-007), May 15, 2023.

[41] *Amtrak Supply Chain Manual: Policies, Procedures, Controls and Training Guide for Amtrak Inventory Control Users*, April 3, 2017.

***Figure 5. Security Vulnerabilities at 10 Storage Facilities***




*Source*: OIG observations and interviews with company employees and officials

These vulnerabilities persist because the company has not fully developed and implemented a risk-based plan to secure its inventory facilities across the country through controls such as access controls and security cameras. The Corporate Security department has early plans to improve security at several facilities; however, as of October 2023, these plans did not cover all facilities, including one where we identified vulnerabilities. Without weighing the risks, costs, and benefits at all facilities and prioritizing which controls to install and where to install them, the company may not be allocating resources effectively and may be exposed to more risk than necessary.

**Company has not implemented a process to monitor inventory usage.** Common private- and public-sector management standards call for entities to have controls for monitoring inventory usage. We found, however, that the company does not consistently and regularly monitor for abnormal inventory usage. Although it conducts some ad hoc reviews, it does not do so consistently across the company. For example, Mechanical department employees at two back shop facilities we visited said an employee checks inventory items ordered against a planned bill of materials, and two Mechanical department officials told us the Mechanical department runs a monthly

report that compares inventory usage to a two-year average. The company's Chief Mechanical Officer confirmed, however, that the company does not consistently monitor for abnormal usage. This occurred because the company has not focused on developing and implementing a process to consistently and regularly do this, including clearly assigning responsibility for managing the process.

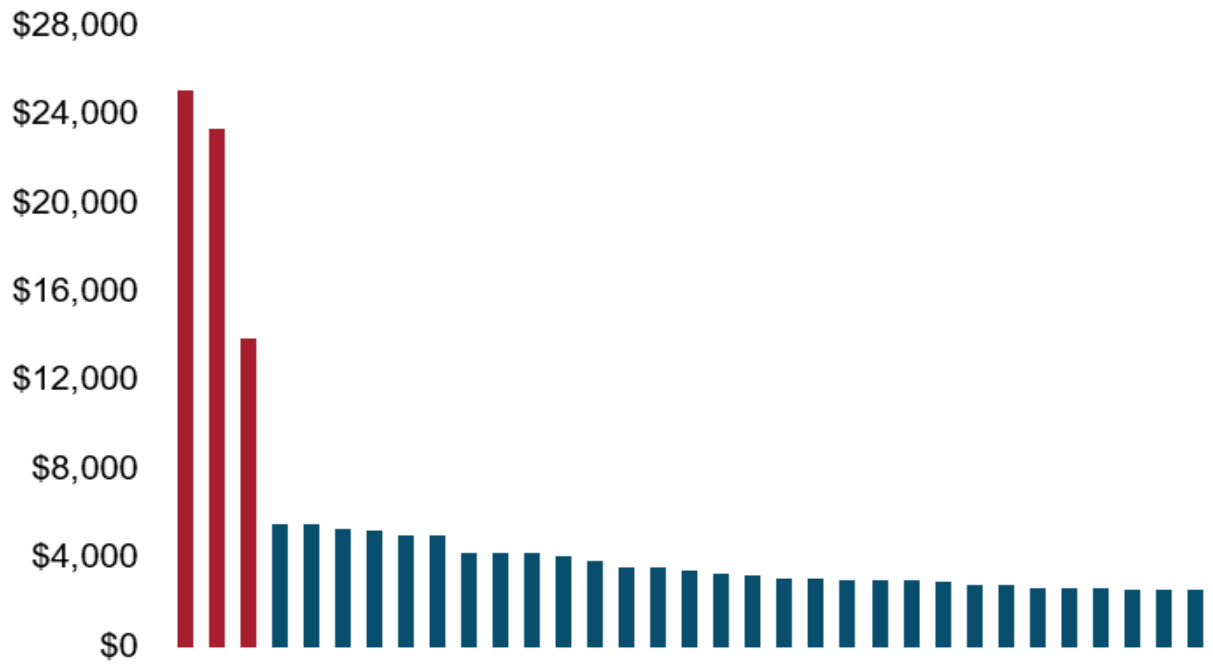
**Company has not implemented a process to consistently and effectively apply limits to inventory ordering.** We found that the company applies some limits to what Mechanical department employees can request through the ordering system, but it does not apply these limits consistently, and it does not ensure that these controls effectively limit excessive inventory usage, which is contrary to common private and public management standards. For example, the system the Mechanical department uses to order inventory includes dollar value and quantity limits on some items but not others. Accordingly, we identified several Mechanical employees who ordered excessive amounts of tools for their job in CY 2022, including one employee who ordered 100 of the same tool. In addition, several Mechanical employees we spoke with (14 of 88, 16 percent)[42] told us—without us specifically asking—that they had circumvented these limits. A senior Mechanical department official in charge of maintaining the system acknowledged that employees can circumvent limits but said the company could implement more controls over ordering. This is occurring because the company has not focused on developing and implementing a process to consistently and effectively apply limits to the inventory system.

**Gaps in controls increase the risk of inventory loss or theft.** As a result of these gaps in its safeguarding controls, the company is at increased risk of loss or theft of its MoE inventory. For example, our office has investigated multiple instances when employees stole inventory items such as tools, copper wire, and generators. We informed the company about these instances; some resulted in criminal charges and convictions of company employees.[43] In addition, since the company is not consistently monitoring for abnormal inventory activities, we analyzed company data to identify fraud indicators. We focused on tools because almost half of the Material Control management and employees we spoke with (14 of 31, 45 percent)[44] said tools were the items most

[42] We excluded four employees from this analysis because their positions did not entail ordering inventory.
[43] For a list of prior investigations, see Appendix A.
[44] We excluded six employees from this analysis because we did not ask them which inventory items were most vulnerable to theft.

vulnerable to theft. Our analysis found that in CY 2022, 3 employees ordered more than $62,000 in tools, and each ordered significantly more than each of the next 30 employees, as Figure 6 shows.

***Figure 6. Value of Tools Ordered by Top 3 Employees Compared to Next 30 Employees, CY 2022***




*Source*: OIG analysis of company data

We identified these individuals as outliers both in the full population of Mechanical employees who ordered tools and among others of a similar position. We referred this abnormal tool-ordering to our Office of Investigations.

Without processes to assess physical security vulnerabilities at inventory storage facilities, monitor inventory usage, and limit inventory ordering, the company faces an increased risk of theft or loss of inventory.

## CONCLUSIONS

The company has an opportunity to improve its processes and controls for managing MoE inventory. Specifically, implementing processes to improve consumption data and regularly review reorder points and lead times would help it achieve a more appropriate inventory balance. In addition, developing strategic inventory management

goals would better align the Procurement and Supply Chain and the Mechanical departments' objectives with the company's broader goals of increasing ridership, improving on-time performance, and improving trust and coordination between the departments. Implementing more controls to secure storage facilities and prevent abnormal usage would help deter fraud and abuse and protect vulnerable MoE inventory from being lost or stolen. Taken together, such actions could help the company better achieve its core operational, customer service, and financial goals.

## RECOMMENDATIONS

To better balance, order, and safeguard company inventory, we recommend that the Executive Vice President, Business Transformation and Chief Financial Officer, in coordination with the Executive Vice President, Service Delivery & Operations, take the following actions:

1. Develop and implement:
    a. a process to ensure that the data used for MoE inventory demand forecasting and replenishment more accurately and reliably reflect consumption. At a minimum, this should include better tracking of employee practices that distort consumption data, such as enforcing the requirement to track the use of parts cannibalized from other units.
    b. a process to regularly and consistently review and update inventory attributes that the company relies on for forecasting and replenishment, such as reorder points and lead times.
2. Develop and document strategic goals and metrics for inventory management that align with the company's broader goals. Options might include measuring how frequently an MoE inventory shortage causes a train to be delayed and the extent to which MoE inventory shortages impact the company's service capacity.
3. Establish a process to regularly assess the costs and benefits of carrying surplus and obsolete inventory to determine which materials to sell or scrap. Based on this assessment, determine what portion, if any, of the $14.4 million of obsolete MoE inventory the company should attempt to recover.
4. Assess the costs and benefits of updating inventory item information in the company's inventory management system. At a minimum, assess the costs and benefits of updating, clarifying, and standardizing item names, descriptions,

units of measure, and accompanying photographs, as well as options for doing so. Based on this assessment, determine what actions, if any, to take.

5. Develop and begin implementing a risk-based plan to secure inventory facilities across the company.
6. Develop and implement a process to consistently and regularly monitor for abnormal inventory use. This should include clearly assigning responsibility for managing this process on an ongoing basis.
7. Develop and implement a process to consistently and effectively apply ordering limits to the inventory system, as appropriate.

## MANAGEMENT COMMENTS AND OIG ANALYSIS

In commenting on a draft of this report, the Executive Vice President, Business Transformation and Chief Financial Officer, as well as the Executive Vice President, Service Delivery & Operations, agreed with our recommendations and detailed actions the company plans to take to address them, which we summarize below.

- **Recommendation 1a:** Management agreed with our recommendation to develop and implement a process to ensure that inventory data more accurately and reliably reflect consumption. Management stated that, on a monthly or quarterly basis, the Mechanical department plans to assess the extent to which certain practices distort the consumption data and to take actions to minimize the impacts of those practices. The target completion date is September 30, 2024.

- **Recommendation 1b:** Management agreed with our recommendation to develop and implement a process to regularly and consistently review and update inventory forecasting attributes, such as reorder points and lead times. Management stated that the Procurement and Supply Chain department plans to implement a strategic initiative to identify which inventory items are critical. It also plans to periodically update lead times and reorder points to improve consistency and accuracy. The target completion date is December 31, 2024.

- **Recommendation 2:** Management agreed with our recommendation to develop and document strategic inventory goals and metrics. Management stated that the Mechanical, Procurement and Supply Chain, and Finance departments plan to develop metrics and goals that align inventory management with the company's broader goals. The target completion date is December 31, 2024.

- **Recommendation 3:** Management agreed with our recommendation to establish a process for regularly assessing the costs and benefits of carrying surplus and obsolete inventory. Management stated that the Finance department, with support from the Procurement and Supply Chain department, plans to develop a cost model and form a committee of end users to determine which materials to dispose of. The target completion date is December 31, 2024.

- **Recommendation 4:** Management agreed with our recommendation to assess the costs and benefits of updating inventory item information. Management stated that, in coordination with the Digital Technology and Innovation department, it plans to award a project to a third party to evaluate the costs and benefits of updating, clarifying, and standardizing item names, descriptions, units of measure, and accompanying photographs. The target completion date is January 31, 2025.

- **Recommendation 5:** Management agreed with our recommendation to develop and begin implementing a risk-based plan to secure inventory facilities. Management stated that the Mechanical, Procurement and Supply Chain, and Corporate Security departments plan to collaborate to develop and implement a risk-based plan to secure inventory facilities across the company and submit funding requests for select facilities by September 30, 2024. Management also stated that it plans to deploy enhanced physical access controls, with a target completion date of March 30, 2025. Further, Management stated that it is currently working on security projects at 7 of the 10 facilities we visited. The target completion date for these activities is September 30, 2026.

- **Recommendation 6:** Management agreed with our recommendation to develop and implement a process to consistently and regularly monitor for abnormal inventory use. Management stated that the Mechanical department plans to implement a team responsible for this function and initiate meetings to discuss usage for each facility to improve monitoring. The target completion date is September 30, 2024.

- **Recommendation 7:** Management agreed with our recommendation to develop and implement a process to consistently and effectively apply ordering limits, as appropriate. Management stated that the Mechanical department currently has some limits in place and plans to develop and implement processes to enforce additional limits. It also plans to improve the effectiveness of its ordering

practices through periodic reporting at facility planning meetings. The target completion date is September 30, 2024.

For management's complete response, see Appendix E. Management also provided technical comments that we have incorporated in this report as appropriate.

# APPENDIX A

## Objective, Scope, and Methodology

This report provides the results of our audit of Amtrak's MoE inventory management. Our objective was to evaluate the effectiveness of the company's processes and controls for managing and safeguarding its inventory. Our scope was the company's processes and controls for MoE inventory at 21 storage facilities across the country.[45] Our scope included company inventory data over a five-year period, from CY 2018 through CY 2022. We performed our audit work from September 2022 to February 2024 in Bear, Delaware; Beech Grove, Indiana; Chicago, Illinois; Indianapolis, Indiana; New Castle, Delaware; New Orleans, Louisiana; Oakland, California; Seattle, Washington; Washington, D.C.; and Wilmington, Delaware.

To assess the company's processes for managing and safeguarding MoE inventory, we conducted site visits to 10 storage facilities.[46] During those visits, we interviewed employees from the Mechanical department and the Material Control group in the Procurement and Supply Chain department.

We determined which facilities to visit, which employees to interview, and what information to obtain during the visits based on the following:

**Facility selection methodology**. To identify the MoE inventory storage facilities to visit, we considered several factors, including the following:

- type of facility—whether it was a terminal maintenance facility, back shop, or distribution center
- size of stored MoE inventory, which ranged from $1.2 million to $42.5 million
- geographic diversity
- ownership—whether the inventory was company-owned or whether the company was managing it on behalf of other transportation agencies or state partners

[45] We excluded other facilities that held minimal MoE inventory.
[46] During our initial (survey) phase we visited four facilities in Beech Grove, Indiana; Indianapolis, Indiana; New Orleans, Louisiana; and Seattle, Washington. During our latter (analysis) phase, we visited an additional six facilities in Bear, Delaware; Chicago, Illinois; New Castle, Delaware; Oakland, California; and Wilmington, Delaware.

Based on a combination of these factors, we selected and visited a diverse array of 10 facilities—eight of which are located within Mechanical shops and two of which are distribution centers—holding most of the company's MoE inventory (83 percent).

**Semi-structured interview tool**. We then developed a semi-structured tool to use in interviewing employees from the Mechanical department and Material Control group. This semi-structured tool allowed us to collect consistent information and illustrative examples of what employees thought worked well and what could be improved with inventory management and safeguarding. We used the information we learned from our initial (survey) site visits to revise our tool during our latter (analysis) phase to use in interviewing employees from the Mechanical department and Material Control management. We then analyzed all of the interview responses to identify common issues across locations, determine what was working well, and identify any challenges and their causes and effects. For a list of interview questions, see Appendix B.

We did not use the semi-structured tool to interview Material Control management employees during our survey phase or when we interviewed Mechanical department management to obtain a broader level perspective from more senior officials at the facilities.

**Interviewee selection methodology**. To identify and select the most knowledgeable individuals to interview, we reviewed lists of employee availability and craft that management provided, as well as company data on inventory items each facility received and returned over a one-year period. We combined these data to select Mechanical and Material Control employees who were available during our visits and received and returned the highest value of MoE inventory. Additionally, we interviewed other Mechanical employees with positions related to MoE inventory management whose roles did not necessarily involve ordering inventory. We also selected Mechanical and Material Control management who were available during our visit.

For a list of the facilities and employees we interviewed, see Table 1.

***Table 1. Inventory Storage Facilities Visited and Employees Interviewed***

| Facility Name | Type of Facility | Mechanical Employees | Mechanical Management | Material Control Employees | Material Control Management | Total |
|---|---|---|---|---|---|---|
| New Orleans | Terminal | 11 | 1 | 3 | 2 | 17 |
| Seattle | Terminal | 18 | 2 | 5[a] | 1 | 26 |
| Beech Grove | Back Shop | 20 | 2 | 9[a] | 1 | 32 |
| Indianapolis | Distribution Center | N/A | N/A | 4 | 2[a] | 6 |
| **Survey Phase Total** | | **49** | **5** | **21** | **6** | **81** |
| Oakland | Terminal | 10 | 2 | 0 | 3[b] | 15 |
| Chicago | Terminal | 9 | 5 | 0 | 3[a] | 17 |
| Brighton Park | Terminal | 6 | 0[c] | 0 | 0[c] | 6 |
| Wilmington | Back Shop | 7 | 2 | 0 | 1 | 10 |
| Boulden | Distribution Center | N/A | N/A | 0 | 1 | 1 |
| Bear | Back Shop | 11 | 2 | 0 | 2[a] | 15 |
| **Analysis Phase Total** | | **43** | **11** | **0** | **10** | **64** |
| **Total** | | **92** | **16** | **21** | **16** | **145** |

*Source:* OIG analysis of company data
*Notes:* [a]In the survey phase, we considered the Material Control supervisors and analysts we interviewed as employees when we interviewed them using the semi-structured tool, and we considered them management when we did not use the semi-structured tool. In the analysis phase, we used the same interview tool for the Material Control supervisors and analysts that we used for management; therefore, we considered these individuals to be management.
[b]Two Material Control employees we did not select joined this interview. We included them as management because we used the same interview tool for them as the management official.
[c]We spoke with managers who oversee both Chicago and Brighton Park. For this table, we counted them in the Chicago row.

**Physical observations**. In addition to conducting interviews, during our site visits we walked through each facility to observe and document various steps of the inventory management process, including the systems each facility used for ordering, maintaining, and issuing inventory items. We also observed the storage locations at each facility, including controls in place to safeguard stored inventory.

To establish criteria and understand the company's controls for managing and safeguarding MoE inventory, we reviewed company policies, procedures, and controls for inventory management, as well as internal control guidance from private- and

public-sector organizations.[47] We also mapped the inventory ordering and receiving process in a flowchart, which can be found in Appendix D.

To evaluate the company's processes for managing MoE inventory, we also analyzed the company's MoE inventory data and related reports, including data on inventory movements, expedited shipping costs, supply planning metrics, and adjustments to its routine counts of inventory.

To further inform our understanding and obtain perspectives from relevant internal stakeholders on the challenges with managing and safeguarding MoE inventory, we interviewed senior company officials in the following departments: Procurement and Supply Chain, Mechanical, Finance, Digital Technology and Innovation, and Corporate Security.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Internal Controls

We reviewed the internal controls the company had in place for managing and safeguarding its MoE inventory. We assessed the internal control components and underlying principles and determined that the following three of the five internal control areas were significant to our audit objective:

- **Risk Assessment.** Management should define objectives clearly to enable identification of risks and identify, analyze, and respond to risks to defined objectives and significant changes that could impact the internal control system. The company should consider the potential for fraud when identifying, analyzing, and responding to risks.

[47] Committee of Sponsoring Organizations of the Treadway Commission, *Internal Control-Integrated Framework*, May 2013; Government Accountability Office, *Standards for Internal Control in the Federal Government* (GAO-14-704G), September 2014; and Council of Supply Chain Management Professionals, *The Definitive Guides to Inventory Management and Warehousing*, April 2014 and December 2013.

- **Control Activities.** Management should design control activities and the entity's information system to achieve objectives and respond to risks. The company should implement control activities through policy.

- **Information and Communication.** Management should use quality information to achieve the entity's objectives and should communicate the necessary quality information internally.

We developed audit work to ensure that we assessed each of these control areas by reviewing company policies, interviewing knowledgeable officials, and analyzing company data. Because we focused our review on these internal control components and underlying principles, it may not have disclosed all of the internal control deficiencies that may have existed at the time of this audit.

## Computer-processed Data

To accomplish our objective, we relied on computer-processed data from three sources:

- SAP data showing inventory movements and adjustments made to inventory levels as a result of routine counts of inventory
- the Mechanical department's WMS data showing the impacts of inventory shortages on the number of units available for revenue service
- expedited shipping data showing costs of shipping inventory, which is stored in the database maintained by a third party

We assessed the reliability of these data by reviewing a prior report, interviewing the company officials responsible for the underlying data, and checking the underlying data for reasonableness. We further assessed SAP data by performing logic checks between data fields and comparing SAP inventory movement data to the company's year-end inventory balance sheet. Based on our observations and tests, we determined that the data were sufficiently reliable to meet our objective.

## Prior Reports

In conducting our analysis, we reviewed and used information from the following OIG reports and investigative summaries:

**Reports**

- *AMTRAK: Insights on Fraud Risks as the Company Expands Its Mission* (OIG-SP-2023-007), May 15, 2023
- *Acquisition and Procurement: Improved Management and Oversight of GE Diesel Locomotive Service Contract Could Lead to Savings* (OIG-A-2017-005), February 3, 2017
- *Acquisition and Procurement: Opportunities Exist to Improve Management of Technical Support Services Contracts* (OIG-A-2016-013), September 30, 2016

**Investigative Summaries**

- *Theft of Inventory,* OIG-I-2022-512, February 2, 2022
- *Theft of Inventory,* OIG-I-2022-510, January 27, 2022
- *Theft of Inventory,* OIG-I-2022-507, December 17, 2021
- *Theft of Inventory*, OIG-I-2021-519, March 11, 2021
- *Theft of Inventory,* IL-18-0009-O, July 20, 2020
- *Theft of Inventory*, OIG-I-2020-520, April 17, 2020
- *Theft of Inventory,* OIG-I-2020-502, October 9, 2019
- *Theft of Inventory*, OIG-I-2017-509, January 13, 2017
- *Theft of Inventory*, OIG-I-2017-503, October 11, 2016

# APPENDIX B

## Semi-structured Interview Tools

We used semi-structured tools to interview Mechanical employees and Material Control employees and management. The semi-structured approach allowed us to gather consistent information across a broad range of issues. It also allowed us to obtain quantitative responses in closed-ended questions and to probe for details, causes, and robust examples in open-ended questions.

We pre-tested the interview questions and response scales to assess the flow, timing, terminology, and content of the questions. We then refined our semi-structured interview questions to ensure that they aligned with the audit objective, incorporated an optimal mix of open-ended and close-ended questions, and used clear language. We asked different sets of questions for Mechanical employees and Material Control employees and management and adjusted the questions between the survey and analysis phases.

The interview questions are listed below. Each question is presented as it was asked; however, we removed specific vendor names. We have included each tool that we used throughout the audit for both Mechanical employees and Material Control employees and management.

**Survey Phase Questions for Material Control Employees**

1. Please briefly describe your current role and responsibilities as they relate to managing and safeguarding MoE inventory.
2. How long have you worked in the Material Control department at Amtrak?

We will start with **receiving and storing MoE inventory**.

3. Our understanding is that, to receive and put away inventory, Materials Management will accept the material; ensure the purchase order, invoice and receipt match; enter the information into SAP; and place the material in a designated area of the warehouse. Is this your understanding?

Based on this understanding…

4. What, if anything, do you think is working well with the MoE inventory receipt and storage processes?

5. What, if anything, is not working well with the processes?
6. [If not discussed] What is/is not working well with:
    a. the amount of physical space available to store items?
    b. the ways inventory is physically secured against loss or theft?
    c. [If applicable at site] the ways state supported inventory is received and stored separately from Amtrak-owned inventory?
    d. cycle counts and physical inventories?
        i. When conducting cycle counts, do you count boxes of items, or individual items?
7. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?
8. Have you received training on how to receive and put away MoE inventory items? This could include training on systems or software used, how the warehouse is organized, or how to ensure the right amount of material was delivered.
    a. What suggestions, if any, do you have for how existing training could be improved or for new training related to receiving and putting away inventory that you believe might help you perform your job better?
9. What is the process for returning items that are damaged or faulty?
10. What if any, documented procedures exist for receiving and storing inventory?

We will now ask you questions about **picking and issuing MoE inventory**.

11. We understand that, to pick and issue inventory, clerks will use the information provided in SAP to find the inventory item, give the material to a representative of the Mechanical group, and sign and file a pick ticket. Is this your understanding?

Given this…

12. What, if anything, do you think is working well with the MoE inventory picking and issuing process?

13. What, if anything, is not working well with the process?

14. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

15. Have you received training on how to pick and issue MoE inventory? This could include training on the SAP Mobile Solutions app or knowing what to do if you cannot find an item.
    a. What suggestions, if any, do you have for how existing training could be improved or for new training that you believe might help you perform your job better?

16. What, if any, documented procedures exist for picking and issuing inventory?

17. Please describe the circumstances under which you can issue an MoE item without a 2070 form or a reservation in SAP.

18. After you fill out a 2070 form, what do you do with it?
    a. [If not mentioned] How often do you input this information into SAP?
        ii. [If not stated; SKIP if answered already] Daily? Weekly? Monthly?

19. What, if anything, would you consider abnormal or unreasonable inventory usage or activity?
    a. Who, if anyone, is responsible for monitoring for abnormal or unreasonable activity or usage of MoE material?
    b. How often, if at all, have you seen abnormal activity?
    c. [If responsible] How do you monitor for this?
    d. [If responsible] What documentation, if any, do you use to monitor?
    e. [If responsible] If you identify abnormal or unreasonable activity, what steps would you take?
    f. [If not responsible] If you see abnormal activity, how, if at all, would you report it?

20. Are you involved with providing any spare parts from [outside vendors] inventory to Amtrak employees?
    a. [If yes] Please describe how this process works, including how you know when to provide a [outside vendors] part over an Amtrak part.
    b. [If yes] What challenges, if any, do you have with this process?

21. In general, what do you think is and is not working well with the process to return MoE items into inventory?

22. Are there any other aspects related to managing and safeguarding MoE inventory that you have concerns about, but we have not discussed?

23. In your opinion, are there any weaknesses in Amtrak's inventory system that you think could increase the risk of potential theft or fraud?
    a. [If not discussed] Which inventory items, if any, are most vulnerable to theft or loss?
        i. Why are they most vulnerable?

24. What improvements could Amtrak implement that would make the process to manage and safeguard inventory and materials better?

25. [If not discussed] Over the past 2-3 years, have there been any enhancements that have helped you better perform your job, for example, changes to technology or processes related to the topics we have discussed?
    a. [If yes] Can you describe those enhancements and how they have helped you?
    b. What challenges have you had with any new enhancements?

26. What challenges, if any, exist between Materials Management and other departments?

**Survey Phase Questions for Mechanical Employees**

1. Please briefly describe your current role and responsibilities as they relate to using and safeguarding MoE inventory.

2. [If not mentioned] How long have you been in your current position?

We will start with **placing an order for MoE materials**.

3. Our understanding is that, to place an order, you enter the order information to WMS, which Materials Management then receives and fulfils. In some instances, you can go to the counter and use a paper form to place an order. Is this your understanding?

Based on this understanding…

4. What, if anything, do you think is working well with the current process to place an order for MoE materials?

5. What, if anything, is not working well with the current process?

6. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

7. Have you received training on how to place orders for MoE materials? This could include any training how to use WMS, or how to know when a certain part is covered by warranty or Technical Support and Spares Supply Agreement contract.
    a. What suggestions, if any, do you have for how existing training could be improved or for new training related to placing orders for MoE materials that you believe might help you perform your job better?

8. What situations, if any, would you use ways other than WMS to place an MoE order, such as paper forms?
    a. How often, if at all, does this happen?
        i. [If not stated; SKIP if answered already] Daily? Weekly? Monthly?
9. What, if any, documented procedures exist for placing an order?

10. Please describe any approval processes you must go through to order MoE materials.

11. [Foreman only] What limits, if any, exist on how many of an MoE item you can order, or how often you can order it?

12. [Foreman only] What, if anything, would you consider abnormal or unreasonable inventory usage or activity?
    a. Who, if anyone, is responsible for monitoring for abnormal or unreasonable inventory usage?
    b. [If responsible] How do you monitor for this?
        i. What documentation, if any, do you use to monitor?
        ii. [If not discussed] What reports, if any, are used to monitor for unreasonable or abnormal activity at this facility?
    c. If you identify abnormal or unreasonable usage, what steps do you take?

13. Please describe how you order and receive tools, including larger tools, such as a chainsaw or impact wrench, as well as smaller hand tools.
    a. [If not discussed] Who, if anyone, approves orders for tools?
    b. What is working well with this process?
    c. What is not working well with this process?

14. [Foreman only] What, if any, documented procedures exist for managing tools?
    a. How often, if at all, do you assess what tools are required by mechanics?
    b. What reports, if any, do you use to monitor the tool inventory?

15. What is your role, if any, in completing [outside vendor] claims?
    a. [If involved in process] Please describe the [outside vendor] claims process.
    b. How do you know when to use Amtrak-owned parts versus [outside vendor] parts?

16. [If applicable] Please describe the process for ordering parts from [outside vendor].
    a. What is working well with this process?
    b. What is not working well with this process?

Next, we will ask you questions about how you **receive an order and maintain MoE material in your possession**.

17. We understand that, to receive an order, you would go to the Materials Management counter and ask for the reservation. Is this your understanding?

Given this…

18. In general, what, if anything, do you think is working well with how you currently receive MoE inventory from Materials Management?

19. What do you do when MoE parts or materials are not readily available when you need them?
    a. [If wait times are long] Can you provide an example of when an item had a longer than expected wait time, and how it impacted your work?
        i. How often does this occur?
            1. [If not stated; SKIP if answered already] Daily? Weekly? Monthly?
            2. How long, if at all, does this delay your work?
            3. How long, if at all, does this delay trains?
            4. What other impacts, if any, do longer than expected wait times have on you and the company?
            5. Why do you believe these long wait times occur?
    b. [Other than those mentioned above] What methods, if any, do you or your coworkers use to ensure projects aren't delayed in these situations?
        i. How often, if at all, do you use these methods?
            1. [If not stated; SKIP if answered already] Daily? Weekly? Monthly?

20. We talked about wait times, what else, if anything, is not working well with the current way you receive MoE orders?

21. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

22. [Foreman only] What, if any, procedures or guidance dictate how materials should be managed once they transfer from Material Management over to the Mechanical department?

Now, we will ask you questions about **returning MoE material**.

23. When you have extra parts or materials that you don't end up using, what do you do with them?

    a. What is the process for returning items that are damaged or faulty, if different?

24. What, if anything, do you think is working well with the current process to return unused parts or materials?

25. What, if anything, is not working well with the current process?

26. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

27. Have you received training on procedures for returning MoE materials?

    a. What suggestions, if any, do you have for how existing training could be improved or for new training related to returning MoE materials that you believe might help you perform your job better?

28. [Foreman only] What, if any, documented procedures exist for returning items?

29. Are there any other aspects related to managing and safeguarding MoE inventory or materials that you have concerns about, but we have not discussed?

30. In your opinion, are there any weaknesses in Amtrak's inventory system that you think could increase the risk of potential theft or fraud?

31. What improvements could Amtrak implement that would make the process to manage and safeguard inventory and materials better?

32. [If not discussed] Over the past 2-3 years, have there been any enhancements that have helped you better perform your job, for example, changes to technology or processes related to the topics we have discussed?

    a. [If yes] Can you describe those enhancements and how they have helped you?

    b. What challenges have you had with any new enhancements?

**Analysis Phase Questions for Material Control Management**

1. Please briefly describe your current role and responsibilities as they relate to using and safeguarding MoE inventory.

2. We understand that MoE and [*fill in the blank*] inventory is stored at this location. Is there any other type of inventory stored here?

    a. For each of type of inventory stored here that is not owned by Amtrak, (State Supported other mentioned?) can you describe who manages each type and how, if at all, the management of that inventory differs from Amtrak's processes?

3. Is there unsecured MoE inventory or inventory that cannot practically be stored in the warehouse, such as wheelsets?

4. What is/is not working well with:

    e. the amount of physical space available to store items?

    f. the ways inventory is physically secured against loss or theft?

    g. cycle counts and physical inventories?

    h. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

5. Thinking <u>just</u> over the past year, what are the most common reasons that needed parts and materials are not in stock at the facility?

6. For this next question, please refer to scale A. To what extent do you believe unavailable parts and materials affect morale at this facility (to a great extent, to a moderate extent, a little extent, or to no extent)?

7. What other impacts, if any, does unavailable parts and materials have on you?

    a. What other impacts, if any does unavailable parts and materials have on the company?

8. What, if anything, do you think is or is not working well with the process of issuing orders to Mechanical?

a. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

9. What, if anything, do you think is or is not working well with the way items are returned into inventory?

    a. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

10. In your opinion, are there any weaknesses in Amtrak's inventory system that could increase the risk of theft or loss?

    b. Which inventory items, if any, are most vulnerable to theft or loss?

    c. Why are they most vulnerable?

11. What, if anything, would you consider abnormal or unreasonable inventory usage or activity?

    a. Who, if anyone, is responsible for monitoring for abnormal or unreasonable activity or usage of MoE material?

    b. How often, if at all, have you seen abnormal activity?

12. Are there any other aspects related to managing and safeguarding MoE inventory that you have concerns about, but we have not discussed?

13. What improvements could Amtrak implement that would make the process to manage and safeguard inventory and materials better?

**Analysis Phase Questions for Mechanical Employees**

1. Please briefly describe your current role and responsibilities as they relate to using and safeguarding MoE inventory.

We will start with **placing an order for materials.**

2. What, if anything, do you think is **not working well** with the process to place an order for MoE materials?
    a. [For each of the things mentioned that are not working well; SKIP if nothing mentioned] Why do you think this is happening? How, if at all, does this impact you? How, if at all, does this impact the company? Can you provide an example?

3. [If not mentioned] For this next question, please refer to scale A. To what extent are the inventory catalogs sufficient in helping you find the parts and materials you need to order (to a great extent, to a moderate extent, a little extent, or to no extent)? [If additional explanation needed] This could include search functions in WMS, Link 1, or other Materials Search.
    a. During the past year, has searching for parts and materials delayed your work?
    b. [If there are delays] On average, about how many hours per week, has searching for parts and materials delayed your work?

4. What limits, if any, exist on how many of an MoE item someone can order, or how often they can order it?
    a. [Foreman only] Who, if anyone, is responsible for setting and reassessing limits?

5. Before we move on from this topic, what, if anything, do you think is working **well** with the current process to place an order for materials?

Next, we are going to ask about the **availability of inventory**.

6. Can you provide an example of when an item had a longer than expected wait time, and how it impacted your work?
    a. How often does this occur?

7. We're going to ask you a similar question but putting a time frame around it. Please refer to scale B. Thinking just over the past year, how often are parts or materials not available (not in stock) at the facility when you need them? (daily, weekly, monthly, other, or never)?

8. If parts or materials are not available, what steps, if any, would you take in WMS? For example, would you order it anyway or are there other steps you take in the system?

9. What do you do when MoE parts or materials are not readily available when you need them?
    a. How often, if at all, do you use these methods?
        i. [If not stated; SKIP if answered already] Refer to scale B. Daily? Weekly? Monthly?
        ii. Thinking just over the past year, how often have you used these methods (daily, weekly, monthly, other)?

10. For this question, please refer to scale B. How often, if at all, are units (cars or locomotives) delayed leaving this facility because the facility doesn't have the necessary parts or materials to service them (daily, weekly, monthly, other, or never)?
    a. Just thinking over the past year, how often has this happened?
    b. Can you provide an example from the past year when a unit was delayed in leaving the facility due to parts or materials not being available?
    c. For this question, please refer to scale A. To what extent does unavailable parts and materials affect morale at this facility (to a great extent, to a moderate extent, a little extent, or to no extent)?

11. What other impacts, if any, does unavailable inventory have on you or the company?

12. When you have extra parts or materials that you don't end up using, what do you do with them?

[General Foremen only] Next, we are going to ask about **inventory planning.**

13. Are you involved in planning for the facility's parts and material needs, either formally or informally?

14. [If involved] Please describe how the facility identifies its parts and material needs.

    a. How is this information communicated to the Supply Chain group?

15. [If involved] What is not working well with the inventory planning process?

16. [If involved] What is working well with the inventory planning process?

17. [If involved] What improvements, if any, could Amtrak implement that would make the planning process better?

18. In your opinion, are there any weaknesses in Amtrak's inventory system that could increase the risk of theft or fraud?

19. [Foremen only] What, if anything, would you consider abnormal or unreasonable inventory usage or activity?

20. Who, if anyone, is responsible for monitoring for abnormal or unreasonable inventory usage?

    a. [If responsible] How do you monitor for abnormal or unreasonable inventory usage?

21. Are there any other aspects related to managing and safeguarding MoE inventory or materials that you have concerns about, but we have not discussed?

22. What improvements could Amtrak implement that would make the process to manage and safeguard inventory and materials better?

# APPENDIX C

## Fact Sheets on Inventory Storage Facilities Visited

### BEAR

| | |
|---|---|
| Location: | Bear, Delaware |
| Facility Type: | Back Shop |
| Inventory Value: | $20,683,595 |
| Types of Inventory Stored: | Amtrak |
| Total Procurement and Supply Chain and Mechanical Department Employees | 335 |
| Number of Employees Interviewed: | 15 |

### BEECH GROVE

| | |
|---|---|
| Location: | Beech Grove, Indiana |
| Facility Type: | Back Shop |
| Inventory Value: | $16,386,143 |
| Types of Inventory Stored: | Amtrak, State Partner |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 504 |
| Number of Employees Interviewed: | 32 |

### BOULDEN

| | |
|---|---|
| Location: | New Castle, Delaware |
| Facility Type: | Distribution Center |
| Inventory Value: | $ 35,810,092 |
| Types of Inventory Stored: | Amtrak |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 11 |
| Number of Employees Interviewed: | 1 |

*Source:* OIG analysis of company data as of December 2022

## BRIGHTON PARK

| | |
|---|---|
| Location: | Chicago, Illinois |
| Facility Type: | Terminal Maintenance Facility |
| Inventory Value: | $1,084,598 |
| Types of Inventory Stored: | Amtrak, State Partners |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 85 |
| Number of Employees Interviewed: | 6 |

## CHICAGO

| | |
|---|---|
| Location: | Chicago, Illinois |
| Facility Type: | Terminal Maintenance Facility |
| Inventory Value: | $30,437,626 |
| Types of Inventory Stored: | Amtrak, State Partners |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 448 |
| Number of Employees Interviewed: | 17 |

## INDIANAPOLIS

| | |
|---|---|
| Location: | Indianapolis, Indiana |
| Facility Type: | Distribution Center |
| Inventory Value: | $46,361,467 |
| Types of Inventory Stored: | Amtrak |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 31 |
| Number of Employees Interviewed: | 6 |

*Source:* OIG analysis of company data as of December 2022

## NEW ORLEANS

| | |
|---|---|
| Location: | New Orleans, Louisiana |
| Facility Type: | Terminal Maintenance Facility |
| Inventory Value: | $1,312,365 |
| Types of Inventory Stored: | Amtrak |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 122 |
| Number of Employees Interviewed: | 17 |

## OAKLAND

| | |
|---|---|
| Location: | Oakland, California |
| Facility Type: | Terminal Maintenance Facility |
| Inventory Value: | $15,723,470 |
| Types of Inventory Stored: | Amtrak, State Partners |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 148 |
| Number of Employees Interviewed: | 15 |

## SEATTLE

| | |
|---|---|
| Location: | Seattle, Washington |
| Facility Type: | Terminal Maintenance Facility |
| Inventory Value: | $13,203,183 |
| Types of Inventory Stored: | Amtrak, State Partners, Other Transportation Agencies |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 147 |
| Number of Employees Interviewed: | 26 |

*Source:* OIG analysis of company data as of December 2022

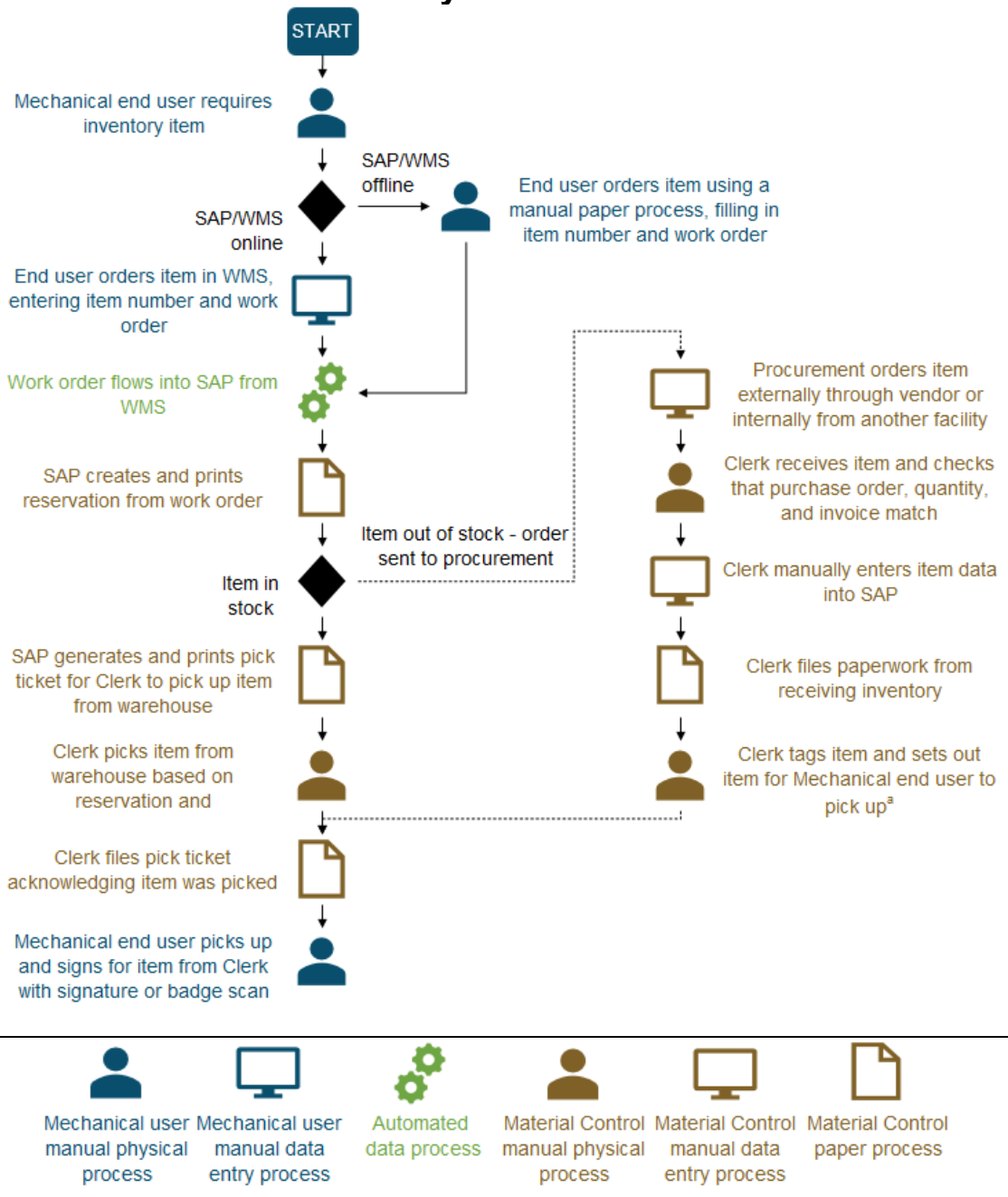
## WILMINGTON

| | |
|---|---|
| Location: | Wilmington, Delaware |
| Facility Type: | Back Shop |
| Inventory Value: | $5,422,788 |
| Types of Inventory Stored: | Amtrak |
| Total Procurement and Supply Chain and Mechanical Department Employees: | 228 |
| Number of Employees Interviewed: | 10 |

*Source:* OIG analysis of company data as of December 2022

# APPENDIX D

## MoE Inventory Process Flowchart




*Source:* OIG analysis of company documents and interviews with company officials
[a]If an item is ordered for future use and not against a reservation, it is stored in the warehouse and subject to cycle counts.

# APPENDIX E

## Management Comments

**NATIONAL RAILROAD PASSENGER CORPORATION**

Memo

AMTRAK

Date: February 13, 2024

From: Tracie Winbigler, EVP CFO

Gerhard M. Williams III, EVP Service & Delivery Operations (SD&O)

To: Jim Morrison, Assistant Inspector General, Audits

Departments: Finance and Service & Delivery Ops

Cc: Stephen Gardner, CEO
Roger Harris, President
Eleanor Acheson, EVP General Counsel
Kuvesh Ayer, VP CPO & Supply Chain
Eric Chapman, Dir Asset Management
John Carroll, Sr Dir Business Services
Sam Dotson, VP Corporate Security & Chief of Police
Robert Grasty, EVP CHRO
Eliot Hamlisch, EVP Marketing & CCO
Ian Hinke, AVP Supply Chain Management
George Hull, VP Chief Mechanical Officer
Laura Mason, EVP Capital Delivery
Dennis Newman, EVP Strategy & Planning
Steven Predmore, EVP CSO
Christian Zacariassen, EVP CIO

Subject: Management Response to **ASSET MANAGEMENT***: Company Has Opportunities to More Effectively Manage and Safeguard Maintenance-of-Equipment Inventory* (Draft Audit Report for Project No. 013-2022).

This memorandum provides Amtrak's response to the draft interim audit report titled, "*Company Has Opportunities to More Effectively Manage and Safeguard Maintenance-of-Equipment Inventory*". Management agrees with all the noted OIG recommendations below and appreciates the opportunity to provide a response.

To better balance, order, and safeguard company inventory, the OIG recommends that the Executive Vice President, Business Transformation and Chief Financial Officer in coordination with the Executive Vice President, Service Delivery & Operations, take the following actions:

**NATIONAL RAILROAD PASSENGER CORPORATION**

**Recommendation #1:**

Develop and implement:

a. A process to ensure that the data used for MoE inventory demand, forecasting, and replenishment more accurately and reliably reflect consumption. At a minimum, this should include better tracking of employee practices that distort consumption data, such as enforcing the requirement to track the use of parts cannibalized from other units.

b. A process to regularly and consistently review and update inventory attributes that the company relies on for forecasting and replenishment, such as reorder points and lead times.

Management Response/*Action Plan*:

1a. Mechanical team shall assess the extent to which we have distortion of consumption data on MOE parts through the following:

1. Examine Repair Work Orders (Corrective and Inspection Follow-On Corrective Work Orders - unplanned work) across all facilities monthly that have a repair action identified as either installed, replaced, or cannibalized and zero-dollar purchase cost to better determine the potential impact. Target Completion Date: September 30, 2024

2. Review results with higher level of supervision at each facility to ensure and enforce the ordering of all parts for corrective repair whether cannibalized parts or locker unused parts. In parallel, Mech leaders will seek feedback from site during this period to understand if the process to place orders for cannibalized parts is clear and easy to use for front line workers. Target Completion Date: September 30, 2024

3. Examine extent of parts over-ordering - Mechanical or over-issuing – Material Control with no associated part(s) return. The results will help to identify potential hoarding and presented to facility supervision to do a full examination without prior notice to end users. The parts found will be identified and tallied to determine % of total inventory $ they represent, then returned to material control.
Target Completion Date: September 30, 2024

Depending on % impact, management would pursue different actions to minimize hoarding by any employees going forwarding.

All the above actions will be ongoing monthly and/or quarterly.

1b. Procurement and Supply Chain will take the following actions:

1. For FY24, Procurement is implementing a strategic initiative to proactively quote inventory items tagged as critical and with no usage within the last 12 months. The process requires Procurement personnel to contact the suppliers to first confirm the material availability. If the material is available, obtain the current cost, lead time, minimum order quantity/lot size, and other applicable purchasing information. Information different from what is loaded within our ERP system will be submitted to Materials Planning for supplier master updates. If the material is no longer available for purchase, obtain recommended alternatives and begin the second sourcing effort with Amtrak Mechanical or Engineering. Procurement has also included in the standard material expedite process the requirement for Procurement personnel to provide updated lead time to Materials Planning when new lead time is provided by the suppliers during the expedite process. Both initiatives are now in place with ongoing training being provided to responsible Procurement personnel. Target Completion Date: September 30, 2024.

2. Supply Chain management will utilize SAP Integrated Business Planning module to update lead times and reorder points on a periodic basis interval for increased consistency and accuracy. Target Completion Date: December 31, 2024

*Responsible Amtrak Official(s)*:
Eric Chapman, Dir Asset Management
Shirley Craun, AVP Procurement Operations
Ian Hinke, AVP Supply Chain Management
Daniel P. Ruppert, AVP DCMO Fleet Programs

*Target Completion Date*: 1a. – September 30, 2024
1b. – December 31, 2024

**Recommendation #2:**

Develop and document strategic goals and metrics for inventory management that align with the company's broader goals. Options might include measuring how frequently an MoE inventory shortage causes a train to be delayed and the extent to which MoE inventory shortages impact the company's service capacity.

Management Response/*Action Plan*:

Mechanical, Network Operations, and Supply Chain Management teams along with Finance will determine metrics and goals that will provide alignment for inventory management with company's broader goals.

**NATIONAL RAILROAD PASSENGER CORPORATION**

*Responsible Amtrak Official(s):*
Tony Flynn, AVP Network Operations
Eric Chapman, Dir Asset Management
Ian Hinke, AVP Supply Chain Management
Mark Dutmers, Sr. Dir Financial Planning & Analysis

*Target Completion Date:* December 31, 2024

**Recommendation #3:**

Establish a process to regularly assess the costs and benefits of carrying surplus and obsolete inventory to determine which materials to sell or scrap. Based on this assessment, determine what portion, if any, of the $14.4 million of obsolete MoE inventory the company should attempt to recover.

Management Response/*Action Plan:*

Finance with support from Supply Chain Management team will develop an inventory carrying cost model to reflect these costs and provide periodic management updates to SLT for their awareness. In addition, Accounting shall highlight aging inventory and facilitate joint discussion by forming an Inventory Committee with end user departments and Supply Chain to discuss what SKUs should be disposed of to reduce ongoing carrying costs for slow moving surplus, obsolete parts, and long held protect stocks.

*Responsible Amtrak Official(s):*
Michele Millsaps, Asst. Controller
James Cute, Dir Material Accounting
Mark Dutmers, Sr Dir Financial Planning & Analysis
Ian Hinke, AVP Supply Chain Management

*Target Completion Date:* December 31, 2024

**Recommendation #4:**

Assess the costs and benefits of updating inventory item information in the company's inventory management system. At a minimum, assess the costs and benefits of updating, clarifying, and standardizing item names, descriptions, units of measure, and accompanying photographs, as well as options for doing so. Based on this assessment, determine what actions, if any, to take.

Management Response/*Action Plan:*

Mechanical, Digital Technology (DT), and Supply Chain Management teams with support of Procurement for any 3rd party assessments will evaluate the costs and benefits of updating, clarifying, and standardizing item names, descriptions, units of measure, and accompanying photographs, as well as other options for doing so. This information assessment will also be provided to future Maximo 7.6 and S4 Hana system team to see if some gaps can be corrected in that solution going forward. Date to complete by: Mechanical working with

DT, Materials Management, and Procurement shall complete RFP and award project subject to budget or funding by January 31, 2025.

Based on this assessment, determine what further actions, if any, to take.

*Responsible Amtrak Official(s):*
Tapas Bose, Sr Dir DT Procurement Business Systems
John Constantine, Dir DT Sys Design & Dev
Ian Hinke, AVP Supply Chain Management
Eric Chapman, Dir Asset Management
Daniel P. Ruppert, AVP DCMO Fleet Programs

*Target Completion Date:* January 31, 2025

**Recommendation #5:**

Develop and begin implementing a risk-based plan to secure inventory facilities across the company.

Management Response/*Action Plan:*

Management will begin developing and implementing a risk-based plan to secure inventory facilities across the company. Amtrak Mechanical and Materials Management and Corporate Security (CS) will work collaboratively to assess specific security risk at each location then develop an agreed upon prioritized, ranked list of facilities. Amtrak will then work together to submit funding for the development and implementation of security designs for ranked facilities in the FY25 AOP-and out years. Targeted completion date for submission into FY25 AOP is September 30, 2024.

Amtrak Corporate Security is currently working on security projects at seven of the ten visited sites. These projects range from facility perimeter fencing to video surveillance and access control. Targeted completion date for these projects is September 30, 2026.

In addition to this, CS will work with Mechanical and Materials Management to help adopt and improve a security culture leveraging existing access control systems. Increasing their utilization and deployment. Physical access within Amtrak is currently divided into three categories: public, secure, and restricted. Currently, inventory facilities are defined as secure areas, accessible to all personnel with an active Blue or Red Smart ID credential. For those inventory facilities identified by Amtrak Mechanical and Materials Management as being a higher-risk asset, Corporate Security in support of Materials Management will transition the access strategy from secure to restricted. Restricted areas are not accessible to Smart ID credential holders without prior authorization. As such, restricted areas require both an area owner and delegate with sufficient authority to authorize and revoke physical access. Targeted completion date for this activity is March 30, 2025.

**NATIONAL RAILROAD PASSENGER CORPORATION**

*Responsible Amtrak Official(s):*
John Carroll, Sr Dir Business Services
Antoinette Pressman, Sr Dir DT Safety & Security Systems
Jeremy Gross, Director Engineering
Ian Hinke, AVP Supply Chain Management

*Target Completion Date:* September 30, 2026

**Recommendation #6:**

Develop and implement a process to consistently and regularly monitor for abnormal inventory use. This should include clearly assigning responsibility for managing this process on an ongoing basis.

Management Response/*Action Plan:*

Mechanical will consistently and regularly monitor for abnormal inventory use through:

1) Mechanical will implement a Production Control Team (PCT), reporting to Eric Chapman, that will have the responsibility to monitor and review abnormal inventory use. This includes generating the reports that were discussed in recommendation 1a but will also include reporting and addressing with all mechanical facilities abnormal material use for planned maintenance inspections with planned materials and unplanned corrective work.

2) Additionally, Mechanical in collaboration with Supply Chain Planning team will initiate weekly/bi-weekly ISDP (Integrated Supply Demand Planning) meetings with all major PM facilities with Material Control warehouses to address material demand needs and usage for each facility along with their outlying locations to whom they supply material. We will review these processes to see where we can address gaps, if any, that may cause inconsistencies in the monitoring for abnormal inventory use.

*Responsible Amtrak Official(s):*
Eric Chapman, Dir Asset Management
Daniel P. Ruppert, AVP DCMO Fleet Programs
Mark Dutmers, Sr Dir Financial Planning & Analysis
Ian Hinke, AVP Supply Chain Management

*Target Completion Date:* September 30, 2024

NATIONAL RAILROAD PASSENGER CORPORATION

**Recommendation #7:**
Develop and implement a process to consistently and effectively apply ordering limits to the inventory system, as appropriate.

Management Response/*Action Plan*:

Functionality available to Mechanical, in its current environment, can limit orders in the following manner:

1. Material Orders against the facility (Overhead) are limited by $ dollar amount (implemented).

Mechanical will develop and implement the following processes to strengthen our ability to limit orders:

2. We will develop and implement a process in which Parts Ordering limits can be enforced on each item/part for specific equipment class and/or equipment class/types. This functionality will be applied to single orders but will not limit multiple orders for same part. Additionally various scopes of work require different planned quantities, therefore the part limit enforced would be for the larger planned quantities (i.e., Overhaul). For parts not used for Overhaul we'll use historical order average or other reasonable benchmark from other scopes of work.

3. We will develop and implement a process to address effective ordering practices through periodic reporting at ISDP (Integrated Supply Demand Planning) meetings for back shops and other Mechanical PM facilities.

*Responsible Amtrak Official(s)*:
Eric Chapman, Dir Asset Management
Daniel P. Ruppert, AVP DCMO Fleet Programs
Ian Hinke, AVP Supply Chain Management

*Target Completion Date*: September 30, 2024

# APPENDIX F

## Abbreviations

| | |
|---|---|
| CY | calendar year |
| MoE | Maintenance-of-Equipment |
| OIG | Amtrak Office of Inspector General |
| the company | Amtrak |
| WMS | Work Management System |

# APPENDIX G

## OIG Team Members

J.J. Marzullo, Deputy Assistant Inspector General, Audits

Dorian Herring, Director

Jana Brodsky, Senior Audit Manager

Alejandra Rodriguez, Senior Manager, Data Analytics

Sarah Brandes, Senior Auditor, Lead

Alex Cullen, Senior Auditor, Lead

Drew Woodall, Senior Data Analyst, Data Analytics

Elio Cruz, Auditor

Rosalind Sipple, Auditor

Alison O'Neill, Communications Analyst

Sid Schwartz, Contractor

# OIG MISSION AND CONTACT INFORMATION

## Mission

The Amtrak OIG's mission is to provide independent, objective oversight of Amtrak's programs and operations through audits and investigations focused on recommending improvements to Amtrak's economy, efficiency, and effectiveness; preventing and detecting fraud, waste, and abuse; and providing Congress, Amtrak management, and Amtrak's Board of Directors with timely information about problems and deficiencies relating to Amtrak's programs and operations.

## Obtaining Copies of Reports and Testimony

**Available at our website [www.amtrakoig.gov](http://www.amtrakoig.gov)**

## Reporting Fraud, Waste, and Abuse

**Report suspicious or illegal activities to the OIG Hotline**

**[www.amtrakoig.gov/hotline](http://www.amtrakoig.gov/hotline)**

**or**

**800-468-5469**

## Contact Information

**Jim Morrison**
**Assistant Inspector General, Audits**
Mail: Amtrak OIG
10 G Street NE, 3W-300
Washington, D.C. 20002
Phone: 202-906-4600