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ASSET MANAGEMENT:

Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist

Report No. OIG-E-2013-021 | September 27, 2013





REPORT HIGHLIGHTS

Why We Did This Review

Amtrak is replacing its fleet of 62 electric locomotives—its first major introduction of new equipment in over a decade. Amtrak’s 70 new locomotives, the Amtrak Cities Sprinters, are being manufactured at a cost of \$466 million. The company believes that these locomotives will be more reliable than the current fleet, which will help to increase revenue and reduce costs.

Because of the significance of these locomotives to the company’s plans for improving its financial performance and because they are scheduled to begin revenue service in October 2013, we assessed the extent to which Amtrak is prepared to effectively and efficiently operate and maintain the new locomotives in service.

For further information, contact Calvin Evans, Assistant Inspector General for Inspections & Evaluations (202) 906-4507.

The full report is at www.amtrakoig.gov/reading-room

ASSET MANAGEMENT: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist (Report No. OIG-E-2013-021, September 27, 2013)

What We Found

Amtrak has taken some significant actions and developed plans to introduce the new locomotives into revenue service once they are delivered, including:

- hiring a Project Team Leader in the Mechanical department with expertise managing complex equipment procurements and locomotive commissioning projects
- developing and coordinating a testing plan for the locomotives with the equipment manufacturer at the Federal Railroad Administration’s testing facility
- developing plans to train staff to maintain and operate the new locomotives

Although progress is being made and preparations are still ongoing, as of July 1, 2013, some important actions and plans that could reduce Amtrak’s risk had been delayed or had not been finalized, including:

- improving its facilities to test and maintain the locomotives, raising questions about whether these improvements are needed and, if so, the most cost-effective way to fund the construction
- scheduling the retirement of the current locomotives, potentially causing Amtrak to continue to spend more than necessary to maintain and overhaul locomotives that it plans to remove from active service over the next three years
- finalizing practices for maintaining the new locomotives that could impact their availability or reliability if not completed before the locomotives are put into service
- procuring spare parts, increasing the risk that parts might not be available when needed or might cost more than necessary

Being fully prepared to operate and maintain the new locomotives increases the likelihood of maximizing the benefits associated with these locomotives. However, Amtrak has not designated an individual to be accountable for synchronizing all of the company’s efforts to prepare for the new locomotives. This has delayed the finalization of some plans and actions, which could reduce the expected benefits.


Recommendations

To help the company prepare to efficiently operate and maintain the new locomotives, we are recommending several actions. These include assigning authority and responsibility for managing and synchronizing these efforts to ensure that all plans are finalized in a cost-effective and timely manner—and also to ensure that all associated tasks are documented in a policy to guide this and future procurements. Amtrak’s Vice President of Operations agreed with our recommendations, and the company has taken actions that appear to be mostly consistent with the intent of our recommendations.



Memorandum

To: Donald A. Stadtler, Jr., Vice President, Operations



From: Calvin E. Evans, Assistant Inspector General, Inspections and Evaluations

Date: September 27, 2013

Subject: *Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist (Report No. OIG-E-2013-021)*

Amtrak is in the process of replacing its entire fleet of electric locomotives. This will be Amtrak's first major introduction of new equipment in over a decade. In July 2013, according to an Amtrak official, the company received the first of 70 new Amtrak Cities Sprinter (ACS-64) electric locomotives for testing (as shown in Figure 1). Siemens Industry, Inc. (Siemens) is manufacturing the new locomotives at a cost of about \$466 million.¹ Siemens plans to deliver one locomotive every month starting in July 2013, and up to three locomotives every month from August 2014 through November 2015. The first of these units is scheduled to enter revenue service in October 2013, and all of the 62 electric locomotives that Amtrak currently operates on the Northeast Corridor are scheduled to be replaced by February 2016.

These locomotives are central to the company's plans for improving its financial performance and operations. Amtrak's primary reason for buying the locomotives is to improve the reliability of its electric locomotive fleet. The company projects that

¹ Amtrak is financing the acquisition of these locomotives with a \$563 million loan from the Federal Railroad Administration, which includes funds for facility construction, spare parts, program management, and contingencies. Based on Amtrak's projected loan repayment schedule, the company will pay about \$787 million for the units over the life of the loan after repaying the principal and interest. Amtrak will also pay credit risk premiums for each loan draw from the FRA.

*Amtrak Office of Inspector General***Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist**

Report No. OIG-E-2013-021, September 27, 2013

increased locomotive reliability will result in improved performance on the Northeast Corridor, which will lead to increased revenue for the company. Amtrak officials also state that operating only one type of locomotive will improve reliability and will reduce the complexity of its maintenance requirements. Furthermore, the company expects that the locomotives will reduce energy costs due to the ACS-64's advanced dynamic braking system, which regenerates power that can be fed back into the electrical grid for use by other locomotives.

Figure 1. Amtrak's New ACS-64 Locomotive



Source: Amtrak Mechanical Department photo

According to company officials, being fully prepared to operate and maintain the new locomotives enhances Amtrak's ability to fully realize the benefits afforded by the ACS-64s. To help ensure that the locomotives perform as designed, Amtrak officials stated that they are working with Siemens to develop operating and maintenance procedures for the new locomotives. These operating and maintenance procedures will require considerable modifications to operations that must be carefully planned and synchronized throughout the company, according to Amtrak officials.

Therefore, this report discusses the extent to which Amtrak is prepared, as of July 1, 2013, to effectively and efficiently operate and maintain the new locomotives in

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

revenue service.² For a detailed discussion of our evaluation methodology, see Appendix I.

PREPARATIONS ARE UNDERWAY, BUT SOME PLANS AND ACTIVITIES HAVE BEEN DELAYED

Amtrak has taken actions and developed plans to prepare the company to operate and maintain the new locomotives once they are delivered. Our analysis shows, however, that, as of July 1, 2013, some of these plans and activities have been delayed, increasing the risk that these efforts will not be completed in an efficient or timely manner to fully realize the benefits of the new locomotives. Furthermore, Amtrak has not designated an individual with the authority to address some of these issues.

Preparations for New Locomotives are Underway

The company has taken some significant steps to prepare to introduce the locomotives into revenue service in a timely manner after Siemens delivers them. For example, Amtrak officials stated that the company has taken these actions:

- The company created a Project Team Leader position in its Mechanical department to manage the commissioning of the ACS-64s. To fill this position, Amtrak hired someone with expertise managing complex equipment procurements and locomotive commissioning³ projects. According to Amtrak officials, the Project Team Leader helped develop the design specifications for the new locomotives, developed a commissioning plan with testing requirements for each new locomotive and locomotive component, and worked very closely with Siemens to overcome potential delays and other issues to accelerate the delivery schedule of the locomotives—about nine months ahead of its original schedule.

² We provided the company with a briefing of our preliminary findings in July 2013.

³ Commissioning includes refining the design of the locomotives as necessary, receiving the units from the manufacturer, and testing the locomotives in preparation for introducing them into revenue service.

Amtrak Office of Inspector General

Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist

Report No. OIG-E-2013-021, September 27, 2013

- Amtrak developed and coordinated plans jointly with Siemens for testing each locomotive. Siemens is responsible for providing the first two production units for qualifications and commissioning testing at the Federal Railroad Administration's (FRA) Transportation Technology Center in Pueblo, Colorado. These tests, which began in May 2013, are designed to meet FRA safety standards, and there were no delays as of the end of June 2013.
- The company developed plans to train staff to operate and maintain the locomotives. Amtrak officials said that Siemens representatives will instruct these personnel in hands-on training sessions at multiple sites once the initial units arrive. These plans call for certifying all staff by April 2014.

Some Plans and Activities Have Been Delayed

Although progress is being made, as of July 1, 2013, the company has not finalized some of its plans for operating and maintaining the new locomotives. Delays in implementing these plans could affect the company's ability to fully realize the benefits expected from the locomotives or create additional costs that could be avoided.

Improvements to locomotive facilities have not been made and may not be needed. After receiving each new locomotive, Amtrak plans to conduct qualifications tests by running the ACS-64s along the Northeast Corridor and performing diagnostic tests on the locomotives. To conduct these tests, Amtrak officials stated that the company planned to make facility improvements at some of its shops.

As part of its overall \$563 million loan from FRA, Amtrak requested about \$29 million for shop improvements. However, because it did not specify the need for specific facilities in its loan application, FRA reserved the right to approve this line item based on future justification of Amtrak's need when the funding was requested. According to an Amtrak official, as part of the \$29 million for shop improvements, Amtrak requested \$12.5 million in October 2012 to construct a test facility at its maintenance yard in Wilmington, Delaware. Amtrak has subsequently submitted several modifications to its request to draw the funds, but FRA officials told us that they had yet to approve the release of the funds because FRA and Amtrak are still attempting to define the expenses that are allowable under their agreement. Therefore, Amtrak officials said the company has not been able to start construction of the new facility.

*Amtrak Office of Inspector General***Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist**

Report No. OIG-E-2013-021, September 27, 2013

According to a company official, it will take two years to build the facility once funds become available. This construction timeline makes it likely that most of the ACS-64s will have been delivered before the facility is built. Nonetheless, company officials stated that this delay will not impact Amtrak's ability to test and commission the ACS-64s because the company has the capability to test the locomotives without this facility. In addition, Amtrak officials stated that the facility can also be used for conducting warranty repairs, but the lack of the facility will not delay this work because warranty repairs can be performed on the new units at existing facilities before the new facility is constructed or other improvements are completed.

Therefore, constructing the Wilmington facility and making additional improvements to other facilities may be unnecessary. Additionally, using the FRA loan may not be the most cost-effective way to fund construction because it will add about \$8.6 million in interest to the construction costs for the test facility in Wilmington alone.

Plans to decommission locomotives have been delayed. As the ACS-64s arrive, Amtrak plans to remove its existing locomotives from service and dispose of them in order to free up space and resources to accommodate the maintenance of the new units. In October 2012, Amtrak established a group that included personnel from the Mechanical, Procurement, and Finance departments to develop a sequence for retiring equipment to maximize cost savings and contain the cost of maintenance, overhauls, and parts procurements during the transition from old to new equipment. Additionally, the group considered the historic and projected reliability of each locomotive, the costs to take each locomotive out of service, and the financial impact of existing leases. Amtrak's locomotive lease contracts require the company to return units to the lessor in operating condition, and the group prioritized its retirement sequence based on the leased status of units.⁴

In December 2012, the group presented its findings to several Amtrak executives. It recommended using Siemens' delivery schedule for the ACS-64s to establish a one-for-one replacement schedule and to generally decommission the locomotives it owns first

⁴ We previously reported that Amtrak officials estimated that the company could incur penalties of up to \$35 million if 15 of its locomotives are not returned in good condition at the end of their leases. See *Asset Management: Integrating Sound Business Practices into its Fleet Planning Process Could Save Amtrak Hundreds of Millions of Dollars on Equipment Procurements* (OIG-E-2013-014, 5/28/2013).

*Amtrak Office of Inspector General***Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist**

Report No. OIG-E-2013-021, September 27, 2013

and then the locomotives it has leased. To ensure that each new unit performs as expected, their proposed schedule incorporated a two-month waiting period from the arrival of each ACS-64 to the decommissioning of each existing unit. The group also sought decisions on whether to sell, scrap, or store the units owned by Amtrak, and decisions on suitable and secure locations to store owned and leased locomotives.⁵ However, as of the end of June 2013, no decisions have been made to adopt or modify this plan.

In the absence of decisions on the decommissioning sequence and disposal options, Amtrak has not finalized a schedule for retiring its current locomotives. Therefore, the company could spend more money than necessary maintaining its locomotive fleet. In particular, Amtrak:

- Has spent or is planning to spend about \$21 million for fiscal years 2013–2016 to overhaul 36 locomotives that will be decommissioned in this timeframe. Without a retirement schedule, Amtrak risks unnecessarily overhauling locomotives that could be removed from service shortly after the overhaul is completed.
- Extended its spare parts supply agreement for its existing locomotives from June 2013 to June 2018 although it plans to retire all of these locomotives by February 2016. The agreement can be terminated before 2018, but Amtrak will have to pay the supplier's termination costs.
- Is required to purchase the unused spare parts from the supplier regardless of whether the spare parts contract is terminated early or not. These inventory costs could be reduced after Amtrak sets its decommissioning schedule. However, company officials said they have not begun to wind down the spare parts contract due to a lack of direction on when units will be decommissioned

⁵ Each decision could affect the planned decommissioning schedule. During our review, we did not attempt to independently verify whether the group's recommended course of action was more cost-effective than other options; therefore, we are not providing an assessment of the merits of the proposed plan.

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

and therefore the company potentially risks spending more than necessary on unused parts remaining in its inventory.⁶

In addition, company officials told us that until a decommissioning schedule is finalized, they plan to first replace the six most unreliable units from across its electric locomotive fleet. They said that this approach would likely remove the units that are most expensive to operate and maintain from service. However, if Amtrak continues retiring locomotives in this manner, the company will have to continue to maintain four types of locomotives and their associated spare parts for an unspecified amount of time as it receives the new locomotives.

Plans to maintain new locomotives are complex and still being finalized. Amtrak states that the new locomotives will be easier to maintain because the ACS-64s' onboard computing systems allow the units to self-diagnose problems and because the plug-and-play component design configuration enables Amtrak to efficiently remove damaged or worn out parts and quickly return the units to service. In addition, company officials said that Amtrak plans to institute a maintenance program on the ACS-64s similar to the program it instituted for the Acela Express service in order to achieve greater reliability among the new locomotives than it currently experiences with the existing electric locomotive fleet. This program is an efficient method for meeting the periodic regulatory requirements for locomotive inspection and maintenance, and Amtrak plans to apply the program to each ACS-64 as it enters revenue service.⁷

The Mechanical department is using its Washington D.C.-based staff to pilot this program on existing electric locomotives to familiarize mechanics with the practices they will employ on the ACS-64s. Officials told us that Washington D.C. will likely be the primary maintenance facility for the units until the other facilities are comfortable with the new practices. Company officials also said the program's design will likely

⁶ Amtrak has not yet determined the current value of the spare parts inventory for the existing locomotives.

⁷ We previously reported that implementing a reliability-centered maintenance program for the Acela Express trainsets allowed Amtrak to achieve significant improvements in equipment availability and reliability. See *Mechanical Maintenance: Improved Practices Have Significantly Enhanced Acela Equipment Performance and Could Benefit Performance of Equipment Company-wide* (OIG-E-2012-008, 5/21/2012).

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

change over time, as the Mechanical staff learns how to best maintain the new locomotives under different operating conditions.⁸

Nonetheless, company officials told us that they face several challenges to implementing this maintenance regime. These challenges could reduce both the availability and reliability of the new locomotives. For example, although it expects to begin maintaining the new locomotives in October 2013, the company is waiting for Siemens to finalize its recommended maintenance procedures in order to finalize its own policies and procedures for conducting specific maintenance tasks. Officials told us that without documented tasks and procedures, it may be difficult to ensure that maintenance personnel are trained on the new practices in a timely manner. Additionally, prior to July 1, 2013, the Mechanical department planned to train more than 200 mechanics and electricians from September 2013 through April 2014 in Washington D.C. and at other facilities.

Company officials also told us that the Acela maintenance program benefits from having three near-identical facilities and staff resources across the Northeast Corridor to perform segments of planned maintenance on the locomotives. However, these officials said that none of Amtrak's electric locomotive maintenance shops have the same configuration. They also added that this could present a challenge to performing maintenance routines in these facilities the same way they are performed for Acela.

To accommodate the different shop configurations, Mechanical has decided to perform different segments of the maintenance program in specific facilities across the Northeast Corridor. However, Amtrak officials told us that this plan will require the company to ensure that the locomotives end up at the right facility in order to support the maintenance schedule. Amtrak plans to manage this daily, but officials said this practice will significantly complicate how trains are dispatched because most of the electric locomotive fleet's maintenance is currently conducted in Washington D.C. Company officials also told us that they have not yet worked out how or where Amtrak will perform maintenance if locomotives break down or are rerouted to unscheduled facilities.

⁸ Amtrak also will be receiving a series of engineering drawings of the ACS-64s, which will enable the company to diagnose maintenance issues in the absence of any post-warranty technical support from Siemens.

Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist

Report No. OIG-E-2013-021, September 27, 2013

Employing these maintenance practices for the new locomotives will also require Amtrak to modify how it currently manages its spare parts inventory. Not only will the company need to ensure that the right spare parts are at each facility performing the specific maintenance tasks, this regime may require the company to have more spare parts on hand than it has for existing locomotives because Amtrak plans to perform maintenance activities in more locations than it had previously.

Plans to obtain and manage spare parts have been delayed. According to Amtrak officials, as of July 1, 2013, Amtrak had not yet purchased some critical spare parts for the ACS-64s. As with the shop improvements that Amtrak wants, the company requested about \$28 million from FRA to procure spare parts, but FRA officials told us that they had yet to define with Amtrak the expenses that are allowable under their agreement. To obtain spare parts, officials from the Mechanical and Procurement & Material Management departments are analyzing these options:

- Continuing to pursue funding spare parts with the loan from FRA. Amtrak has already ordered initial sets of the long-lead components to ensure that it had replacement parts on hand if some locomotives are damaged or long-lead parts fail early in their operation. However, Amtrak has not yet assessed how it will pay for these spares if FRA rejects its funding request.
- Entering into a vendor-managed inventory arrangement with Siemens similar to the one it has for its existing electric locomotives. These arrangements may result in Amtrak paying Siemens management and storage fees in addition to the cost of spare parts. FRA has said it will not fund this arrangement, and Amtrak has not yet identified how it could fund this option.
- Buying consumable spare parts, as needed, on the open market or from Siemens. This option will limit Amtrak's ability to take advantage of reduced prices obtained from advanced purchases and economies of scale achieved through larger orders. Amtrak has not yet decided how it will fund the procurement of parts in this manner.

Potential delays to ordering spare parts could affect the company's ability to acquire parts in a cost-effective manner. Moreover, not having spare parts available may complicate its ability to conduct maintenance, potentially reducing the availability and reliability of the new locomotives.

Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist

Report No. OIG-E-2013-021, September 27, 2013

Clear Accountability Could Enhance Decision-Making and Synchronization of Efforts

Our analysis shows that the lack of program-level accountability has limited the company's ability to be fully prepared to operate and maintain the new locomotives in an efficient manner. Although Amtrak hired a Project Team Leader in the Mechanical department to manage the commissioning process, the company has not designated an individual accountable for managing and synchronizing all of the company's efforts to prepare for the new locomotives. Company officials told us that Amtrak's commissioning plan relies on a project management matrix in which the Mechanical, Finance, Engineering, Transportation, and Procurement departments plan and execute specific tasks to support the new units.

This approach appears to be working at the department level—as evidenced by the progress Amtrak has made preparing to commission the ACS-64s. However, the approach relies on the planning and initiative of the individual departments—rather than a structured set of tasks with an associated master schedule and cost estimates that would comprise an integrated program for managing the process of preparing to introduce the new locomotives into service.

According to several company officials we interviewed, the lack of a designated person with the authority to make decisions across departmental lines is the primary reason that key decisions have not been made. Additionally, designating such a person could help Amtrak develop a consolidated view of the status of all required tasks, effectively synchronizing the schedules for introducing the new locomotives and decommissioning existing units, and identifying the overall costs of this effort.

CONCLUSIONS

Amtrak has made progress preparing for the arrival of new locomotives and introducing them into revenue service. The delays in finalizing plans and activities that we identified could reduce the benefits that the company expects to receive from operating the new locomotives if the delays are not managed and synchronized by someone in the company with the authority to address them. Furthermore, these risks could drive up Amtrak's costs if they are not addressed in a timely manner.

Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist

Report No. OIG-E-2013-021, September 27, 2013

RECOMMENDATIONS

To assist management's efforts to prepare to efficiently operate and maintain the new locomotives, we recommend that:

1. Amtrak's Vice President for Operations designate a program manager or executive with the authority necessary to manage the introduction of the new locomotives into service in an efficient and timely manner. This individual should be responsible for synchronizing all plans and tasks necessary for preparing to operate and maintain the new locomotives and decommission the existing locomotives.
2. The designated official should:
 - a. Ensure that the need for new shop facilities is assessed and the appropriate funding source for any needed facilities is determined.
 - b. Ensure that the sequence for decommissioning Amtrak's existing electric locomotives is finalized. The sequence should reflect a cost-effective approach, supported by an analysis that includes:
 - i. Plans for the disposition of each existing locomotive (sell, scrap, lease, or store) and where and how they will be stored while waiting disposition or return to the lessor
 - ii. Plans for winding down the overhaul program for these locomotives and their spare parts inventories
 - c. Ensure that operating policies and maintenance procedures for the new locomotives are finalized so that the units perform as designed.
 - d. Ensure that plans are finalized for purchasing, storing, and managing spare parts and supplies for the new locomotives.
 - e. Ensure that tasks for effectively and efficiently commissioning, operating, and maintaining new equipment, and decommissioning existing equipment, are documented in a policy to guide this and other ongoing and future procurements.

Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist

Report No. OIG-E-2013-021, September 27, 2013

MANAGEMENT COMMENTS AND OIG ANALYSIS

On September 25, 2013, Amtrak's Vice President of Operations provided us with comments on a draft of this report in which he concurred with our recommendations (see Appendix II). In his response, he identified actions the company has taken since we completed our fieldwork on July 1, 2013, and other ongoing initiatives. These actions appear to be mostly consistent with the intent of our recommendations, and we will follow up on their implementation. However, we take issue with several statements in the response.

With regard to recommendation #1, Amtrak states that the Project Team Leader assigned to the project fulfills the role of a program manager or executive with the authority necessary to manage the introduction of the new locomotives into service in an efficient and timely manner. However, our report states that the Project Team Leader does not fill this role because he does not have the authority to make decisions across departmental lines or to direct the activities of other staff not in his chain of command. Furthermore, we believe that this lack of program-level accountability could continue to limit the company's ability to be fully prepared to operate and maintain the new locomotives in an efficient manner, and to fully realize the benefits of the new locomotives.

With regard to recommendation #2a, the response does not appear to fully address the recommendation. Our report questions whether the facility improvements are necessary since existing facilities can be used to commission and maintain the locomotives. Although Amtrak asserts the need for facility improvements in its response, it provided no additional justification for the improvements other than that provided in its initial justification for the FRA loan and its 5-year facility plans. Additionally, our report questions whether using the FRA loan, and paying at least about \$8.6 million in interest, is the most cost-effective way to fund the facility improvements. Amtrak informed us that it plans to use the FRA loan, in this case, because facilities funding has been the primary location for budget cuts. Although the FRA loan provides available funding, it may not be the most cost effective option, as we state in our report. We believe that, in finalizing its decision for funding the facility improvements, Amtrak should consider alternative funding sources that may be more cost-effective, including its annual capital grant.

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

With regard to recommendation #2b, our report questioned Amtrak's decision to extend the contract to 2018 and risk incurring termination costs, when the company had already planned to retire the units in February 2016. The contract does not identify the close-out costs in the same way it identifies termination costs. Therefore Amtrak's statement that termination costs *should realistically not exceed what Amtrak would normally pay during a standard contract close out* may not be accurate.

We appreciate the courtesies and cooperation that Amtrak representatives extended to us during this review. If you have any questions, please contact me (Calvin.Evans@amtrakoig.gov, 202.906.4507) or Jason Venner, Senior Director (Jason.Venner@amtrakoig.gov, 202.906.4405).

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Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

Appendix I

SCOPE AND METHODOLOGY

This report provides the results of our evaluation of Amtrak's efforts to commission its new fleet of ACS-64 electric locomotives. Our objective for this report is to discuss the extent to which Amtrak is prepared, as of July 1, 2013, to effectively and efficiently operate and maintain the new locomotives in revenue service. We performed our work from May through July 2013 in Washington D.C., Philadelphia, and Wilmington.

To determine the extent to which Amtrak is prepared, we obtained documentation on the company's plans for commissioning, operations, and maintenance from Amtrak officials. We discussed these documents with officials in the Mechanical, Finance, Transportation, Engineering, and Procurement and Materials Management departments who were directly involved in the planning and execution of the processes. We also reviewed and analyzed documents Amtrak submitted to the FRA in support of the commissioning processes, and we discussed these documents with FRA officials. Last, we documented the extent that Amtrak is synchronizing efforts to decommission existing equipment with commissioning plans.

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

Internal Controls

In conducting the evaluation, we reviewed Amtrak's program management controls in the context of our objectives. Specifically, we reviewed the internal controls to determine whether they were adequate to ensure effective and efficient commissioning and operations of the new locomotives. We determined that a lack of program-level accountability has limited the company's ability to be fully prepared to operate and maintain the new locomotives. We presented the results of our review in the body of this report.

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

Use of Computer-Processed Data

We did not rely on computer-processed data to determine the findings or conclusions of this report.

Prior Reports

In conducting our evaluation, we relied on the following reports from Amtrak Office of Inspector General (OIG) and the U.S. Government Accountability Office (GAO):

- *Asset Management: Integrating Sound Business Practices into its Fleet Planning Process Could Save Amtrak Hundreds of Millions of Dollars on Equipment Procurements* (OIG-E-2013-014, 5/28/2013)
- *Railroad Safety: Amtrak Has Made Progress in Implementing Positive Train Control, but Significant Challenges Remain* (OIG-E-2013-003, 12/20/2012)
- *Mechanical Maintenance: Improved Practices Have Significantly Enhanced Acela Equipment Performance and Could Benefit Performance of Equipment Company-wide* (OIG-E-2012-008, 5/21/2012)
- *Amtrak Corporate Governance: Implementing a Risk Management Framework is Essential to Achieving Amtrak's Strategic Goals* (OIG-A-2012-007, 3/30/2012)
- *Evaluation of Amtrak's FY 2010 Fleet Strategy: A Commendable High-Level Plan That Needs Deeper Analysis and Planning Integration* (OIG-E-11-2, 3/31/2011)
- *Transit Rail: Potential Rail Car Cost-Saving Strategies Exist*, U.S. Government Accountability Office (GAO-10-730, 6/30/2010)

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

Appendix II

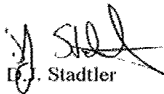
**COMMENTS FROM AMTRAK'S VICE PRESIDENT OF
OPERATIONS**

NATIONAL RAILROAD PASSENGER CORPORATION
40 Massachusetts Ave, NW Washington, DC 20002

Memo



Date September 24, 2013
To Calvin Evans

From  D. J. Stadler
Department Operations
Subject OIG Report Draft Evaluation Report
cc Joseph Boardman
Mark Yachmetz
Mario Bergeron
Dan Black
Jeff Martin
Matthew Gagnon
Melantha Paige

Message

Attached is the response to your Memorandum dated August 15, 2013 entitled *Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risk to Fully Achieving Intended Benefits Exist (Draft Evaluation Report)*. We believe that we have addressed all of the recommendations that the OIG offers in the following narrative.

The OIG report summarizes areas of potential risk into four categories: 1) The need for facilities (especially after recent delays) and the use of RRIF loans to subsidize the facility enhancements, 2) reviewing the decommissioning strategy to insure minimization of Amtrak expenditures on equipment scheduled to be retired, 3) risks associated with the implementation of a continuous maintenance program, and 4) delays associated with spare parts procurement and its potential impact to material costs. We will address each of these risk areas as part of the response to each recommendation below.

OIG Recommendation

1. *Amtrak's Vice President for Operations designate a program manager or executive with the authority necessary to manage the introduction of the new locomotives into service in an efficient and timely manner. This individual should be responsible for synchronizing all plans and tasks necessary for preparing to operate and maintain the new locomotives and decommission the existing locomotives.*

Management Response

Amtrak management agrees with the OIG recommendation, and believes that the Project Team Leader (PTL) that has been assigned to the project fulfills that role. That leader operates in a matrix environment, responsible for coordinating all the tasks associated with acquisition, training, maintenance, and operations with appropriate stakeholders as needed. Specific tasks are coordinated under the following interdepartmental teams:

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

Project Team Leader:	William Durham
Acquisition:	Greg Gagarin, Dale Engelhardt, John Forgione, Ed Bolden, RSE Support
Testing:	Greg Gagarin, Ed Bolden, John Forgione
Continuous Maintenance:	Tammy Krause, Mark Murphy, Mike Bello, Al Marello
Spares:	Bob Nanney, Scott Riley, Dale Engelhardt
Decommissioning:	Scott Riley, Dale Engelhardt, Tom Butler, Betty Ann Hastings, Jeff Martin, Bruce Van Sant
Facilities:	Glenn Sullivan, Mark Murphy, Terry Schindler

OIG Recommendation

2. *The designated official should:*

- a. *Ensure that the need for new shop facilities is assessed and the appropriate funding source for any needed facilities is determined.*

Management Response

Amtrak management agrees with the OIG recommendation and the Facilities Team has reviewed and approved the facility enhancements. These enhancements are consistent with proper utilization of the \$29M and integrated with the 5-year facility plans. The \$29 million included in the RRIF application is to provide the necessary enhancements to the terminal maintenance facilities located throughout the Northeast Corridor (NEC) and to provide needed enhancements at the Wilmington, DE shop to support commissioning, warranty, and overhaul capabilities. Historically, facilities funding has been the primary location for budget cuts (reference E-06-04, 08/24/2006, Semiannual Report #34). Examples are as follows:

	2010	2011	2012	2013	2014	2015-2017
Requested	16,500,000	15,020,000	14,500,000	3,250,000	14,500,000	15,000,000
Authorized	15,600,000	4,467,370	5,300,000	2,100,000	1,500,000	
Actual	11,229,000	2,712,567	4,199,086			

Funding delays will impact the availability of planned enhancements at Wilmington, DE but the Wilmington facility enhancements as well as those planned for the various terminals will be utilized by Amtrak personnel throughout the life of the ACS-64 locomotives. Facility 5 year investment plans for the terminals are planned to further allow enhancements to bring equivalent capabilities at each of the terminals in support of continuous maintenance. Current planned facility investments using RRIF funding totals \$18M dollars with details available upon request.

OIG Recommendation

2. *The designated official should:*

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
 but Several Risks to Fully Achieving Intended Benefits Exist**
 Report No. OIG-E-2013-021, September 27, 2013

- b. *Ensure that the sequence for decommissioning Amtrak's existing electric locomotives is finalized. The sequence should reflect a cost-effective approach, supported by an analysis that includes:*
- i. *Plans for the disposition of each existing locomotive (sell, scrap, lease, or store) and where and how they will be stored while waiting disposition or return to the lessor*
 - ii. *Plans for winding down the overhaul program for these locomotives and their spare parts inventories*

Management Response

Amtrak management agrees with the OIG's recommendation and the Decommissioning Team developed a plan incorporating recent changes to 2014 budgets and has recently been issued. The final sequence of decommissioning has been determined, by the Team, with pending submittals to executive leadership and the FRA for the asset retirement plan and equipment disposition. The analysis included evaluation of the reliability of each fleet, the ongoing cost to maintain each fleet and required capital investment for each locomotive in order to keep them running. The FY14 capital budget will be and has been adjusted to consider those units that will be stored first.

As reviewed with Amtrak management (concerning HHP-8 parts contracts), Amtrak made a prudent business decision to extend the parts agreement with a no cost option with Alstom because the alternative of not having contracted parts support for our fleet is unacceptable. If the agreement is terminated prior to 2018 Amtrak will pay the supplier's termination costs, but those costs should realistically not exceed what Amtrak would normally pay during a standard contract close out.

In addition, Amtrak Procurement has had periodic customer meetings where a wide variety of topics are discussed including the arrival of the new Siemens locomotives and the impact to the parts program. Recently, Amtrak Procurement has specifically engaged Alstom about current demand patterns of parts and future reductions of inventory, because more data and information is available regarding the decommissioning strategy.

OIG Recommendation

2. *The designated official should:*
- c. *Ensure that operating policies and maintenance procedures for the new locomotives are finalized so that the units perform as designed.*

Management Response

Amtrak management agrees with the OIG's recommendation and has decided that a continuous maintenance approach will insure best performance reliability for the new locomotives as being developed by the Continuous Maintenance Team. As stated in the OIG report the Mechanical Department is planning to use Continuous Maintenance (CM) as the method to perform daily maintenance on the ACS-64 locomotives. Since July 1st Siemens has provided the maintenance

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

manuals for the ACS-64s and the Amtrak Reliability Centered Maintenance (RCM) group has reviewed these specifications and added additional Amtrak requirements. The maintenance requirements are in the process of being divided into segments (known as “buckets”) for the 184 day interval and will be implemented within the Work Management System.

OIG Recommendation

2. *The designated official should:*

- d. *Ensure that plans are finalized for purchasing, storing, and managing spare parts and supplies for the new locomotives.*

Management Response

Amtrak management agrees with the OIG’s recommendation and the Spares Team will finalize plans for ACS-64 spare parts in time to acquire original planned spare pricing or to defer spare purchases pending the decision to accept Siemens’ Vendor Managed Inventory (VMI) proposal. Amtrak Procurement is evaluating the non-binding proposal recently submitted by Siemens for VMI. It is expected that the VMI decision will be made while ACS-64 locomotives are still being manufactured so that Amtrak would be able to procure spares at discount prices should Amtrak decide not to enter into a VMI.

OIG Recommendation

2. *The designated official should:*

- e. *Ensure that tasks for effectively and efficiently commissioning, operating, and maintaining new equipment, and decommissioning existing equipment, are documented in a policy to guide this and other ongoing and future procurements.*

Management Response

Amtrak management agrees with the OIG’s recommendation and has developed a Microsoft project template summarizing the required support activities for the new equipment acquisition. This template outlines the process and ongoing lessons learned from specification development through to operation the new equipment. The process being used for the acquisition and associated tasks for the ACS-64s and the Long Distance Single Level cars has been documented in a Microsoft Project format. Although the timing for individual tasks may change from one project to the next the interdependencies of the tasks will remain constant. This project template is being enhanced as we uncover new issues with the ACS-64 locomotive and CAF car procurement and associated tasks as they occur. The need to develop organizations for the tasks outside of acquisition is identified within the Project template, but will vary depending on the equipment. This template will be made available for all future rolling stock acquisitions. Once the current procurements are completed, the Deputy Chief Mechanical Officer Engineering, Standards and Planning will ensure that a process outline will be developed to be accompanied with the Microsoft Project Template for the benefit of future acquisitions.

Amtrak Office of Inspector General

**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**

Report No. OIG-E-2013-021, September 27, 2013

Appendix III

ABBREVIATIONS

ACS-64	Amtrak Cities Sprinter
FRA	Federal Railroad Administration
GAO	Government Accountability Office
OIG	Office of Inspector General
Siemens	Siemens Industry, Inc.

Amtrak Office of Inspector General
**Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives,
but Several Risks to Fully Achieving Intended Benefits Exist**
Report No. OIG-E-2013-021, September 27, 2013

Appendix IV

OIG TEAM MEMBERS

Calvin Evans, Assistant Inspector General, Inspections and Evaluations

Jason Venner, Senior Director, Inspections and Evaluations

Joshua Moses, Evaluator

Robert Dyer, Principal Operations Analyst

*Amtrak Office of Inspector General***Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist**

Report No. OIG-E-2013-021, September 27, 2013

OIG MISSION AND CONTACT INFORMATION

Amtrak OIG's Mission

The Amtrak OIG's mission is to provide independent, objective oversight of Amtrak's programs and operations through audits, inspections, evaluations, 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.

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Phone: 800-468-5469

Congressional and Public Affairs

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