



OFFICE of INSPECTOR GENERAL
NATIONAL RAILROAD PASSENGER CORPORATION

ACQUISITION AND PROCUREMENT:

Improved Management of Diesel Fuel Program Could Lead to Cost Savings

Certain information in this report has been redacted due to its sensitive nature.

OIG-A-2017-013 | August 14, 2017

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Memorandum

To: Scot Naparstek, Executive Vice President/Chief Operating Officer
DJ Stadtler, Executive Vice President/Chief Administrative Officer

From: Stephen Lord 
Assistant Inspector General, Audits

Date: August 14, 2017

Subject: *Acquisition and Procurement: Improved Management of Diesel Fuel Program
Could Lead to Cost Savings (OIG-A-2017-013)*

INTRODUCTION

In June 2011, Amtrak (the company) management advised our office that eight locomotives had experienced fires and significant mechanical problems after being refueled in [REDACTED]. Our office initiated an investigation into Sevier Valley Oil Company, which supplied fuel directly to the locomotives, and found that weaknesses in the company's management controls for the testing of diesel fuel allowed substandard fuel to be delivered to these locomotives.¹ This is an important issue because diesel fuel powers the company's fleet of 269 diesel locomotives on 15 long-distance routes and 26 state-supported routes. The loss of locomotive power on a long-distance route—especially in a remote area—could pose special safety concerns. In addition, delays due to a mechanical failure on any route could diminish customer satisfaction.

The company's locomotives can be fueled from three sources: the company's storage tanks, contractors that deliver fuel by truck directly to locomotives (DTL), and by host railroads. The company requires random monthly testing of diesel fuel delivered to company storage tanks and by DTL contractors to ensure that it meets contract specifications.²

Our objective was to assess the company's management controls for purchasing, delivering, and testing diesel fuel. We compared company practices to leading practices

¹Management Information Report: *Amtrak Diesel Fuel Sampling/Testing Procedures Need Strengthening*, Office of Investigations, July 19, 2012. Based on our recommendations, the company revised its diesel fuel policy and standard maintenance procedure for testing.

² The company policy does not require testing of diesel fuel provided by host railroads.

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we identified for purchasing, delivering, and testing diesel fuel. We identified these leading practices by (1) interviewing officials from Class I railroads (BNSF Railway, Norfolk Southern Corporation, and Union Pacific Railroad), (2) reviewing practices used by international and domestic passenger air carriers and inland and global marine shippers, and (3) researching the benchmarking and leading practices database of the American Productivity and Quality Center.³ For more details on our scope and methodology, see Appendix A.

SUMMARY OF RESULTS

The company's current purchasing practices for diesel fuel are inconsistent with leading practices, particularly strategic sourcing—a process that moves an organization away from numerous individual procurements to a broader, aggregate approach—that can help leverage an entity's purchasing power. The company has ■ contracts with ■ companies that provide diesel fuel, and it paid \$■ million during fiscal year (FY) 2016 for fuel, including delivery fees. However, the company has not assessed the feasibility of consolidating its existing diesel fuel contracts to achieve additional supplier discounts on the price paid.

In a September 2012 report, the Government Accountability Office (GAO) reported that leading companies strategically manage about 90 percent of their procurements and report annual savings of 10 to 20 percent. Because the company has a large number of diesel fuel contracts, which constitute a significant expense, using a strategic sourcing approach could result in potential cost savings. Based on the annual savings reported by GAO, we estimate that consolidating diesel fuel contracts could reduce the company's costs by \$9.2 million to \$18.4 million annually given the purchases made in FY 2016.

Further, eliminating the testing of diesel fuel at DTL locations and relying on suppliers' inspection and quality control systems to ensure quality, with occasional spot checks, could save an additional \$187,500 annually. In addition, strengthening management controls by enhancing the authority of the Senior Manager, Fuel would help ensure that the fuel in company storage tanks is tested regularly, and that adequate records of all corrective actions taken as a result of these tests are maintained.

³ The American Productivity and Quality Center is a member-based nonprofit organization that provides business benchmarking, best practices, process and performance improvement, and knowledge management solutions for organizations.

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Company's controls for verifying deliveries are effective. The company has management controls in place to verify fuel deliveries, consistent with leading practices. These controls vary by location, but all require the use of metered fuel tickets to document the time and amount of fuel delivered, which the company uses to verify the number of gallons delivered before paying an invoice. This helps limit opportunities for fraud.

Company did not consistently test diesel fuel. The company is not conducting required monthly testing of diesel fuel or documenting the corrective actions that were recommended or taken, which is not consistent with company policy and leading practices. Specifically, we found the following:

- From January 1, 2014 through December 31, 2016, the company conducted about one half— [REDACTED] —of the required monthly tests (54 percent). Because the company's fuel sampling policy divides responsibility for fuel sampling across multiple departments, no senior official has the authority to ensure that this testing is conducted in accordance with company policy.
- Of the [REDACTED] tests conducted from January 1, 2014, through December 31, 2016, 82 (12 percent) indicated that fuel did not meet specifications, but the company does not maintain records documenting the corrective actions, if any, taken as a result of these tests.

In addition, the company is spending \$ [REDACTED] per test for diesel fuel delivered directly to locomotives, but this fuel is consumed before the test results are known, which prevents the company from taking corrective actions if the fuel does not meet standards. Because its contracts for DTL fuel require the contractors to maintain separate inspection and quality control systems, we estimate that the company could save \$187,500 annually by relying on its DTL contractors' quality control systems—with occasional spot checks— instead of conducting its own tests of this fuel.

To help the company achieve cost savings, we recommend that it explore the possibility of consolidating its fuel contracts to better leverage its purchasing power and obtain discounts available on large volume purchases of diesel fuel. We also recommend that the company consider eliminating its testing of diesel fuel at DTL locations and instead rely on its suppliers' quality control systems. In addition, we are recommending that the company update its fuel policy and provide the designated senior manager (Senior Manager, Fuel) with the authority to ensure that monthly testing is conducted and that any corrective actions taken as a result of these tests are documented.

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In commenting on a draft of this report, management agreed with two recommendations, partially agreed with the remaining two, and provided information on actions the company plans to take to address all recommendations by January 31, 2018. Management agreed with our recommendation to explore opportunities for consolidating diesel fuel contracts to achieve cost savings by consolidating some or all of the company's diesel fuel contracts. Management also agreed with our recommendation to maintain records of any corrective actions taken as a result of its testing of company storage tanks.

Management partially agreed with our recommendation to assess whether the company could eliminate testing of diesel fuel at DTL locations and instead rely on suppliers' internal inspection and quality control systems to ensure quality. Rather than completely eliminate this monthly testing, the Mechanical department stated they will test DTL locations quarterly to provide assurance that fuel meets company quality standards. While this action will allow the company to realize some savings, we continue to question the merits of conducting quarterly testing given that the fuel will be consumed before the results are known.

Management also partially agreed with our recommendation to provide the Senior Manager, Fuel, with the necessary authority to ensure that testing is being conducted at company storage tanks and DTL locations. Rather than giving this authority to the Senior Manager, Fuel, the company stated that this authority will be provided to the Vice President, Transportation, and the Master Mechanics in the Operations department, and will revise its procedures accordingly to reflect this change. We believe this proposed action, once implemented, will meet the intent of our recommendation to identify a senior accountable official for testing.

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BACKGROUND

The company relies on ■ diesel fueling locations across the United States. Of these, 11 are company tank locations, ■ are DTL sites, and ■ are host railroad locations. For a map showing these fueling locations, see Figure 1.



Source: Amtrak OIG analysis of Amtrak data

From FY 2014 through FY 2016, the company purchased approximately ■ million gallons of diesel fuel costing more than \$■ million, which includes the cost of the diesel fuel and the delivery cost. The price per gallon is based on the daily price from a diesel fuel index.⁴ The delivery fee per gallon varies by contract.

The amount the company spends on diesel fuel each year fluctuates with the price of fuel and the gallons consumed. From FY 2014 through FY 2016, the company's diesel fuel expenses decreased by 54 percent from \$■ million to \$■ million, including delivery fees. This decrease is primarily the result of lower fuel prices and a 6 percent

⁴ To determine the daily price per gallon of diesel fuel, the company uses either the Oil Price Information Service or Platts, depending on the location.

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decrease in the number of gallons purchased, as shown in Figure 2.⁵



Source: Amtrak OIG analysis of Amtrak data

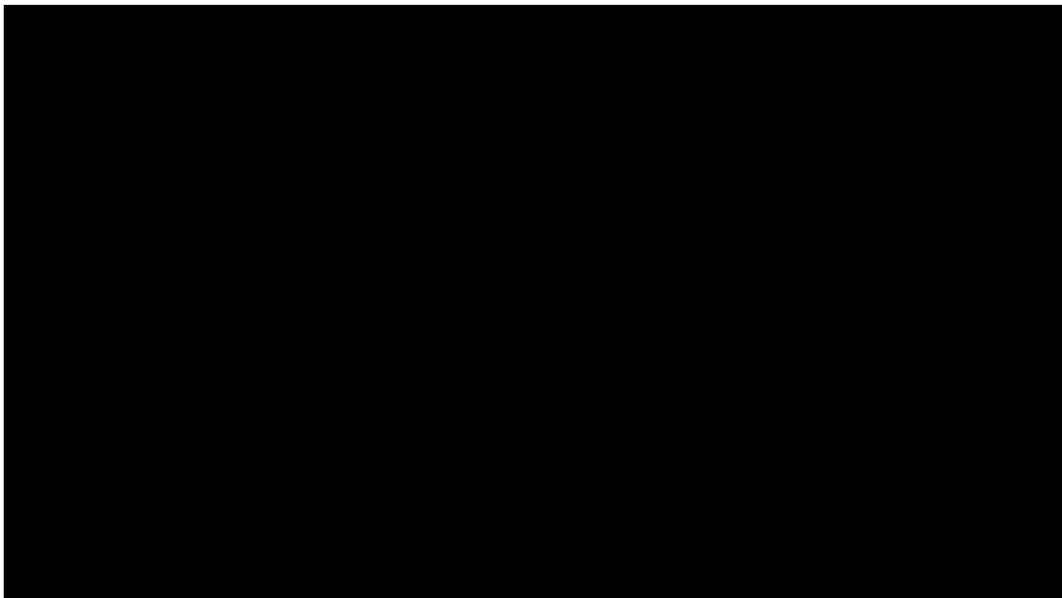
Note: As of April 1, 2017, the average price per gallon of diesel fuel is \$ [REDACTED]

During this 3-year period, 49 percent of the fuel the company purchased was delivered to the company's storage tanks, 42 percent of fuel deliveries came from contract suppliers at DTL locations, and 9 percent came from host railroads.

⁵ Company officials stated that fuel consumption decreased due to a variety of factors, such as ensuring that trains did not idle while in stations and removing some cars on certain routes.

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As highlighted in Figure 3, the company pays a wide range of delivery fees for various quantities of fuel delivered to company storage tanks and DTL locations under its fuel contracts, but it generally pays lower delivery fees for larger volume purchases. See Appendix B for additional details on these delivery fees and locations.



Source: Amtrak OIG analysis of Amtrak data

Three departments are involved in managing diesel fuel:

- **The Procurement department** is responsible for awarding and administering the contracts with suppliers that deliver fuel to company storage tanks and DTL locations.
- **The Operations department**, through the Senior Manager, Fuel, is responsible for monitoring the testing of diesel fuel delivered to company storage tanks and DTL locations. The department also has fuel coordinators who are responsible for monitoring the gallons delivered to company storage tanks and directly to locomotives. The Host Railroad group in the Operations department is responsible for all activities related to host railroads, including diesel fuel deliveries.
- **The Mechanical department** is responsible for developing and updating the company's diesel fuel specifications and policy for testing diesel fuel.

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The company has a contract with an independent laboratory to test diesel fuel samples. According to the company's fuel testing policy, at least once a month, a designated company official from either the Operations, Mechanical, or Procurement department⁶ is required to take a 16-ounce sample of diesel fuel from the company's storage tanks and DTL locations and mail it to the independent laboratory. The laboratory conducts various tests on the fuel, such as testing the pour point (the temperature at which the fuel begins to gel) and the flash point (the temperature at which the fuel ignites).

According to Operations and Mechanical department officials, it takes 10 to 15 calendar days for the laboratory to notify the company of the test results. The laboratory classifies test results into the following categories:

- **Normal:** All properties are within specification limits.
- **Abnormal:** Value(s) are outside a specification limit, but are within a ± 5 percent tolerance range for each property tested.
- **Critical:** Value(s) exceed the ± 5 percent tolerance range for at least 1 of the properties tested.

An engineer in the Mechanical department is responsible for providing recommendations to the Operations department on whether corrective actions are required when tests indicate that fuel did not meet the company's specifications. Corrective actions include introducing an additive to a storage tank so the fuel meets specifications or emptying a storage tank and replacing the fuel.

CONSOLIDATING CONTRACTS COULD RESULT IN COST SAVINGS

The company could improve its management and oversight of diesel fuels by consolidating contracts to reduce costs and improving controls to ensure that fuel deliveries to company storage tanks are being tested monthly, as required.

⁶ According to the policy, responsibility is divided between various departments depending on the type of fuel sampling—company storage tanks or DTL.

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Consolidating Diesel Fuel Contracts Could Reduce Fuel Costs

The company is not leveraging the delivery fee discounts that are available on large purchases to reduce costs when purchasing diesel fuel, which is not consistent with leading practices. The company has [REDACTED] separate contracts with [REDACTED] companies that

Leading Practice: Consolidate contracts to leverage possible discounts on fuel deliveries and price.

supply diesel fuel throughout the country. In FY 2016, the company purchased [REDACTED] million gallons of fuel for \$[REDACTED] million, which includes \$[REDACTED]x million in delivery fees.

The company's current purchasing practices are inconsistent with leading practices, particularly strategic sourcing—a process that moves an organization away from numerous individual procurements to a broader, aggregate approach—that can help leverage an entity's purchasing power. For example, in September 2012, the Government Accountability Office (GAO) reported that leading companies strategically manage about 90 percent of their procurements and report annual savings of 10 to 20 percent.⁷ Because the company has a large number of diesel fuel contracts, which constitute a significant expense, using a strategic sourcing approach could result in potential cost savings. Based on the annual savings reported by GAO, we estimate that consolidating diesel fuel contracts could reduce the company's costs by \$9.2 million to \$18.4 million annually, given the purchases made in FY 2016.

Procurement officials told us they use multiple contracts because not all suppliers can deliver fuel throughout the country on a reliable basis. However, they also stated they have not assessed the feasibility of consolidating the [REDACTED] existing contracts to better leverage potential discounts on large-volume purchases. In addition, company data suggest that discounts on the base price per fuel might be available. For example, 5 of the company's [REDACTED] fuel contracts indicate that the company is being charged negative delivery fees per gallon of fuel delivered which are, in effect, discounts on the base price for fuel. (See Appendix B). Thus, consolidating the current fuel contracts might provide the company with an additional opportunity to negotiate additional discounts on its fuel purchases.

⁷ GAO, *Strategic Sourcing: Improved and Expanded Use Could Save Billions in Annual Procurement Costs* (GAO-12-919), September 20, 2012.

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The Company Has Effective Controls for Verifying the Gallons of Diesel Fuel Delivered

The company's controls for verifying fuel deliveries vary according to the method used to supply fuel at specific locations, but regardless of the supply method used, we found

Leading Practice: *Use an automated management system to monitor deliveries.*

that the company's controls were adequate to verify the number of gallons delivered. This helps limit opportunities for fraud.

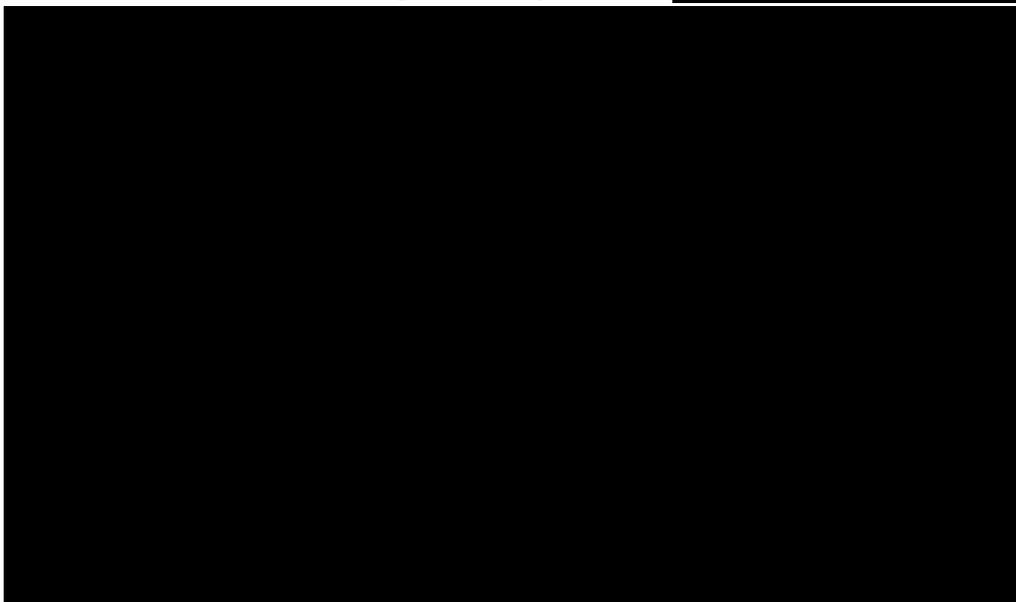
Specifically, we found the following:

- **Company storage tanks.** For 10 of the [REDACTED] company storage tanks, the company uses an automated data management system called the Rail Yard Data Management System (RYDMS) to monitor fuel deliveries.⁸ When fuel is delivered, a meter records the number of gallons being delivered. Diesel fuel coordinators at each location can then access the automated system to verify the number of gallons delivered. The RYDMS also has a meter that shows the number of gallons of diesel fuel delivered to a locomotive. For example, in [REDACTED] we observed the company's storage tank being fueled and a company official reviewing the metered fuel ticket to verify the number of gallons delivered. For a picture of this system and a fuel meter, see Figure 4.

⁸ RYDMS has not been installed in [REDACTED] for environmental reasons. The system is scheduled to be installed by September 2017, according to the Senior Manager, Fuel.

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Figure 4. Rail Yard Data Management System in [REDACTED]



Source: Amtrak OIG.

- **DTL sites.** At the company's [REDACTED] DTL sites, suppliers provide metered fuel tickets that show the number of gallons delivered. In states with laws that require meter calibration, each DTL contract requires the supplier to comply with calibration requirements. In states that do not require meter calibration, the company requires the supplier to calibrate the meters on its delivery trucks prior to the start of the contract and then calibrate them annually. In addition, each contract requires a company official to observe the diesel fuel delivery and sign the metered fuel ticket to verify the gallons delivered. For example, during our visit to a DTL site in [REDACTED], we observed a supplier delivering diesel fuel to a locomotive. After the fueling was complete, the supplier provided a metered fuel ticket to an Operations department official. The metered ticket showed the date, time, locomotive number, and number of gallons delivered. The Operations department official signed the metered fuel ticket to verify the number of gallons delivered.
- **Host railroad locations.** Host railroads send monthly invoices for all costs incurred in providing services to the company, including the cost of supplying fuel, as defined in their contractual agreements. As part of this process, the host railroads provide metered fuel tickets to support the

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amounts cited on the invoices. The Finance department then compares the invoices to the metered fuel tickets to verify the number of gallons delivered before paying the invoice.

The Company Did Not Consistently Test Diesel Fuel and Maintain Records of Corrective Actions

The company did not follow its own policy for conducting monthly testing of diesel fuel. In addition, if test results show that fuel does not meet the company's

Leading Practice: Conduct monthly quality control testing and document corrective actions recommended and taken in response to test results.

specifications, the company does not always document the corrective actions recommended or taken. Further, the company conducts testing at its own expense, instead of relying on suppliers' inspection

and quality control systems to provide assurances about fuel quality.

Monthly Tests Are Not Always Being Conducted

Company policy requires monthly testing of diesel fuel delivered to company storage tanks and direct to locomotives, but the company has not always conducted these tests.⁹ Our analysis of the [REDACTED] monthly tests required from January 1, 2014, through December 31, 2016, found that the company conducted only [REDACTED] (54 percent) as shown in Table 1.

**Table 1. Percentage of Monthly Testing of Diesel Fuel Conducted
 (January 1, 2014, to December 31, 2016)**

Delivery Source	Number of Tests		Percent Conducted
	Required	Conducted	
Company storage tanks	[REDACTED]	[REDACTED]	63%
DTL	[REDACTED]	[REDACTED]	51%
Total	[REDACTED]	[REDACTED]	54%

Source: OIG analysis of Operations department data

⁹ Amtrak, Standard Maintenance Procedure 22403, Fuel Oil Sampling, January 28, 2013.

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Company officials told us that monthly tests were not conducted in part because testing is not a primary responsibility of the personnel working in various departments who are assigned to test fuel. For example, the primary duty of a foreman in the Mechanical department assigned to test diesel fuel is to supervise repairs to locomotives and train cars. Moreover, the primary duty of a material control officer in the Procurement department assigned to test diesel fuel is to manage spare parts and supplies. Under the current organizational arrangement, the senior accountable official—Senior Manager, Fuel—does not have the authority to direct these personnel to test fuel since they work in other departments and report to other officials.

Because the company's fuel sampling policy divides responsibility for fuel sampling across multiple departments, no senior manager has the authority for ensuring that this testing is conducted across the organization in accordance with company policy. According to management control standards for private organizations of the Committee of Sponsoring Organizations, assignment of authority and responsibility for key management functions must be clear to ensure accountability over functional areas. Without a senior accountable official, there is no assurance that the required monthly testing will be conducted in the future.

Records of Corrective Actions Taken in Response to Testing Are Not Being Maintained

Company policy requires the Mechanical department to provide recommendations to the Operations department on the corrective actions to take in response to critical test results (exceeding a 5 percent tolerance range for at least 1 of the properties tested). However, it does not require the Mechanical or Operations departments to maintain records of the recommendations provided or corrective actions taken. Thus, we could not verify what actions, if any, were taken in response to the sub-standard fuel deliveries noted below.

We examined the results of the [REDACTED] diesel fuel tests conducted from January 1, 2014 through December 31, 2016 and found that [REDACTED] (12 percent) were rated critical:

- **Company storage tanks.** Our analysis showed that 27 of the tests rated critical were from fuel delivered to company storage tanks. These 27 fuel deliveries were made by 5 suppliers. The test results revealed that the fuel did not meet specifications, primarily because it did not meet the cloud or pour point

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specifications.¹⁰ A Mechanical department engineer told us that in many instances an additive was introduced to correct the problem; however, the company did not document these corrective actions. This official also told us that two company storage tanks were emptied because of contamination: (1) in January 2014, a supplier had to empty a storage tank in [REDACTED] because of contaminated fuel, and (2) in January 2016, a supplier had to empty a storage tank in [REDACTED]. Both suppliers replaced the fuel at no cost to the company, according to this official.

- **DTL deliveries.** The remaining 55 critical test results were from fuel delivered at DTL locations, which were made by 14 suppliers. The test results revealed that the fuel did not meet specifications, primarily because it did not meet the cloud or pour point specifications. Mechanical department officials stated that no corrective actions were recommended or taken because the fuel had already been used by the time the test results were known. These officials noted that fuel delivered by DTL is normally consumed within a day or two of delivery, and the turnaround time for receiving test results is 10 to 15 days.

We identified some differences in the company's DTL fuel-testing practices and those of other railroads. For example, officials from one Class I railroad told us they test all of the pipeline, truck, and storage tank fuel deliveries through their own lab. They receive diesel fuel test results from this in-house lab within 21 days—within 4 days if they suspect they have a fuel quality problem. They also test equipment such as fuel caps and filters to ensure that the equipment is working properly. Officials from another Class I railroad told us they conduct no testing of DTL-supplied fuel because the railroad has not experienced any issues with poor-quality DTL fuel deliveries. These officials told us that conducting tests and managing the administrative workload would be burdensome and would not be a prudent use of corporate funds. They said they rely on other methods to ensure that they receive quality fuel, such as examining bills of lading¹¹ and other supplier records provided by DTL suppliers.

Suppliers Maintain Separate Fuel Inspection and Quality Control Systems

All of the company contracts for DTL fuel require contractors to maintain inspection and quality control systems for the fuel they deliver. The contracts also stipulate that

¹⁰ Cloud and pour point specifications refer to the temperatures below which diesel fuel loses its flow characteristics.

¹¹ A bill of lading provides the location, quantity, and specifications of the diesel fuel delivered.

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contractors must maintain records of the suppliers' inspections and quality control work and make these records available for company inspection for the performance period of the contract. Thus, if these records are maintained suitably, the company could use them to assess the quality of supplier deliveries.

As noted above, the company conducts its own tests of DTL fuel, but the company does not receive the test results until after the fuel is consumed, which diminishes the value of this testing. For example, as we reported in July 2012, three of the eight locomotives that were fueled with substandard fuel failed within three hours after being refueled in [REDACTED].¹² Therefore, the company could use the supplier inspection and quality control records, with occasional company spot checks, to help monitor the quality of DTL fuel deliveries over time. Occasional spot checks of the contractor's quality control systems would provide additional assurances that proper records are being maintained, and that fuel deliveries meet contractual standards for fuel quality. We estimate that the company could save \$187,500 annually if it relied on supplier inspections and quality control systems to help ensure the quality of fuel deliveries rather than conducting separate tests of DTL fuel.¹³

CONCLUSIONS

By consolidating some or all of its [REDACTED] supplier fuel contracts, the company could better leverage its purchasing power to save money on its fuel purchases. Based on the amount of fuel the company purchased in FY 2016, we determined that a 10 to 20 percent reduction in fuel costs could save the company \$9.2 million to \$18.4 million annually. Further, eliminating the company's DTL tests and relying on suppliers' inspection and quality control systems to ensure quality, with occasional spot checks, could save an additional \$187,500 annually. In addition, strengthening management controls by enhancing the authority of the senior accountable official responsible for overseeing fuel deliveries would help ensure that the fuel in company storage tanks is tested regularly, and that adequate records of all corrective actions taken as a result of these tests are maintained.

RECOMMENDATIONS

To help strengthen management and oversight of diesel fuel, we recommend that the

¹² See Management Information Report: Amtrak Diesel Fuel Sampling/Testing Procedures Need Strengthening, Office of Investigations, July 19, 2012.

¹³ This estimate is based on the company conducting 300 tests at DTL sites annually at \$ [REDACTED] per test.

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Executive Vice President/Chief Operating Officer and the Executive Vice President/Chief Administrative Officer direct the Vice President/Safety, Compliance, and Training, and the Vice President, Procurement, to work together to:

1. Identify opportunities to achieve cost savings by exploring the possibility of consolidating some or all of the company's diesel fuel contracts to better leverage its purchasing power and obtain discounts available on larger volume purchases.
2. Assess whether the company could eliminate testing of diesel fuel at DTL locations and instead rely on suppliers' internal inspection and quality control systems, with occasional company spot checks, to provide assurance that DTL supplier fuel meets company quality standards.

To enhance oversight, and help identify any potential quality concerns about individual fuel vendors, we recommend that the Executive Vice President/Chief Operating Officer direct the Vice President/Safety, Compliance, and Training to update the diesel fuel policy to:

3. Provide the Senior Manager, Fuel, with the necessary authority to ensure that the monthly testing is being conducted at company storage tanks.
4. Require the Senior Manager, Fuel, to maintain records of any recommendations made and corrective actions taken based on critical test results of diesel fuel at company storage tanks.

MANAGEMENT COMMENTS AND OIG ANALYSIS

The company's Executive Vice President, Chief Operating Officer and the Executive Vice President, Chief Administrative Officer, provided comments on a draft of this report on August 3, 2017. These officials agreed with two of our recommendations and partially agreed with the remaining two. The management response to our draft report identified planned actions that addressed the intent of our recommendations and included implementation dates for all recommendations. The company's planned actions are summarized below.

- **Recommendation 1:** Management agreed with our recommendation to identify opportunities to achieve cost savings by exploring the possibility of consolidating some or all of the company's diesel fuel contracts. This will help the company to better leverage its purchasing power and obtain discounts

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available on larger volume purchases. The Procurement department plans to analyze the potential savings available from consolidating some or all of the existing diesel fuel contracts in order to obtain discounts on larger volume purchases. Specifically, management reported that the department plans to conduct one solicitation for five geographic regions in order to complete a thorough evaluation that will enable them to conduct a pricing analysis. This will allow the company to compare multiple strategic pricing structures in order to maximize potential cost savings.

- **Recommendation 2:** Management partially agreed with our recommendation to assess whether the company could eliminate testing of diesel fuel at DTL locations and instead rely on suppliers' internal inspection and quality control systems, with occasional company spot checks. The Mechanical department agreed to test DTL locations quarterly, rather than monthly, to provide assurance that DTL supplier fuel meets company quality standards. While this action will allow the company to realize some savings, we continue to question the merits of conducting quarterly testing given that the fuel will be consumed before the results are known.
- **Recommendation 3:** Management partially agreed with our recommendation to provide the Senior Manager, Fuel, with the necessary authority to ensure that testing is being conducted at company storage tanks and DTL locations. The company indicated that the Vice President, Transportation, and the Master Mechanics in the Operations department, rather than the Senior Manager, Fuel, will have this authority. The company plans to revise its "Diesel Fuel Procedure, Number 3.25.1" to reflect this change. We believe this proposed action meets the intent of our recommendation to identify a senior accountable official for testing.
- **Recommendation 4:** Management agreed with our recommendation to require the Senior Manager, Fuel, to maintain records of any recommendations made and corrective actions taken based on critical test results of diesel fuel at company storage tanks. The company will direct the Mechanical Engineer to maintain records of all recommendations for corrective actions. The Procurement Lead Contract Administrator will be responsible for maintaining records of all correspondence to and from suppliers regarding corrective actions taken based on critical test results.

For management's complete response, see Appendix C.

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APPENDIX A

SCOPE AND METHODOLOGY

This report provides the results of our audit to assess the company's management controls for purchasing, delivering, and testing diesel fuel.

The scope of our work included diesel fuel purchases from FY 2014 through FY 2016. We met with officials from departments that have some responsibility for diesel fuel: Operations, Procurement, Finance, and Mechanical. We conducted our audit work from September 2016 through June 2017 in in [REDACTED].

Our methodology to assess the company's management controls for purchasing, delivering, and testing fuel included reviewing the company policies and procedures for testing diesel fuel. We reviewed the [REDACTED] contracts with vendors that provide diesel fuel to the company's fueling locations—including storage tanks, DTL, and host railroads. We obtained data on the tests conducted from January 2014 through December 2016 for each fuel location from the senior manager, Operations department. To obtain information of corrective actions taken and the records maintained to document these actions, we interviewed the engineer in the Mechanical department responsible for reviewing test results. We also observed diesel fuel deliveries at company storage tank locations in [REDACTED] and [REDACTED] and DTL locations in [REDACTED] and [REDACTED]. In assessing purchasing practices, we focused on delivery fees since volume discounts on the base price-per-gallon paid are not available under current company contracts which use market price indexes to establish the purchase price for fuel.

To identify leading practices for purchasing, delivering and testing diesel fuel, we (1) interviewed officials from BNSF Railway, Union Pacific Railroad, and Norfolk Southern Corporation Class I railroads, (2) reviewed practices used by international and domestic passenger air carriers and inland and global marine shippers, and (3) researched the American Productivity and Quality Center's benchmarking and leading practices database.

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

Certain information in this report has been redacted due to its sensitive nature.

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obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Internal Controls

We reviewed the diesel fuel policy and procedures to identify the management controls in place for delivering and testing diesel fuel. For the controls over delivery of diesel fuel, we observed a vendor use the RYDMS to deliver fuel in [REDACTED] and tested user access to the systems in [REDACTED] and [REDACTED]. For testing, we reviewed the controls in place for tracking the monthly testing of the diesel fuel. We identified internal control weaknesses that are significant in the context of the audit objectives and that contributed to deficiencies cited in this report. This report identifies opportunities for enhancing the company's management controls over testing.

Computer-Processed Data

We obtained data on diesel fuel purchases for FY 2014 through FY 2016 from the company's SAP system. We determined that for the purposes of our audit the data were reliable.

Prior Audit Reports

In conducting our analysis, we reviewed and used information from the following report:

- *Management Information Report: Amtrak Diesel Fuel Sampling Testing Procedures Need Strengthening*, July 19, 2012.

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Acquisition and Procurement:
 Draft Audit Report for Project No. 019-2016

APPENDIX C

Management Comments

NATIONAL RAILROAD PASSENGER CORPORATION

Memo



Date	August 3, 2017	From	Scot Naparstek <i>EVP/Chief Operating Officer</i> DJ Stadler <i>EVP/Chief Administrative Officer</i>
To	Stephen Lord Assistant Inspector General Audits	Department	Operations and Administration
		cc	Eleanor D. Acheson <i>EVP/General Counsel and Corporate Secretary</i> Bernard Reynolds <i>VP Procurement and Logistics</i> David Nichols <i>VP Safety, Compliance and Training</i> Mario Bergeron <i>VP Chief Mechanical Officer</i> Matthew Gagnon <i>Senior Director Risk Management & Controls</i>
Subject:	Draft Report 019-2016: Acquisition and Procurement: Improved Management of Diesel Fuel Program Could Lead to Cost Savings		

This memo is in response to the Draft Audit Report for Project No. 019-2016, July 2017, entitled *Acquisition and Procurement: Improved Management of Diesel Fuel Program Could Lead to Cost Savings*.

Thank you for assessing the company's management controls for purchasing, delivering, and testing diesel fuel. We appreciate this opportunity to respond to the OIG recommendations. As indicated in our responses, we at least partially agree with all of the recommendations and have initiated actions to address each in a timely manner.

Recommendation 1:

Identify opportunities to achieve cost savings by exploring the possibility of consolidating some or all of the company's diesel fuel contracts to better leverage its purchasing power and obtain discounts available on larger volume purchases

Management Response/Action Plan: Management agrees with this recommendation. The Procurement & Logistics Department will analyze the potential savings available by consolidating some or all of our existing diesel fuel contracts in order to obtain discounts on larger volume purchases. Procurement will conduct one solicitation, for the five regions listed below in order to complete a thorough evaluation.

- Northeast
- Southern and Gulf Coast
- Central and surrounding area (Chicago and supporting IDOT fueling locations)

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- West Coast
- Pacific Northwest

Bidders will be permitted to submit three tiers of pricing:

- National - Bidder must bid on all locations nationwide
- Regional - Bidder must bid on all locations within the specified region
- Emergency or Back-Up support - In the event an award is made to a national or regional suppliers, secondary providers are identified at each location in the event of an emergency or for when a back-up supplier is needed. This is also beneficial to have this back up supplier for coverage in the event that a supplier's contract is terminated.

This approach will enable Amtrak to compare multiple strategic pricing structures in order to maximize our potential cost savings.

Responsible Amtrak Official(s): Vice President and Chief Procurement & Logistics Officer

Target Completion Date: January 31, 2018

Recommendation 2:

Assess whether the company could eliminate testing of diesel fuel at DTL locations and instead rely on suppliers' internal inspection and quality control systems, with occasional company spot checks, to provide assurance that DTL supplier fuel meets company quality standards.

Management Response/Action Plan:

Management partially agrees with this recommendation. The Mechanical Department agrees to test all locations quarterly (once every three months) to provide assurance that fuel suppliers meet company quality standards. Furthermore, if a suppliers' test indicates a critical result, the supplier's product will be tested for an additional three months.

This approach will enable Amtrak to ensure supplier fuel meets quality standards, and realize some of the potential savings identified in the Audit Report for Project No. 019-2016.

The Amtrak Equipment Maintenance Department Standard Maintenance Procedure, SMP Number 22403, entitled Fuel Oil Sampling, will be up-dated to reflect this change.

Responsible Amtrak Official(s): Chief Mechanical Officer

Target Completion Date: September 30, 2017

Recommendation 3:

Provide the Senior Manager Fuel with the necessary authority to ensure that the monthly testing is being conducted at company storage tanks.

Management Response/Action Plan: Amtrak partially agrees with this recommendation. The Master Mechanics and the Vice President Transportation have the authority to ensure the Quarterly testing is being conducted at company storage tanks and direct to locomotive (DTL) locations. The Senior

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Manager Fuel will provide the Master Mechanics and the Vice President Transportation, or their designees, with the fuel sampling log results on a regular basis.

The Vice President Safety, Compliance and Training will direct the Senior Manager Fuel to revise the Diesel Fuel Procedure, Number 3.25.1, and submit the revised Procedure through Staff Summary to reflect this change.

Responsible Amtrak Official(s): Vice President Transportation, Vice President Safety, Compliance and Training, and Chief Mechanical Officer

Target Completion Date: September 30, 2017

Recommendation 4:

Require the Senior Manager Fuel to maintain records of any recommendations made and corrective actions taken based on critical test results of diesel fuel at company storage tanks.

Management Response/Action Plan: Amtrak Management agrees with this recommendation. Not only will the Senior Manager Fuel continue to maintain records of all fuel sample results, the Senior Manager Fuel will expand the access to the Fuel Samples shared drive to the Mechanical Engineer, Senior Manager Equipment Engineering and the Lead Contract Administrator.

Mechanical Engineering is responsible for recommending corrective action to be taken as a result of a critical fuel result to the Procurement Lead Contract Administrator and Senior Manager Fuel. The Mechanical Engineer will document and forward the recommendation and subsequent correspondence to Fuel Management to save in the newly expanded share drives.

The Procurement Lead Contract Administrator will be responsible for requesting the appropriate corrective action(s) from the suppliers based on the recommendation of Mechanical Engineering. The fuel supplier response(s) will be notated in the contract file and forwarded to the Senior Manager Fuel for upload in the Fuel Samples shared drive.

Responsible Amtrak Official(s): Executive Vice President, Chief Operations Officer

Target Completion Date: September 30, 2017

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APPENDIX D

Acronyms and Abbreviations

DTL	directly to locomotives
FY	fiscal year
GAO	Government Accountability Office
OIG	Amtrak Office of Inspector General
RYDMS	Rail Yard Data Management System
the company	Amtrak

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APPENDIX E

OIG TEAM MEMBERS

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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.

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