



OFFICE of INSPECTOR GENERAL
NATIONAL RAILROAD PASSENGER CORPORATION

INFORMATION TECHNOLOGY:

Improving Cybersecurity and Resiliency of Train Control Systems Could Reduce Vulnerabilities

OIG-A-2019-008 (Summary) | July 9, 2019

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Memorandum

To: Scot L. Naparstek
Executive Vice President / Chief Operations Officer
Christian Zacariassen
Executive Vice President / Chief Information Officer

From: Eileen Larence *Eileen Larence*
Acting Assistant Inspector General, Audits

Date: July 9, 2019

Subject: *Information Technology: Improving Cybersecurity and Resiliency of Train Control Systems Could Reduce Vulnerabilities (OIG-A-2019-008)*

The Office of Inspector General (OIG) conducted an audit of Amtrak's (the company) train control systems. Our audit objective was to assess the company's efforts to identify and address vulnerabilities in these systems and to ensure resiliency.

BACKGROUND

The company uses train control systems to dispatch and monitor more than 2,000 trains daily across its network of more than 500 stations and 21,000 miles of track. Given their criticality to safe train operations, we assessed the company's efforts to identify and address the train control systems' cybersecurity and resiliency. We compared the company's efforts in both areas with standards from the National Institute of Standards and Technology.

SUMMARY OF RESULTS

We identified areas where the cybersecurity and resiliency of the company's train control systems could be improved and recommended certain improvements to management.

MANAGEMENT COMMENTS AND OIG ANALYSIS

In commenting on a draft of this report, the Executive Vice President / Chief Operations Officer and Executive Vice President / Chief Information Officer agreed with our recommendation and identified actions that the company is taking or plans to take to address it.

SCOPE AND METHODOLOGY

We performed our audit work from January 2018 through March 2019 in Washington, D.C.; Philadelphia, Pennsylvania; Wilmington, Delaware; New York City, New York; and Boston, Massachusetts. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Given the sensitive nature of the report's information, the results have been summarized in this public version of the report.

OIG TEAM MEMBERS

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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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