ORANGE COUNTY TRANSPORTATION AUTHORITY
INTERNAL AUDIT DEPARTMENT

OCTA

Fleetwatch Fluid Management System

Internal Audit Report No. 18-506

April 16, 2018

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Table of Contents

Conclusion

The Internal Audit Department (Internal Audit) has completed an audit of the Fleetwatch Fluid Management System (Fleetwatch). Based on the audit, controls in place over the dispensing of fuel and other consumables are adequate; however, Internal Audit made one recommendation to enhance system access controls.

Background

In 2014, the Orange County Transportation Authority (OCTA) purchased and implemented Fleetwatch, which controls and tracks the dispensing of fuels and consumables at the various OCTA base locations. Fuels and consumables are dispensed at five base locations, by both OCTA employees and third-party contractors. Fleetwatch tracks all fuel types, including liquified natural gas, compressed natural gas, diesel, and unleaded gasoline, as well as, oil, coolant, and transmission fluid. Fleetwatch also facilitates the tracking of vehicle mileage, monitoring of fuel and fluid usage, scheduling of preventative maintenance, and reconciliation of fluid inventories.

The Maintenance Resource Management Department within the Transit Division (Tranist) is responsible for system administration, including assignment of user access to the system and authorization of vehicles for fueling. The system requires two-factor authentication to fuel a vehicle. The first step involves validation that the employee is authorized as a fueler in the system. To initiate the fueling process, an employee must tap their identification badge on a device at the fuel island. The second step involves verification of the vehicle to be fueled. OCTA vehicles are equipped with devices that interface with the fuel islands. Through the interface, Fleetwatch will verify that the vehicle is an authorized OCTA vehicle and automatically unlock that vehicle's required fuel type and related consumables, such as oil, coolant, and other fluids.

Objectives, Scope, and Methodology

The <u>objectives</u> were to assess the adequacy and effectiveness of controls in place over the dispensing of fuel and other consumables at OCTA.

The <u>methodology</u> consisted of evaluating system access to Fleetwatch for reasonableness, testing of controls over the authorizing of fuelers in the Fleetwatch system, and testing fueling activity and alert notifications during system interruptions or manual events. Detailed analytical testing and data mining on Fleetwatch system data was also performed to detect missing or unusual data, anomalies such as abnormal fuel consumption, and unauthorized fuelers or fueling activity.

The <u>scope</u> is limited to fueling transactions at OCTA facilities and related data captured and maintained by the Fleetwatch fluid management system. The scope was limited to fueling transactions for calendar years 2016 and 2017, with an emphasis on 2017 activity.

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.

Audit Comment, Recommendation and Management Response

System User Access Rights

Internal Audit identified eight users designated as system administrators and another 13 employees designated as power users. In addition, 13 users were no longer employed at OCTA.

Per the National Institute of Standards and Technology (NIST) Principles and Practices, organizations should periodically review user account management on a system. These reviews should examine the levels of access for each user, conformity with the concept of least privilege, and whether all accounts are still active. The concept of least-privilege advocates limiting rights to levels consistent with assigned functions and activities of the user.

Recommendation:

Internal Audit recommends that management reduce the number of administrators and power users in the system. In addition, management should implement procedures for periodic review of user access rights to ensure only active employees are assigned access and to assess the reasonableness of the access level assignments.

Management Response:

Transit management will develop procedures as outlined in the recommendation made by Internal Audit regarding access rights. Along with this activity, Transit management will evaluate the current number of administrators and power users in the system, identify positions that are essential as system administrators and power users, and work to adjust the list of those currently identified as system administrators and power users to match the results of the evaluation.