



OFFICE OF
INSPECTOR GENERAL

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

May 20, 2015

TO: Stephen L. Cohen, Associate Director, Division of Enforcement, and Chair,
TCR Oversight Board
Mark J. Flannery, Director and Chief Economist, Division of Economic and
Risk Analysis
Jeffery Heslop, Chief Operating Officer, Office of the Chief Operating Officer

FROM: Carl W. Hoecker, Inspector General, Office of Inspector General

SUBJECT: *Final Management Letter: Observations Noted During TCR System Audit
Support Engagement*

The U.S. Securities and Exchange Commission (SEC or agency) Office of Inspector General (OIG) contracted Williams, Adley & Company-DC, LLP (Williams Adley) to complete an audit support engagement. The purpose of the engagement was to assist the OIG in planning an audit of the SEC's Tips, Complaints, and Referrals Intake and Resolution System (TCR system). Neither the OIG nor Williams Adley conducted an audit in conformance with generally accepted government auditing standards. However, based on the work performed, the OIG is reporting observations about the TCR system and the project to modernize the system. We are also requesting that the SEC provide information about its plans to implement the redesigned TCR system.¹

Executive Summary

In September 2013, the SEC awarded to Guident Technologies, Inc. (Guident)² a contract to bolster the flexibility, agility, and adaptability of the SEC's TCR system. According to agency officials, the current system is functioning and meeting the SEC's needs. However, system enhancements will provide more flexible and comprehensive intake, triage, resolution tracking, searching, and reporting functions. Due to various factors, including unacceptable contractor performance and a lack of adequate contractor and government resources to timely address concerns, the project has experienced schedule delays and cost increases. The Tips, Complaints, and Referrals (TCR) Oversight Board (Board) – a decision-making body comprised of senior officers from across the agency – has managed the project and the SEC has taken action to address contractor performance, including issuing Guident a cure notice, requiring a corrective action plan, and converting contract milestones from time and materials

¹ The full version of this management letter includes non-public information about the SEC's information security program and therefore could not be publicly released. To create this public version, the OIG redacted (deleted) the non-public information and indicated where those redactions were made.

² Guident is a wholly owned subsidiary of CRGT, Inc.

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to firm fixed price. Although the Board has taken action, as of the date of this management letter, the contract value has increased by nearly \$4 million (from approximately \$7.2 million to approximately \$11.0 million)³ and the project is at least 10 months behind schedule.

[REDACTED]

Background

The SEC's mission is to protect investors; maintain fair, orderly, and efficient markets; and facilitate capital formation. In pursuing its mission, the SEC encourages the public to file complaints or submit tips of possible securities law violations, broker or firm misconduct, or any unfair practices in the securities industry that pose a risk of harm to investors. According to the SEC, it receives tens of thousands of TCRs every year from multiple sources in a variety of ways.⁵ These include TCRs from the general public, attorneys, and members of the regulated community, including broker-dealers, investment advisers, self-regulatory organizations, and public companies.

In 2009, the SEC reviewed the sources of TCRs and the decentralized nature of its processes for receiving, recording, tracking, and acting on them. Based on this review, the agency determined that it needed a centralized system for TCR intake, triage, and resolution. In March 2011, the SEC deployed the current TCR system, which provides:

- full lifecycle processing of TCRs from intake through processing and resolution;
- workflow capabilities for workload management;

³ As of March 11, 2015, the agency had obligated approximately \$8.1 million and expended about \$4 million of the total contract value.

⁴ The National Institute of Standards and Technology, Federal Information Processing Standards Publication 199, *Standards for Security Categorization of Federal Information and Information Systems*, defines the following three levels of potential impact should there be a breach of security (i.e., loss of information or information system confidentiality, integrity, or availability): (1) a limited adverse effect (low); (2) a serious adverse effect (moderate); or (3) a severe or catastrophic adverse effect (high).

⁵ SEC Tips, Complaints, and Referrals Oversight Board Charter, October 25, 2012.

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- a suite of reporting capabilities; and
- integration with other systems, including the SEC's Investor Response Information System (IRIS).

The TCR system has two main components: (1) the external TCR intake application,⁶ and (2) the internal TCR application.⁷ The SEC's Division of Economic and Risk Analysis (DERA) is the system's business owner, while the SEC's Office of Information Technology (OIT) is the system owner.⁸ The TCR Oversight Board meets regularly and provides high-level strategic direction and governance to SEC management, and monitors and manages the agency's TCR program.⁹

In recent congressional testimony, the SEC Chair described the current TCR system as "enormously successful," and stated that the system allows the agency to more effectively deal with TCRs in a way that was not possible prior to the 2008 financial crisis.¹⁰ Although successful, SEC stakeholders determined that a more robust, flexible, and scalable system was needed to better support the agency's needs, mission, and policies as they evolve over time. On July 3, 2013, the SEC released the TCR system redesign project Request for Quotation, which stated that the goals of the project are to develop and deploy a system that:

- provides flexible and comprehensive intake, triage, resolution, searching, and reporting functions with full auditing capabilities;
- is role-based, supports configurable question-driven intake questionnaires, and provides users with context-based help as they navigate the system;

⁶ The external TCR intake application is a user interface on the SEC's public website that allows the public to submit TCRs.

⁷ The internal TCR application includes an internal intake module, TCR management and resolution process, a search component, and a reporting component.

⁸ The business owner serves as a steward, with the information system owner, in ensuring the confidentiality, integrity, and availability of an information system. As the TCR system business owner, DERA is subject to the TCR Oversight Board's feedback and direction. The information system owner (or system owner) is responsible for the overall procurement, development, integration, modification, operation, and maintenance of an information system.

⁹ The TCR Oversight Board is chaired by a representative from the Office of the Chair and includes a senior representative from each of the following SEC divisions and offices: (1) the Office of the Chair; (2) the Office of the Chief Operating Officer; (3) the Division of Enforcement; (4) DERA; (5) the Office of Compliance Inspections and Examinations; (6) the Office of Investor Education and Advocacy; (7) the Division of Corporation Finance; (8) the Division of Trading and Markets; and (9) OIT. There are also two rotating members representing the SEC's regional offices.

¹⁰ Chair White's April 15, 2015, testimony on the SEC's fiscal year 2016 budget request before the Subcommittee on Financial Services and General Government, Committee on Appropriations, United States House of Representatives (33:42 mark), which can be accessed over the Internet at: <http://appropriations.house.gov/calendararchive/eventsingle.aspx?EventID=394120> (last accessed on April 28, 2015).

- includes pre-processing workflow and whistleblower information tracking modules;
- enables administrators to tailor the system’s workflows as they evolve; and
- accounts for the SEC’s steady growth and expansion of its user base, data repositories, and applications.

In September 2013, the SEC awarded to Guident a contract to (1) elicit requirements, (2) design, and (3) deploy the redesigned TCR system. Beyond these initial three phases, the SEC anticipates additional phases will be executed on a periodic basis to address needed system fixes and functional enhancements.

While under contract with the OIG between September and December 2014, Williams Adley interviewed key SEC management personnel and reviewed relevant documents (including policies, procedures, system documentation, and contract files) to gain an understanding of the TCR system and identify risks, controls, stakeholders, and applicable criteria. In its February 26, 2015, report to the OIG, Williams Adley also identified limitations the OIG may encounter if it conducts an audit related to the TCR system. To follow up on information obtained by Williams Adley, between March and April 2015, the OIG interviewed personnel from the SEC’s Office of the Chair, Office of Acquisitions, Office of the Chief Operating Officer, DERA, and OIT, as well as the Chair of the TCR Oversight Board. We also reviewed (1) documents supporting contract actions executed since January 2015, (2) the results of system security assessments and penetration testing performed in December 2014, and (3) TCR Oversight Board meeting minutes and agendas from October 2013 to March 2015. Although the work performed did not constitute an audit in conformance with generally accepted government auditing standards, we believe the observations noted warrant management’s attention and response.

Results

The TCR System Modernization Project Has Experienced Difficulties and Delays, and Final User Acceptance and System Implementation Dates Have Not Been Established.

The TCR system modernization project – one of the SEC’s multi-year, mission-critical technology projects – has experienced several difficulties. These difficulties have included unacceptable contractor performance, such as ineffective defect mitigation, ineffective project management and control, inadequate project staffing and resources, and issues with Guident’s custom coding. In addition, according to agency memoranda, the SEC did not provide a sufficient testing environment and other resources to address concerns in a timely manner. The redesigned system was initially scheduled to undergo user acceptance testing in May 2014, in advance of the original implementation (or “go live”) date of July 21, 2014. However, because of the difficulties encountered, user acceptance has been delayed, thereby delaying subsequent project milestones, including quality control testing¹¹ and system implementation.

¹¹ OIT Quality Control Test Center staff performs quality control testing to assess system compliance with usability, functionality, and basic security requirements. Compliance with Section 508 of the Rehabilitation Act (29 U.S.C. 794d) is also assessed.

At present, the project is at least 10 months behind schedule, and the most current milestones for the SEC to accept the redesigned TCR system and complete quality control testing (planned for March 25, 2015, and April 14, 2015, respectively) were not met. Therefore, there is insufficient time for the agency to implement the redesigned TCR system on May 25, 2015 (the system's most recent "go live" date).

While the architecture of the current and redesigned TCR systems is not vastly different, the SEC's Request for Quotation stated that it would take a vendor 9 months to conduct a detailed analysis, undertake architecture and design, and implement and deliver a redesigned TCR system. Guident accepted this timeframe. Given the complexity of the technologies involved and the level of effort required, the project timeframes may have been overly aggressive.

Due in part to the difficulties encountered, the SEC's contract with Guident has been repeatedly modified and the contract value has increased by nearly \$4 million, from approximately \$7.2 million to approximately \$11.0 million. As of March 11, 2015, the SEC had obligated approximately \$8.1 million and expended only about \$4 million on the project. Also, as discussed further below, the SEC modified the contract so that Guident will receive no further payments until the agency accepts the redesigned TCR system. If the contract is terminated for cause as a result of Guident's failure to meet the SEC's milestone acceptance criteria, the agency will be entitled to a full repayment of all prior unliquidated milestone payments already made.

The base contract, which had a period of performance of 9 months (October 9, 2013, to July 8, 2014), included the following time and materials contract line items (CLINs) totaling nearly \$3.0 million:

0001 – Requirements gathering and detailed analysis;

0002 – Development of the TCR system architecture and design; and

0003 – Development and implementation of the TCR system.

The contract also included options for iterative releases to incorporate further refinements and capabilities, and operations, monitoring, and support services. The base contract states that if all options are exercised, the options will be performed between July 9, 2014, and January 8, 2017, and will add approximately \$4.3 million for a total contract value of approximately \$7.2 million.¹²

Minutes from TCR Oversight Board meetings held between October 2013 and January 2014 indicate that, during that time, project activities and deliverable reviews were on track and vendor collaboration and progress remained positive. The project successfully passed a Technical Review Board, a conference room pilot was conducted with positive feedback, and work to satisfy CLINs 0001 and 0002 was largely complete and submitted for review with no

¹² Due to rounding, the amounts cited for CLINs (nearly \$3.0 million) and options (approximately \$4.3 million) do not equal the amount cited for the total contract value (approximately \$7.2 million).

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issues noted.¹³ However, according to the minutes from the February 20, 2014, TCR Oversight Board meeting, “vendor project management risks [unspecified] have begun to surface” and were raised to Guident’s management. At the March 10, 2014, Board meeting, it was reported that significant refinement and collaboration had resulted in an achievable schedule, and the project was “back on schedule and on budget.” Then, at the Board’s April 9, 2014, meeting, it was reported that the project was “tracking aggressively” for a July 2014 deployment of the redesigned TCR system, and ongoing vendor project management risks were being closely monitored.

User acceptance testing was originally scheduled to occur in May 2014. On May 30, 2014, the SEC signed the first contract modification, which extended the period of performance for developing and implementing the redesigned TCR system from July 8, 2014, to August 22, 2014, at no additional cost. Then, on June 3, 2014, the SEC signed the second modification to exercise the first two options for iterative releases and operations, monitoring, and support services.

According to the SEC officials we interviewed, initial user acceptance testing was delayed about 2 months until July 2014 and it was at that time that significant concerns were raised, primarily with Guident’s extensive use of custom coding instead of agreed-to out-of-the-box solutions. To address the situation and help identify deficiencies that must be corrected for the redesigned TCR system to function properly, OIT began holding weekly meetings with Guident’s management. The SEC also tasked another contractor – at no additional cost to the TCR project – to conduct an independent code review, which identified additional defects with Guident’s coding.

On July 22, 2014, the SEC signed the third modification to extend the period of performance by another month at an additional cost of about \$888,479. An Office of Acquisitions memorandum that supports the contract modification states, “. . . the Tips, Complaints, and Referrals (TCR) system redesign project is being delayed due to system coding defects and inadequate contractor and government resources to fix bugs on time to proceed with User Acceptance Testing (UAT)”¹⁴

On August 14, 2014, the SEC issued to Guident a cure notice notifying the contractor of unacceptable performance and schedule delays endangering the TCR system modernization project. The agency requested a corrective action plan and timely resolution of the issues identified in the cure notice.

¹³ CLIN 0001 activities (planning, analysis, and validation) occurred between October 9, 2013, and November 18, 2013. CLIN 0002 activities (system architecture and design) occurred between November 19, 2013, and January 15, 2014. On January 13, 2014, the project passed the Technical Review Board. CLIN 0003 activities (system development) began on December 23, 2013, and were scheduled to end on April 23, 2014, so that testing and readiness could occur.

¹⁴ Memorandum for Record, “SECHQ1-12-A-0106 CALL 0001 TCR System Redesign Service: Mod 0003 Supplemental Agreement Within Scope,” July 14, 2014.

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The fourth contract modification was signed on September 15, 2014, and added another \$200,526 to the contract. The following week, on September 26, 2014, the fifth modification added \$2.7 million to the contract for required and optional phases of Guident's corrective action plan. The modification also converted the contract milestones from time and materials to firm fixed price and stated that Guident may not bill the SEC until the work identified in the corrective action plan is completed and accepted. Finally, the fifth modification established the following dates for the contract's three key milestones:

1. user acceptance (to be completed by December 17, 2014);
2. quality control testing (to be completed by January 21, 2015); and
3. redesigned TCR system "go live" (to be completed by March 10, 2015).

Then, on February 12, 2015, the sixth modification added another \$224,476 to the contract for a total increased contract value of approximately \$11.0 million.¹⁵ The modification also revised the corrective action plan, authorized and approved unliquidated contract financing payments, and incorporated Federal Acquisition Regulation clause 52.232-29, Terms for Financing of Provisions of Commercial Items (February 2002), which states that, if the contract is terminated for cause, the contractor shall repay the amount of unliquidated contract financing payments. An Office of Acquisitions memorandum that supports the contract modification states:

Since the execution of mod 0005 on 9/26/14, for implementing the [corrective action plan] to remedy and deliver the Tips, Complaints, and Referrals (TCR) system by 3/10/15, the project faced further technical and project delays caused by both the Government and the contractor. The major issues contributed [sic] to the project delays are the contractor's inability to fix system defects, conflicts in system environment and interface with Oracle software, and delay [sic] in providing the sufficient testing environment and resources by the Government.¹⁶

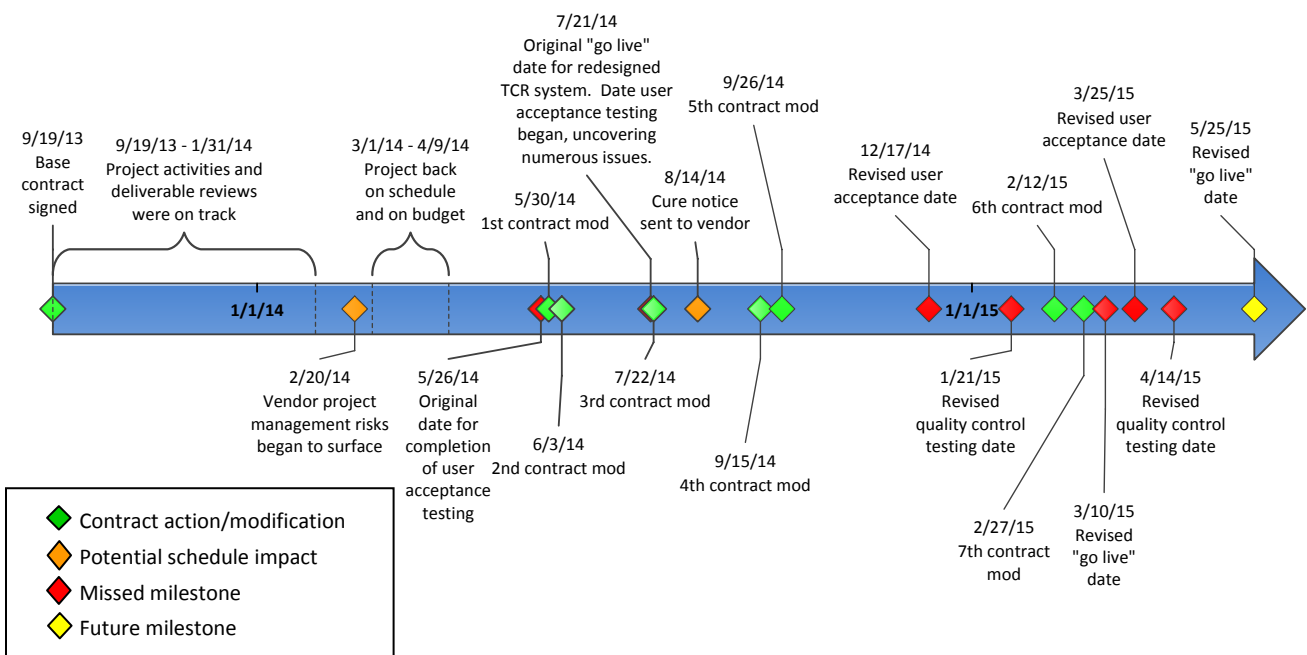
As a result of the continued technical and project delays, the sixth contract modification revised the dates for the contract's three key milestones. Specifically, user acceptance, completion of quality control testing, and the system's "go live" date were delayed until March 25, 2015, April 14, 2015, and May 25, 2015, respectively.

¹⁵ The amounts cited for the base contract value, plus options and modifications, equal approximately \$11.2 million. According to the Office of Acquisitions, the value of the CLINs was erroneously increased by an additional \$200,000 as part of the sixth contract modification. This clerical error has no impact on actual obligations and will be corrected in the next contract modification. As a result, we cite the contract value as approximately \$11.0 million.

¹⁶ Memorandum for Record, "SECHQ1-12-A-0106 CALL 0001 TCR System Redesign Service: Mod 0006 Supplemental Agreement within Scope," February 12, 2015.

These are the most current contract milestones¹⁷ and, because user acceptance and quality control testing did not occur when planned, there is insufficient time for the SEC to implement the redesigned TCR system as planned on May 25, 2015. The figure that follows depicts a timeline of the project actions, contract modifications, and milestones.

Figure. Timeline of TCR System Modernization Project Actions, Contract Modifications (Mods), and Milestones.



Source: TCR Oversight Board meeting minutes and contract files for the TCR system modernization project.

We commend the SEC for addressing the project’s development delays and minimizing the agency’s financial risk in the event of continued contractor non-performance. Doing so will increase the chances of obtaining a redesigned TCR system that fully meets the agency’s needs. However, as of the date of this management letter, the SEC has not accepted the redesigned TCR system and a final user acceptance date has not been established, resulting in uncertainty in the timeframe for implementing the redesigned TCR system.

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¹⁷ On February 27, 2015, a seventh modification was signed; it was administrative in nature and did not modify the contract’s period of performance or value.

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On May 1, 2015, we provided SEC management with a draft of our management letter for review and comment. In its May 15, 2015, response, management noted an inaccuracy on page 3. After reviewing management's comments, we corrected the statement in question. Management's comments are included as an attachment to this final management letter.

To help us determine whether further action by the OIG is warranted, we request that management provide to the OIG, no later than May 29, 2015, the following information:

1. The most current dates for user acceptance, quality control testing, and implementation of the redesigned TCR system. Also, please explain why the key milestones outlined in the sixth contract modification were missed, and describe the action(s) the SEC will take if these milestones are delayed again.

[REDACTED]

[REDACTED]

We appreciate management's cooperation and look forward to receiving the information requested above. If you have questions, please contact Rebecca L. Sharek, Deputy Inspector General for Audits, Evaluations, and Special Projects.

Attachment

- cc: Mary Jo White, Chair
Lona Nallengara, Chief of Staff, Office of the Chair
Erica Y. Williams, Deputy Chief of Staff, Office of the Chair
Luis A. Aguilar, Commissioner
Paul Gumagay, Counsel, Office of Commissioner Aguilar
Daniel M. Gallagher, Commissioner
Benjamin Brown, Counsel, Office of Commissioner Gallagher
Michael S. Piwowar, Commissioner

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Jamie Klima, Counsel, Office of Commissioner Piwowar
Kara M. Stein, Commissioner
Robert Peak, Advisor to the Commissioner, Office of Commissioner Stein
Anne K. Small, General Counsel, Office of the General Counsel
Timothy Henseler, Director, Office of Legislative and Intergovernmental Affairs
John J. Nester, Director, Office of Public Affairs
TCR Oversight Board Members (voting)
 Scott Bauguess, Deputy Director and Deputy Chief Economist, Office of the Deputy
 Director, Division of Economic and Risk Analysis
 Vincente L. Martinez, Chief, Office of Market Intelligence, Division of Enforcement
 Peter Driscoll, Managing Executive, Office of the Managing Executive, Office of
 Compliance Inspections and Examinations
 Mary S. Head, Deputy Director, Office of Investor Education and Advocacy
 Elizabeth Murphy, Associate Director, Office of the Associate Director (Legal)
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 Elizabeth Osterman, Counsel, Office of Chief Counsel, Division of Investment
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 Pamela Dyson, Chief Information Officer, Office of Information Technology
 Michele Layne, Regional Director, Office of the Regional Director, Los Angeles
 Regional Office
 Sharon B. Binger, Regional Director, Office of the Regional Director, Philadelphia
 Regional Office
Vance Cathell, Director, Office of Acquisitions
Michael Whisler, Assistant Director, Office of Acquisitions
Steven Fennell, Branch Chief, Information Technology Support, Office of Acquisitions
Darlene L. Pryor, Management and Program Analyst, Office of the Chief Operating
Officer

MEMORANDUM

May 15, 2015

To: Rebecca L. Sharek, Deputy Inspector General for Audits, Evaluations, and Special Projects, Office of Inspector General

From: Jeff Heslop, Chief Operations Officer

Stephen Cohen, Associate Director, Division of Enforcement

Mark Flannery, Chief Economist and Director, Division of Economic and Risk Analysis

Re: Management's Response to the Office of Inspector General's Management Letter: "Observations Noted During TCR System Audit Support Engagement"

Thank you for the opportunity to review the Office of Inspector General's Management Letter: "Observations Noted During TCR System Audit Support Engagement." In addition, we appreciate the courtesy your staff extended to us during the course of your Audit Support Engagement, and the opportunity you have given us to present the SEC Management's Response to your Management Letter.

The mission of the U.S. Securities and Exchange Commission is to protect investors. In pursuit of its mission, the SEC receives hundreds of thousands of incoming communications through a variety of means into each of the Commission's Divisions and Offices. These communications include tips, complaints, and referrals, which are, as you noted, effectively managed and triaged using our existing TCR System. The objective of TCR System Modernization is to enhance our current TCR System to improve its flexibility, scalability, and support the SEC's needs and policies as they evolve over time.

We take very seriously the task of Modernizing the TCR System, and we appreciate your collaborative approach with us in developing the recommendations. We also appreciate your recognition of the steps that we have taken to address the TCR modernization project's development delays and to minimize the agency's financial risk in the event of continued contractor non-performance. We note, however, an inaccuracy on page 3 of the Management Letter, which states, "[t]he TCR Oversight Board established a charter for the TCR system modernization project." The document you presented as evidence of the document's description, however, is not a charter established by the TCR Oversight Board. It is the TCR Modernization project charter, prepared by the project leads, to launch the TCR Modernization project. Following conversations with certain members of the project team and the TCR Oversight Board, we concluded that the charter of the TCR Oversight Board included implicitly

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the goals listed in the TCR Modernization project charter, so we chose not to execute the TCR Modernization project charter.

We remain committed to making the requisite improvements noted in your Management Letter.

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