



INSPECTOR GENERAL

U.S. Department of Defense

JUNE 5, 2014



Quality Control Review of PricewaterhouseCoopers, LLP FY 2012 Single Audit of Massachusetts Institute of Technology



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**INSPECTOR GENERAL
DEPARTMENT OF DEFENSE**
4800 MARK CENTER DRIVE
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June 5, 2014

The Audit Committee of
Massachusetts Institute of Technology

Vice President of Finance
Massachusetts Institute of Technology

Managing Director
PricewaterhouseCoopers, LLP

Audit Partner
PricewaterhouseCoopers, LLP

SUBJECT: Quality Control Review of PricewaterhouseCoopers, LLP FY 2012 Single Audit of
Massachusetts Institute of Technology (Report No. DODIG-2014-078)

We are providing this report for your information and use. We considered management comments on a draft of this report when preparing the final report. The management comments were responsive; therefore, additional comments are not required.

As the cognizant Federal agency for the Massachusetts Institute of Technology, we performed a review of the PricewaterhouseCoopers, LLP single audit and supporting working papers for the year ended June 30, 2012. The purpose of our review was to determine whether the single audit was conducted in accordance with auditing standards and the Office of Management and Budget Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

We appreciate the courtesies extended to the audit staff. For additional information on this report, please contact Ms. Carolyn R. Davis at (703) 604-8877 (DSN 664-8877).

A handwritten signature in black ink, appearing to read "R. Stone", is positioned above the printed name of the Deputy Inspector General.

Randolph R. Stone
Deputy Inspector General
Policy and Oversight

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Introduction

Objective

As the cognizant Federal agency for the Massachusetts Institute of Technology (MIT), we performed a review of the PricewaterhouseCoopers, LLP (PwC) single audit and supporting working papers for the audit period of July 1, 2011, through June 30, 2012. Our objective was to determine whether PwC conducted the single audit in accordance with generally accepted government auditing standards, the American Institute of Certified Public Accountants (AICPA) auditing standards, and the auditing and reporting requirements of Office of Management and Budget (OMB) Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations." Appendix A contains additional details on our criteria, scope, and methodology; and identifies prior quality control reviews. Appendix B lists the compliance requirements that PwC determined to be applicable to the FY 2012 audit.

Background

Massachusetts Institute of Technology

MIT is a private educational institute located in Cambridge, Massachusetts. Its mission is to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century. MIT also conducts research, primarily receiving funding from the Federal Government through grants and contracts. In addition, MIT operates the Lincoln Laboratory, a federally funded research and development center¹ sponsored by the Department of Defense that uses advanced technology to address problems of national security.

During FY 2012, MIT expended more than \$1.4 billion in Federal funds. Of the \$1.4 billion, MIT expended \$1.3 billion on one major program, the research and development cluster, including \$891 million expended on Department of Defense programs.

PricewaterhouseCoopers, LLP

PwC, a member firm of PricewaterhouseCoopers International Limited, provides a wide array of business services. Their services include auditing, business and Government consulting, and tax preparation and planning. PwC maintains its own system of internal

¹ A federally funded research and development center is an activity sponsored under a broad charter by a Government agency for the purpose of performing, analyzing, integrating, supporting, and managing basic or applied research and development, and that receives 70 percent or more of its financial support from the Government.

quality control over its accounting and auditing practices as required by the AICPA. PwC's office in Boston, Massachusetts, performed the MIT single audit for FY 2012.

Review Results

MIT complied with OMB Circular A-133 reporting requirements. PwC generally met auditing standards and Circular A-133 requirements, and no additional work is required for the FY 2012 single audit. However, we identified deficiencies related to the documentation of audit sampling, reliance on financial statement internal control testing, and the review of the special tests and provisions, subrecipient monitoring, and reporting compliance requirements that need to be addressed for future audits.

Management Comments and DoDIG Response

PwC agreed to take recommended actions. Management comments were responsive and no additional comments are needed. Management comments are included in their entirety at the end of the report.

Finding

Audit Documentation Needs Improvement

PwC did not adequately document its audit sampling used for testing internal controls and compliance with requirements determined to be direct and material for the research and development cluster. In addition, PwC's documentation of the Federal program audit did not always provide a clear description of audit procedures performed and evidence obtained to support its conclusions on the allowable costs/cost principles, special tests and provisions, subrecipient monitoring, and reporting compliance requirements. As a result, the PwC auditors were required to provide additional verbal explanations and documentation for us to conclude there was sufficient evidence to support audit conclusions on the research and development cluster.

Auditing standards require that audit documentation be appropriately detailed to provide a clear understanding of the work performed, the evidence obtained, and the conclusions reached. The documentation and audit evidence should be in sufficient detail to enable an experienced auditor with no previous connections to the audit to understand the nature, timing, extent, and results of audit procedures performed that support the significant judgments and conclusions. In addition, audit documentation should be appropriately organized to provide a clear link to the findings, conclusions, and recommendations.

Audit Sampling

PwC did not adequately document the audit sampling used to test internal controls and compliance with requirements determined to be direct and material for the research and development cluster. The working papers did not include a description of the sampled population or the basis used to determine the sample sizes necessary for the testing of internal controls and compliance. This information is necessary to provide a clear understanding of the audit procedures performed, and ensure that, those audit procedures are sufficient to support the significant judgments and conclusions on the research and development cluster.

The AICPA Audit Guide, "Government Auditing Standards and Circular A-133 Audits" (the Audit Guide)² contains guidance on sampling. The Audit Guide states that auditors

² The AICPA Audit Guide is an interpretative publication issued under the authority of the Auditing Standards Board. The members of the Auditing Standards Board have found this auditing guidance to be consistent with existing generally accepted auditing standards.

should (1) determine that the sampling unit and population are appropriate for the audit objectives, (2) verify the completeness of the population being tested, and (3) select a sample that is representative of the population. The Audit Guide also provides sampling considerations for auditors including the significance of the internal controls, inherent risk factors of the compliance requirement, and the desired level of assurance³ they expect to obtain from the compliance test for each direct and material compliance requirement. Although the working papers for planning and testing contained the resulting sample sizes, PwC did not include documentation on the population being tested and its evaluation of the criteria that would allow a reviewer to assess the adequacy of the sample sizes selected.

In response to our inquiries, PwC provided additional documentation and verbal explanations including a comprehensive evaluation of the criteria used to determine that the sample size selection process was appropriate. However, the documentation PwC provided was not included or referenced in the audit working papers. In the future, PwC should include or reference this documentation in the audit working papers.

Allowable Costs/Cost Principles

PwC did not adequately document in the working papers its reliance on the audit procedures performed in the financial statement audit to support conclusions on the allowable costs/cost principles compliance requirement in the audit of the research and development cluster. The working papers documented that the auditors relied on the payroll system internal control testing performed in the financial statement audit to conclude that payroll costs were properly reviewed and approved for the research and development cluster. However, the working papers did not provide a clear understanding of the specific audit procedures performed during the financial statement audit that supported the conclusions on the allowable costs/cost principles compliance requirement. We also noted that the planned sample sizes identified for testing the research and development cluster were different than the sample sizes tested in the financial statement audit. In addition, the items selected for testing during the financial statement audit included items not related to the research and development cluster. Therefore, it was not clear from the documentation in the working papers whether there was sufficient evidence to support conclusions on MIT's compliance with the allowable costs/cost principles requirement.

³ Desired level of assurance depends on the risk of material noncompliance remaining after considering other audit procedures, such as risk assessment, internal control testing, and substantive analytical procedures.

We had to obtain additional documentation and verbal explanations in order to conclude that the audit procedures performed were sufficient for the testing of internal controls and compliance with the allowable costs/cost principles requirement. Based on the additional information provided, we accept that there was sufficient evidence to support PwC's conclusions; however, for future audits, PwC should enhance documentation supporting its reliance on the testing performed in the financial statement audit. This should include documenting how the populations tested in the financial statement audit are relevant to the Federal program being tested.

Special Tests and Provisions

PwC adequately obtained an understanding of internal controls to ensure compliance with special tests and provisions for the research and development program and properly identified the key personnel requirement as a special provision to be tested. However, PwC did not adequately document the audit procedures performed to test internal controls and compliance with key personnel requirements.

The auditors documented that they relied on the direct cost testing performed for payroll costs to determine compliance with key personnel requirements. However, we noted that the direct cost testing was on a population that included all personnel related to the grants selected, not just key personnel. This population was not adequate to test whether key personnel were working on the grants because the sampled items being randomly selected would not necessarily include any key personnel. Instead, the auditors should have selected a sample from a population that was appropriate for the specific audit objectives of the requirement being tested. Based on our discussions with the auditors and additional information from other audit procedures performed, we determined that the auditors' conclusions on key personnel were supported.

We identified documentation deficiencies in prior quality control reviews of PwC's audit work for the testing of key personnel requirements. See Appendix A for further information on prior quality control reviews. Because of the deficiencies in this report and prior quality control reviews, we believe PwC should provide additional guidance or modify procedures to ensure PwC auditors understand how to properly perform and document the review of key personnel requirements in future audits.

Subrecipient Monitoring and Reporting

PwC needs to improve the audit documentation relating to its review of the subrecipient monitoring and reporting compliance requirements. The objectives of the subrecipient monitoring compliance requirement include determining whether the pass-through entity⁴ monitored subrecipient activities to provide reasonable assurance that the subrecipient administers Federal awards in compliance with Federal requirements. This includes determining whether the pass-through entity monitored subrecipient activities during the award period and ensured that required subrecipient audits were performed and reviewed. The working papers documented the review of subrecipient audit reports but did not identify other evidence reviewed to support that MIT was monitoring activities during the award period. For the reporting compliance requirement, the auditors did not adequately document how the internal control testing performed for one report type supported their conclusions that internal controls were operating effectively for the two report types reviewed. We had to obtain additional verbal explanations in order to conclude that the audit procedures performed were sufficient for the testing of internal controls and compliance with the subrecipient monitoring and reporting requirements.

Recommendations, Management Comments, and Our Response

Recommendation 1

We recommend that for future audits, the Audit Partner PwC:

- a. Document in its audit working papers a complete description of the population from which samples are selected. This includes how the auditor considered the completeness of the population.
- b. Maintain, as part of its audit file, documentation to support the evaluation of criteria used to determine the appropriate sample sizes for internal control and compliance testing.
- c. Document the rationale for relying on the financial statement audit testing to support conclusions on the allowable costs/cost principles compliance requirement including how the population tested in the financial statements audit is sufficient to support the audit of the major program.

⁴ A pass-through entity is a non-Federal entity (a State, local Government, or non-profit organization) that provides a Federal award to a subrecipient to carry out a Federal program.

- d. Improve the performance and documentation of audit procedures to address the deficiencies identified in this report on the special tests and provisions, subrecipient monitoring, and reporting compliance requirements.
- e. Provide the Department of Defense Office of Inspector General with the working paper documentation from the FY 2014 single audit that demonstrates corrective action taken to address the deficiencies identified in this report.

PwC Comments

The Audit Partner, PwC, agreed to take the recommended actions. Management comments are included in their entirety at the end of this report.

Our Response

PwC comments are responsive to our recommendation. No additional comments are needed.

Recommendation 2

We recommend that the Managing Director, PwC, provide additional guidance or implement procedures to improve the performance and documentation for the review of the key personnel requirement for all future PwC single audits.

PwC Comments

The Managing Director, PwC, agreed to take the recommended actions. Management comments are included in their entirety at the end of this report.

Our Response

PwC comments are responsive to our recommendation. No additional comments are needed.

Appendix A

Quality Control Review Process

Criteria, Scope, and Methodology

Public Law 98-502, “The Single Audit Act of 1984,” as amended, was enacted to promote sound financial management of Federal awards administered by non-Federal entities and to establish a uniform set of auditing and reporting requirements for all Federal award recipients that are required to obtain a single audit. OMB Circular A-133 establishes policies that guide the implementation of the Act and provides an administrative foundation for uniform audit requirements of non-Federal entities administering Federal awards. Entities that expend \$500,000 or more in a year are subject to the Act and OMB Circular A-133 requirements. Therefore, they must have an annual single or program-specific audit performed in accordance with government auditing standards and submit a complete reporting package to the Federal Audit Clearinghouse.

We reviewed PwC’s FY 2012 single audit of MIT submitted to the Federal Audit Clearinghouse on March 11, 2013, using the 2010 edition of the Council of Inspectors General on Integrity and Efficiency (CIGIE), “Guide for Quality Control Reviews of OMB Circular A-133 Audits.” The Guide is the approved CIGIE checklist for performing quality control reviews of single audits. We performed the review from August 2013 through April 2014 in accordance with CIGIE Quality Standards for Inspection and Evaluation. The review focused on the following qualitative aspects of the single audit:

- Qualification of Auditors,
- Independence,
- Due Professional Care,
- Planning and Supervision,
- Audit Follow-Up,
- Internal Control and Compliance Testing for the Research and Development Cluster,
- Schedule of Expenditures of Federal Awards, and
- Data Collection Form.

Prior Quality Control Reviews

Since October 1, 2008, we performed three quality control reviews of PwC's OMB Circular A-133 audits. Two reviews contained deficiencies resulting in findings and recommendations relating to PwC's audit performance and working paper documentation. Unrestricted DoD IG reports can be accessed at <http://www.dodig.mil/audit/reports>.

- DODIG Report No. DODIG-2013-125, "Quality Control Review of the PricewaterhouseCoopers, LLP FY 2011 Single Audit of SRI International," August 29, 2013.
- DODIG Report No. DODIG-2013-048, "Quality Control Review of the PricewaterhouseCoopers, LLP and the Defense Contract Audit Agency FY 2010 Single Audit of the Institute for Defense Analyses," February 20, 2013
- DODIG Report No. D-2011-6-004, "Report on Quality Control Review of the PricewaterhouseCoopers, LLP and the Defense Contract Audit Agency FY 2008 Single Audit of the Charles Stark Draper Laboratory, Incorporated," February 28, 2011

Appendix B

Compliance Requirements

Table B. PwC's Determination of the Compliance Requirements Applicable to the Research and Development Cluster

OMB Circular A-133 Compliance Requirements	Applicable	Not Applicable/ Not Material
Activities Allowed/Unallowed	X	
Allowable Cost/Cost Principles	X	
Cash Management	X	
Davis Bacon Act	X	
Eligibility		X
Equipment and Real Property Management	X	
Matching, Level of Effort, Earmarking	X	
Period of Availability of Federal funds	X	
Procurement, Suspension, and Debarment	X	
Program Income		X
Real Property Acquisition and Relocation Assistance		X
Reporting	X	
Subrecipient Monitoring	X	
Special Tests and Provisions	X	

Management Comments

PricewaterhouseCoopers, LLP



May 12, 2014

Randolph R. Stone
Deputy Inspector General
Policy and Oversight
Department of Defense
4800 Mark Center Drive
Alexandria, VA 22350-1500

Dear Mr. Stone:

Thank you for providing a draft of the proposed report, *Quality Control Review of PricewaterhouseCoopers, LLP FY2012 Single Audit of Massachusetts Institute of Technology* (the "Draft Report"). We have reviewed the draft report and we appreciate the opportunity to provide additional information and clarification on the potential findings noted therein.

Review Results

The Department of Defense Office of Inspector General ("OIG") indicated that the PricewaterhouseCoopers audit generally met the auditing standards and Circular A-133 requirements. However, the OIG identified deficiencies related to the documentation of audit sampling, reliance on financial statement internal control testing, and the review of special tests and provisions, subrecipient monitoring, and reporting compliance requirements that need to be addressed in future audits.

Finding - Audit Documentation Needs Improvement

OIG indicated that PwC did not adequately document its audit sampling used for testing internal controls and compliance with requirements determined to be direct and material for the research and development cluster. In addition, PwC's documentation of the Federal program audit did not always provide a clear description of audit procedures performed and evidence obtained to support its conclusions on the allowable costs/cost principles, special tests and provisions, subrecipient monitoring, and reporting compliance requirements. As a result, the PwC auditors were required to provide additional verbal explanations and documentation for OIG to conclude there was sufficient evidence to support audit conclusions on the research and development cluster.

Auditing standards require that audit documentation be appropriately detailed to provide a clear understanding of the work performed, the evidence obtained, and the conclusions reached. The documentation and audit evidence should be in sufficient detail to enable an experienced auditor with no previous connections to the audit to understand the nature, timing, extent, and results of audit procedures performed that support the significant judgments and conclusions. In addition, audit documentation should be appropriately organized to provide a clear link to the findings, conclusions, and recommendations.

OIG Recommendation 1

We recommend that for future audits, the Audit Partner PwC:

- a. Document in its audit working papers a complete description of the population from which samples are selected. This includes how the auditor considered the completeness of the population.

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Management Comments

PricewaterhouseCoopers, LLP (cont'd)



- b. Maintain, as part of its audit file, documentation to support the evaluation of criteria used to determine the appropriate sample sizes for internal control and compliance testing.
- c. Document the rationale for relying on the financial statement audit testing to support conclusions on the allowable costs/cost principles compliance requirement including how the population tested in the financial statements audit is sufficient to support the audit of the major program.
- d. Improve the performance and documentation of audit procedures to address the deficiencies identified in this report on the special tests and provisions, subrecipient monitoring, and reporting compliance requirements.
- e. Provide the Department of Defense Office of Inspector General with the working paper documentation from the FY 2014 single audit that demonstrates corrective action taken to address the deficiencies identified in this report.

PwC Response

In future audits, we will enhance our documentation in each of these areas to more clearly document the procedure performed.

- a. We will clarify our documentation and retain information concerning the population from which samples are selected and document our consideration of the completeness of the population.
- b. In determining the sample sizes for internal control and compliance testing, we considered the significance of the internal controls, inherent risk factors of the compliance requirement, and the desired level of assurance we expected to obtain from the compliance test for each direct and material compliance requirement. In future audits, we will maintain, as part of the audit file, documentation to support the evaluation of criteria used to determine the appropriate sample sizes for internal control and compliance testing.
- c. We conducted an audit of Massachusetts Institute of Technology which consisted of a financial statement audit and an A-133 audit, and our audit procedures and conclusions were documented in two electronic databases. We believe that the two databases, taken as a whole, adequately document the internal control review and the compliance audit of allowable cost/cost principles. However, we do understand the importance of documentation to minimize the need for verbal explanation. In future audits, we will enhance the cross-referencing between the financial statement and A-133 databases to more clearly demonstrate the linkage between the A-133 internal control and compliance testing with the allowable costs/cost principles requirement and the audit work performed.
- d. We believe, as you have noted in the Draft Report, that the audit procedures performed over special tests and provisions, specifically as it relates to key personnel, subrecipient monitoring and reporting compliance requirements were sufficient for the testing of internal controls and compliance. However, we understand the recommendation made above and will enhance our documentation over the audit procedures performed over these compliance requirements.
- e. When our FY 2014 single audit is completed, we will contact OIG to arrange for review of the FY 2014 audit workpapers they would like to review.

Management Comments

PricewaterhouseCoopers, LLP (cont'd)



OIG Recommendation 2

We recommend that the Managing Director, PwC, provide additional guidance or implement procedures to improve the performance and documentation for the review of the key personnel requirement for all future PwC single audits.

PwC Response

We agree that our performance and documentation of procedures we perform to test compliance and internal control over compliance associated with Special Tests and Provisions-Key Personnel requirements can be improved. Accordingly, we have developed a revised EGA (PwC term for compliance audit procedure) and related documentation templates for testing both key personnel on completed projects and for changes in key personnel occurring during the audit period. In addition to a revised EGA and documentation templates, we have emphasized this compliance area within our recently revised class room training as well as on internal practice hot topic calls and a webcast designed for sector engagement team members.

Thank you for your consideration of our responses included above. We would be pleased to discuss our letter with you at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Lee Ann C. Leahy".

By: Lee Ann Leahy
Engagement Partner

Acronyms and Abbreviations

AICPA	American Institute of Certified Public Accountants
CIGIE	Council of Inspectors General on Integrity and Efficiency
MIT	Massachusetts Institute of Technology
OMB	Office of Management and Budget
PwC	PricewaterhouseCoopers, LLP

Whistleblower Protection

U.S. DEPARTMENT OF DEFENSE

The Whistleblower Protection Enhancement Act of 2012 requires the Inspector General to designate a Whistleblower Protection Ombudsman to educate agency employees about prohibitions on retaliation, and rights and remedies against retaliation for protected disclosures. The designated ombudsman is the DoD IG Director for Whistleblowing & Transparency. For more information on your rights and remedies against retaliation, go to the Whistleblower webpage at www.dodig.mil/programs/whistleblower.

For more information about DoD IG reports or activities, please contact us:

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