Reports of Independent Certified Public Accountants In Accordance with Government Auditing Standards And with The Office of Management and Budget Circular A-133

Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation and Georgia Institute of Technology

For the Year Ended June 30, 2008

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Report of Independent Certified Public Accountants on Internal Control Over Financial Reporting and On Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards Audit • Tax • Advisory

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To the Board of Trustees of Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation:

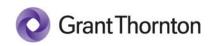
We have audited the financial statements of the business-type activities and each major fund of the Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation, (collectively, the Research Corporation), as of and for the year ended June 30, 2008, which collectively comprise the Research Corporation's basic financial statements and have issued our report thereon dated September 12, 2008. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States.

#### Internal control over financial reporting

In planning and performing our audit, we considered the Research Corporation's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Research Corporation's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the Research Corporation's internal control over financial reporting.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and would not necessarily identify all deficiencies in internal control over financial reporting that might be significant deficiencies or material weaknesses. However, as discussed below, we identified certain deficiencies in internal control over financial reporting that we consider to be significant deficiencies.

A control deficiency exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to initiate, authorize, record, process or report financial data reliably in accordance with generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of the entity's financial statements that is more than inconsequential will not be prevented or detected by the entity's internal control. We consider the deficiencies described in the accompanying schedule of findings and questioned costs as items 2008-1 through 2008-4 to be significant deficiencies in internal control over financial reporting.



A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected by the entity's internal control.

Our consideration of the internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in the internal control that might be significant deficiencies and, accordingly, would not necessarily disclose all significant deficiencies that are also considered to be material weaknesses. However, we believe that none of the significant deficiencies described above is a material weakness.

## Compliance and other matters

As part of obtaining reasonable assurance about whether the Research Corporation's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

The Research Corporation's responses to the findings identified in our audit are described in the accompanying schedule of findings and questioned costs. We did not audit the Research Corporation's responses and, accordingly, we express no opinion on them.

This report is intended solely for the information and use of the Board of Trustees, management and federal awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties.

Atlanta, Georgia September 12, 2008

Grant Thorston MP



Report of Independent Certified Public Accountants on Compliance With Requirements Applicable to Each Major Program and on Internal Control Over Compliance In Accordance With OMB Circular A-133 Audit • Tax • Advisory

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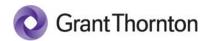
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To the Board of Trustees of Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation and Georgia Institute of Technology:

## Compliance

We have audited the compliance of Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation and the Georgia Institute of Technology (collectively hereinafter referred to as the Organization) with the types of compliance requirements described in the U.S. Office of Management and Budget (OMB) Circular A-133 Compliance Supplement that are applicable to each of its major federal programs for the year ended June 30, 2008. The Organization's major programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs. Compliance with the requirements of laws, regulations, contracts and grants applicable to each of its major federal programs is the responsibility of the Organization's management. Our responsibility is to express an opinion on the Organization's compliance based on our audit and the report of the other auditors. As part of this coordinated audit, we did not audit compliance with requirements as described in OMB Circular A-133 related to equipment and real property management; procurement and suspension and debarment; and real property acquisition and relocation assistance for each of the major programs. Those compliance requirements were audited by other auditors, whose report thereon has been furnished to us, and our opinion, insofar as it relates to those requirements, is based solely on the reports of the other auditors.

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Circular A-133, Audits of States, Local Governments and Non-Profit Organizations. Those standards and OMB Circular A-133 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Organization's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances. We believe that our audit and the report of the other auditors provide a reasonable basis for our opinion. Our audit and the report of the other auditors do not provide a legal determination of the Organization's compliance with those requirements.



In our opinion, the Organization complied, in all material respects, with the requirements referred to above that are applicable to each of its major federal programs for the year ended June 30, 2008. However, the results of our auditing procedures disclosed instances of noncompliance with those requirements, which are required to be reported in accordance with OMB Circular A-133 and which are described in the accompanying schedule of findings and questioned costs as items 2008-5 and 2008-6.

## Internal control over compliance

The management of the Organization is responsible for establishing and maintaining effective internal control over compliance with the requirements of laws, regulations, contracts and grants applicable to federal programs. In planning and performing our audit, we considered the Organization's internal control over compliance with the requirements that could have a direct and material effect on a major federal program in order to determine our auditing procedures for the purpose of expressing our opinion on compliance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance.

Accordingly, we do not express an opinion on the effectiveness of the Organization's internal control over compliance.

Our consideration of internal control over compliance was for the limited purpose described in the preceding paragraph and would not necessarily identify all deficiencies in the entity's internal control that might be significant deficiencies or material weaknesses as defined below. However, as discussed below, we identified certain deficiencies in internal control over compliance that we consider to be significant deficiencies.

A control deficiency in an entity's internal control over compliance exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect noncompliance with a type of compliance requirement of a federal program on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to administer a federal program such that there is more than a remote likelihood that noncompliance with a type of compliance requirement of a federal program that is more than inconsequential will not be prevented or detected by the entity's internal control. We consider the deficiencies in internal control over compliance described in the accompanying schedule of findings and questioned costs as items 2008-4 through 2008-6 to be significant deficiencies.

A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that material noncompliance with a type of compliance requirement of a federal program will not be prevented or detected by the entity's internal control. We did not consider any of the deficiencies described in the accompanying schedule of findings and questioned costs to be material weaknesses.

The Organization's responses to the findings identified in our audit are described in the accompanying schedule of findings and questioned costs. We did not audit the Organization's responses and, accordingly, we express no opinion on them.



This report is intended solely for the information and use of the Board of Trustees, management of the Organization, federal awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties.

Grant Shoraton LLP

Atlanta, Georgia October 27, 2008

# Schedule of findings and questioned costs

For the year ended June 30, 2008

## I. Summary of audit results

## Financial statements – (Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation only)

Type of auditor's report issued: Unqualified

Internal Control over financial reporting:

Material weaknesses identified? None reported.

Significant deficiencies identified that are not considered to be material weaknesses? Yes

Noncompliance material to financial statements noted? No

## Federal awards – (Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation and Georgia Institute of Technology)

Internal control over major programs:

Material weaknesses identified? None reported.

Significant deficiencies identified not considered to be material weaknesses? Yes

Type of auditor's report on compliance for major programs:

Research and Development Cluster - Unqualified Education and Human Resources - Unqualified Manufacturing Extension Partnership - Unqualified

Any audit findings disclosed that are required to be reported in accordance with Section 510(a) of Circular A-133? Yes

## Identification of major programs

- 1) Research and Development Cluster under various CFDA numbers. These grants are funded by various sponsoring agencies.
- 2) Education and Human Resources under CFDA number 47.076. These grants are funded by the National Science Foundation.
- 3) Manufacturing Extension Partnership under CFDA number 11.611. This grant is funded by the National Institute of Standards and Technology and the Department of Commerce.

Dollar threshold used to distinguish between Type A and Type B programs: \$3,000,000

Auditee qualified as a low-risk auditee: Yes

## II. Financial statement findings

## Finding No. 2008-1

#### Statement of condition

Approximately \$2.4 million of potentially unrecoverable cost overruns were identified for which revenue had been recognized.

#### Criteria

Revenue should not be recognized for project costs which exceed the amount expected to be billable to the sponsor.

#### Cause

The Research Corporation has established procedures for identifying cost overruns. However, procedures are not in place to ensure timely determination and communication to accounting regarding the collectibility of these overruns.

#### **Effect**

The condition could result in costs being incurred that cannot be billed. As a result, revenue related to project costs in excess of contract amounts which are not recoverable would be recognized as revenue in error.

#### Recommendation

The accumulation of costs on projects should be evaluated on an ongoing basis to minimize instances where estimated total costs exceed the approved contract amount. Procedures should be such that in the event cost overruns do occur, they are easily identified and the potential for recovery of these costs is evaluated by the appropriate individual in a timely manner. Additionally, procedures should be put in place to ensure cost overruns deemed unrecoverable are reported to accounting in a timely manner.

### Management's response

Management concurs with the importance of attention to overruns and the recommendation to implement procedures for ongoing review of over-budget projects. We will review the current cost overrun policies with the Board and will recommend an update to the policies and procedures.

## Finding No. 2008-2

## Statement of condition

Certain adjustments to revenue and expense to recognize the change in unbilled work in process were incorrectly posted or omitted. The effect of these entries on the change in net assets for the year was negligible since the revenue and expense were approximately equal.

#### Criteria

Controls should be in place to ensure that posting errors or omissions are prevented or detected.

#### Cause

A checklist is not utilized to ensure all entries are posted and, if necessary, reversed in the subsequent period.

#### **Effect**

The condition could result in misstatements in the financial statements.

#### Recommendation

Management should consider creating a checklist of all year-end recurring manual entries to ensure that all required entries are posted.

#### Management's response

Management concurs with the finding and recommendation. We will develop a mechanism for reviewing all manual entries to ensure approval by the appropriate level of management. Additionally, we will develop a process to ensure that all necessary period end manual adjustments are identified and posted. In the future, GTRC/GTARC intends to post the entries referred to above.

## Finding No. 2008-3

#### Statement of condition

The Georgia Institute of Technology (GIT) does not have formal policies and procedures related to the management of changes to customizable tables and configuration settings. Also, an inventory of customizable tables and configuration settings is not maintained.

#### Criteria

Changes to customizable tables and settings should be documented, reviewed, tested and approved by appropriate management before the changes are implemented.

#### **Effect**

The condition could result in unauthorized changes to critical tables and settings that could have a direct impact on financial reporting. Examples of configuration tables include, but are not limited to, the following: financial calendars, bank codes, accounting templates, payment terms, rules for 'three-way matching', asset templates and depreciation methods.

#### Recommendations

Management should consider defining the procedures and requirements for implementing changes to customizable tables and settings. Execution of the change management procedures should be documented. Components of the procedures should include:

- Documented evidence of authorization of changes
- Documented test plans and expected results
- Documented evidence of testing, test results and resolution of test-related issues
- Documented approval for implementation in the production environment

Additionally, management should implement a process to monitor changes to the configuration tables to detect any unauthorized changes.

## Management's response

Management concurs with the finding and recommendation. GIT's Office of Information Technology (OIT) will develop a tracking procedure within each group as it relates to critical configuration settings. We will implement a standard procedure which addresses the management of configuration settings within each department.

## Finding No. 2008-4

**Georgia Institute of Technology** 

#### Statement of condition

In the prior year, we noted an internal control deficiency pertaining to the operating effectiveness of certain purchasing card policies and procedures. In the current year, GIT implemented new processes or modified existing processes to address the deficiency. While notable improvements have been made to improve the controls around purchasing card transactions, results of current year testing performed by GIT Internal Audit do not support a conclusion that operating effectiveness has been achieved for the year ended June 30, 2008.

#### Criteria

All purchasing card policies and procedures should be adhered to without exception to ensure operating effectiveness.

#### Cause

Cardholders and designated approval officials are not adhering to policies and procedures in every instance.

#### Effect

The condition could result in unidentified fraudulent activity, unallowable charges to federal programs and misstatements in the financial statements.

#### Recommendation

We recommend that the Organization continue to reemphasize the importance of strict adherence to its policies in this area. In addition, we recommend that the Organization continue to conduct mandatory training on awareness of fraud and financial accountability for all employees involved in the purchasing card program to ensure adequate understanding.

## Questioned cost

None.

#### Management response

GIT agrees with the recommendation to continue to emphasize the importance of strict adherence to its purchasing card program policies.

We also accept the recommendation that we continue to conduct mandatory training on awareness for fraud and financial accountability for all employees involved in the purchasing card program.

GIT has enhanced its program controls with the requirement that all cardholders, card coordinators (administrators) and approvers must annually retake the requisite card program training for their particular duties associated with the purchase card program.

In addition to mandatory training, the following processes have been implemented to ensure compliance with program policies:

- · All card receipts are required to reside with the unit's central financial office, not the cardholder's files
- An online report has been developed to ensure that monthly card statements are signed, approved and reconciled.
- The central card administration and the Internal Audit unit have developed a series of card program reports that are used to determine compliance with policies. Potential disciplinary action for non compliance ranges from oral warnings to loss of employment depending on the severity of the infraction.

All of the above corrective action steps were fully implemented prior to June 30, 2008.

## III. Federal award findings and questioned costs

## Finding No. 2008-5

See Exhibit 8-5 for a listing of agency names, contract numbers and CFDA numbers associated with this finding.

#### Statement of condition

Certain progress and special performance reports required by grant and contractual agreements entered into by the Organization with various federal agencies were not submitted on time. Of a total of 29 performance reports judgmentally selected for testing, seven were not submitted on time.

#### Criteria

In accordance with 32 CFR Section 32.51, the Organization is required to submit performance reports as required by the award terms and conditions. Such performance reports are required to be submitted within a specified timeframe as required by the applicable grant or contract agreement.

#### Cause

The cause of untimely reports, as stated to us, was the unavailability of data at the report due date necessary for the completion of the required reports.

#### Effect

The submission of inaccurate or untimely reports could result in the possible delay of grant funding or affect other projects from the federal sponsor agency.

## Recommendation

Efforts should continue to be made by the Organization to reemphasize policies and procedures to ensure required reports are submitted to the contracting agencies by the specified due dates.

#### Questioned cost

None.

### Management response

Management concurs with the finding and recommendation. GIT made significant enhancements to the on-line deliverable system in June 2008. Benefits of these enhancements have been publicized and communicated campus wide. Training classes and on-line tutorials for the updates to the deliverables system were made available campus wide as well.

We will continue to publicize the importance of timely report submission and reemphasize the related policies. We do not consider this finding to be material and, accordingly, we do not believe further action outside of what has been noted above is warranted.

Georgia Tech Research Corporation,
Georgia Tech Applied Research Corporation and
Georgia Institute of Technology

## III. Federal award findings and questioned costs (cont'd)

Finding No. 2008-5 – (cont'd)

Exhibit 8-5

	Agency	CFDA Number	Major Program	Pass-Through Grantor/Program Title	Award Year	Contract Number	Reference Number	Type of Report	Due Date	Date Submitted
1	USAF	12.800	R&D	Electronic Protection (EP) Initiatives Program D.O. 0002	2003	F33615-02-D-1125	A7156	Final Draft Report	7/31/2007	12/18/2007
2	DOE	81.049	R&D	Improving the Processes of Land- Atmosphere Interaction in CCSM 2.0 at High	2001	DE-FG02-01ER63198	R3243	Annual Progress Report	5/31/2008	6/09/2008
3	NRE	81.087	R&D	Full Field Bifrefringence Measurement of Grown-In Stresses in Thin Silicon	2002	AAT-2-31605-06	R3498	Quarterly Progress Report	11/15/2007	1/30/2008
4	DHHS	93.859	R&D	Cellular and Tissue Engineering Training Program	2002	2 T32 GM08433-11A1	R3837	Annual Report	12/01/2007	12/10/2007
5	EPA	66.509	R&D	Fate and Transformation of C60 Nanoparticles in Water Treatment Processes	2005	RD-83252601-0	R6551	Annual Report	11/30/2007	12/03/2007
6	NSF	47.041	R&D	Goali: Nano-Structuring of Silicon Surfaces: Low Cost Route to Manufacturing	2006	DMI-0600600	R7074	Annual Report	6/30/2008	7/10/2008
7	NIH	93.837	R&D	Shear Stress BMP and Aortic Valve Inflammation	2007	5-41465-G1	R8642	Annual Progress Report	2/28/2008	8/05/2008

Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation and Georgia Institute of Technology

## Finding No. 2008-6

See Exhibit 8-6 for a listing of agency names, contract numbers and CFDA numbers associated with this finding.

#### Statement of condition

The Organization has certain procedures in place to accumulate and review data for potential sub-recipients prior to granting the sub-award. However, current pre-award procedures do not require formal documentation of the Organization's risk assessment process for determining who will receive sub-awards. Once sub-awards have been granted, primary investigators perform some level of ongoing monitoring of contracts with for–profit sub-recipients; however, the Organization does not formally document its monitoring of for-profit subrecipients' activity during the contract.

### Criteria

Pursuant to 32 CFR section 32.51 and OMB Circular A-133, subpart B section 210(e), a pass-through is responsible for the following related to for-profit subrecipients:

For-profit Subrecipients - Evaluating the impact of subrecipient activities on the pass-through entity's ability to comply with applicable Federal regulations includes monitoring for-profit subrecipients. The pass-through entity is responsible for establishing requirements, as necessary, to ensure compliance by for-profit subrecipients. The contract with the for-profit subrecipient should describe applicable compliance requirements and the for-profit subrecipient's compliance responsibility. Methods to ensure compliance for Federal awards made to for-profit subrecipients may include pre-award audits, monitoring during the contract and post-award audits.

## Cause

The Organization does not have policies to formally document its assessment of risk with respect to potential sub-recipients and further for ongoing monitoring of for-profit subrecipients until satisfaction of contract or grant terms.

## **Effect**

The Organization may be unable to ensure that primary investigators and others have performed adequate monitoring of subrecipients, to ensure compliance with contract provisions and Federal grant regulations.

## Recommendation

The Organization should consider creating a checklist to document the formal risk assessment process used in selecting sub-recipients. Additionally, the Organization should include "for-profit" entities in its annual subrecipient certification process that certifies compliance with all applicable compliance requirements for the period under review (i.e. monthly, quarterly or annually). In addition, the Organization should develop processes to ensure its monitoring of subrecipient progress and compliance is documented.

## **Questioned Cost**

None.

### Management Response

Management concurs with the finding and recommendation. The GIT Office of Sponsored Programs (OSP) will make a high-risk/low-risk determination for each sub-recipient. This will be added to our current "checklist." We will also revise our current certification form/letter to include a section to be completed for "for-profit" sub-recipients. We will develop a process for additional monitoring of sub-recipient progress and compliance.

## III. Federal award findings and questioned costs (cont'd)

Finding No. 2008-6 – (cont'd)

Exhibit 8-6

		CFDA	Cluster/		Award	Contract	Reference	
	Agency	Number	Major Program	Pass-Through Grantor / Program Title	Year	Number	Number	Subreceipient
1	NSF	47.041	R&D	Advances in Wind Turbine Analysis and Design for Sustainable Energy	2007	CBET-0731034	R8416	Computational Science and Engineering, LLC
2	Air Force	12.800	R&D	TAT59 Marine Personnel Carrier Requirements Definition and M&S Analysis	2007	HC1047-05-D-4000-0059	D5567	Ricardo, Inc.
3	Air Force	12.800	R&D	Electronic Combat XIII	2007	FA8523-04-D-0006-0015	D5528	Terma North America
4	Air Force	12.800	R&D	Big Safari	2007	FA8620-07-C-3043	D5441	KBK Consulting, Inc.
5	Army	12.431	R&D	Defense Research, Engineering, Science and Technology	2005	W9113M-05-C-0194	A7806	Radiance Technologies, Inc.
6	Army	12.431	R&D	Software Engineering Management and Software Architecture Support for Prod.	2005	W31P4Q-05-C-R077-0295A	A7654	James Caudle

## Summary schedule of prior audit findings

For the year ended June 30, 2008

## Federal award findings and questioned costs reporting

**Finding 2007-9:** Failure to monitor purchasing card activity (i.e. obtain proper supporting documentation, perform a timely monthly reconciliation and approve the monthly reconciliations).

Status: Corrective action plan implemented.

Finding 2007-10: Financial reports not submitted, or not submitted on time.

Status: Corrective action plan implemented.

**Finding 2007-11:** Progress/special reports not submitted, not submitted on time or submitted with missing components.

Status: Corrective action plan partially implemented such that no instances of noncompliance with respect to failing to submit or submission with missing information; however, similar instances of noncompliance with respect to timely submission of progress/special reports were noted in 2008. See Finding 2008-5.

Finding 2007-12: Subrecipients were not adequately monitored.

Status: Corrective action plan implemented; however, similar instances of noncompliance were noted in 2008. See Finding 2008-6.