February 15, 2016

To: Members of the Board of Trustees

Fr: Peg Fish, Director of Audits

Re: Approval of 2015 Annual Report of the Director of Audits

On behalf of the Internal Audit Office, the calendar year 2015 annual report, reflecting the overall results of audit activities for the period, is enclosed. This report demonstrates Internal Audit’s accountability to the Board of Trustees and that the office is operating in accordance with the *Bylaws of the Trustees of Purdue University*.

The Internal Audit Office is committed to the professional conduct and quality of its work, productive use of its resources, and the professional competence of its staff. The Internal Audit Charter, Appendix A, has been updated and reflects these commitments.

The accomplishments of the Internal Audit Office would not have been possible without the dedication and professionalism of its staff. The Internal Audit Office also wishes to acknowledge the vision and direction of the Board of Trustees, the President, executive leadership, and the management teams throughout the University.

Enclosure

c: President Mitch Daniels
   Treasurer Bill Sullivan
   Provost Deba Dutta
   Assistant Treasurer Jim Almond
   Corporate Secretary Janice Indrutz
   Legal Counsel Steve Schultz
During the 2015 calendar year, a program of work spanning various institutional units and activities was delivered to assist leadership and management in effectively achieving goals and objectives with recognition of key internal controls that aid in risk mitigation. All audits were performed in accordance with the Institute of Internal Auditor’s *International Standards for the Professional Practice of Internal Auditing (Standards)*. A risk based approach was used to determine the scope of each audit, and all significant findings were reported. Cooperation was received from management in all audits conducted.

### Allocation of Professional Audit Staff Resources

Audit staff delivered over 10,900 hours of service, with 84% of these resources in client contact categories, which include audits and research conducted in order to respond to various departmental queries. Administration of the anonymous reporting program is counted in the client research category, as are initiatives in support of external audits. Activity in support of internal audit business continuity, technology, administration, and staff professional development is reported in the non-client contact category. Staff met all continuing education requirements per the *Standards*.

The audit universe is complex, covering a multitude of higher education objectives. Internal Audit has recognized stakeholders’ expectations and priorities, and has adapted to changes in technology, legislation, and organizational strategic priorities. Institutional requests have been met and broad audit coverage provided. Audit execution included consideration of the higher education risk categories summarized below.

Fifty-five (55) audit reports were issued with four audits in-process at year-end. Fifteen (15) of these, totaling 1,038.5 hours were not planned. The breadth and diversity of the audit coverage, including follow-up on actions taken by management, is summarized below by campus. The hours dedicated to follow-up are included in the total 8,510.5 hours; however, these activities do not typically result in an audit report so are not included in the audit report count.

**Fort Wayne Audit Coverage** (938 hours, 11%, 5 reports issued)

Categories for audits and follow-up included: continuing studies, outside activities, accounts receivable, purchasing cards, foundation audit, and information technology infrastructure.
Calumet Audit Coverage (688 hours, 8%, 3 reports issued)
Categories for audits and follow-up included: telecommunications, student aid, scholarships, the Banner student system application, and information technology infrastructure.

North Central Audit Coverage (43.5, 1%, 0 reports issued)
Categories for audits and follow-up included: credit by exam, scholarships, the Banner student system application, and information technology infrastructure.

Northwest Unification Audit Coverage (103.5, 1%, 1 report issued)
Categories for audits and follow-up included: information technology infrastructure security controls design.

West Lafayette Audit Coverage (6,737.5, 79%, 46 reports issued)
Categories for audits and follow-up included: cash validation, construction, inventory, revenues, operational reviews, general ledger account analyses, debt, valuation of invested funds, contract management, export controls, effort reporting, I-9, outside activities/conflicts of interest, identification and training for campus security authorities, uniform guidance, procurement card usage, time recording validation, foundation audits, system applications (housing, travel, payroll, human resources, space scheduling, and access control), information technology (Banner data management, vulnerability management program, secure storage, active directory, production readiness, Hyper-V infrastructure, mobile emerging technologies, security logging and monitoring, LINUX and Oracle configuration management, change management, career account authentication, and distributed infrastructure).

For each audit, risks were considered and the system of internal controls evaluated. The framework used in reviewing internal controls was based on the Committee of Sponsoring Organizations of the Treadway Commission (COSO) model. COSO defines internal control as, "a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance." Key application internal controls were documented using the Global Technology Audit Guide (GTAG).

The complexity and rate of change, as well as the potential for disruption and interference associated with information technology resources, bring challenges with respect to University-wide coordination and integration. Thirty-two percent (32%) of the audit time was dedicated to information technology with recognition of infrastructure, security, and application controls.

In addition to the internal audit coverage, under a collaborative effort by Internal Audit and Information Technology Security and Policy, an external vendor was engaged to perform vulnerability scans on the Windows and UNIX servers, workstations, and network devices (routers, switches and firewalls). This provided enterprise coverage of the four campuses.

Comparison of the 2015 Annual Report to the 2015 Audit Plan
Forty-four (44) of the 58 planned audits were completed or in-process at year-end (four were in-process). Additionally, 15 unplanned audits were completed. The disposition of the 14 audits planned, but not started, is as follows:
- Software was not implemented as planned or changes in schedules occurred: 3
- Vendor action was completed in advance of the audit: 1
- Planned audits were combined with other audits: 2
- Audits were evaluated and risks were considered as part of the 2016 plan: 8

The 2015 program of work was delivered primarily by six professional auditors, which is fewer staff than planned. Two positions remained unfilled at calendar year-end.

Audit Staff at December 31, 2015
The Director of Audits, Peg Fish, MS in Management and Certified Internal Auditor, was responsible for the overall audit plan and for ensuring that audits were performed in accordance with the Standards. Internal quality assurance processes are in place to ensure the quality of the audit services.
The following staff are recognized for their contribution, dedication, and professionalism.

- Audit Manager **Jeff Tatum**, CIA
- Associate Auditor **Alex Quinn**, CPA
- Information Systems Audit Manager **Robert Oxender**, MS in Computer and Information Science, CISA, CISSP, CPA
- Information Systems Auditor **John Fry**
- Principal Auditor, Data **Jane White**, MBA, CIA
- Principal Auditor, Special Projects **Wendi Johnston**, CRISC

**Anonymous Reporting Activity**
Purdue remains committed to providing an environment in which individuals may report suspected fraud, waste, or abuse of University assets, as well as regulatory noncompliance in a simple, anonymous way. An external firm manages the intake of information via telephone (866) 818-2620, or internet [www.purdue.edu/hotline](http://www.purdue.edu/hotline). This information is then provided to Internal Audit for appropriate action. Seventy-nine (79) reports were received via the program during calendar year 2015, with two duplicated. Sixty-eight (68) reports, which includes the two duplicated reports, were referred to other University departments for action, and seven (7) reports were analyzed by the Internal Audit Office. Four (4) reports were without sufficiently detailed information to allow for review.
Appendix A

Internal Audit Charter

Mission
The Internal Audit Office is dedicated to aiding the University in accomplishing its strategic and operational initiatives by providing independent, objective assurance, and consulting services with respect to evaluating risk management, control, and governance processes.

Role
The Internal Audit Office serves as a resource to examine and evaluate University activities in service to the Board of Trustees and management. Internal Audit has no direct operating responsibility or authority for management processes, internal controls, or any of the activities or operations it reviews; thereby, maintaining its independence and objectivity.

Purpose and Responsibilities
The purpose of the Internal Audit Office is to determine whether the University’s control, risk management, and governance processes, as designed and implemented by management, are adequate and functioning to ensure that:

- Strategic objectives and plans are achieved
- Risks are appropriately identified and managed
- Interaction with various governance groups occurs as needed
- Quality and continuous improvement are promoted in the University’s control processes
- Resources are acquired economically, used efficiently, and are adequately protected
- Financial, managerial, and operational information is accurate, reliable, and available
- Actions are in compliance with University policies and standards, and applicable laws and regulations
- Significant legislative and regulatory issues impacting the University are recognized and appropriately addressed
- Information technologies are integrated and aid in accomplishing University objectives

Responsibilities include:
- Developing a flexible audit plan utilizing both a risk-based methodology (risk-centric approach) and an institutional objective methodology (objective-centric approach)
- Ensuring inclusion of resources for unplanned audits when developing the audit plan
- Allocating resources, setting timelines, determining scope of work, and applying the techniques required to accomplish the audit objectives
- Communicating audit results, assessing management responses, and conducting follow-up accordingly
- Maintaining sufficient knowledge and skills to meet the audit objectives
- Administering the anonymous reporting program
- Considering the scope of work of the external auditors or regulators for purposes of providing optimal audit coverage to the institution
- Monitoring, on an ongoing basis, the performance of the internal audit activity

All audit activity is governed by the mandatory guidance of the Institute of Internal Auditor’s (IIA) International Professional Practices Framework, which includes the definition of Internal Auditing, the Code of Ethics, and the International Standards for Professional Practice of Internal Auditing.

Reporting
The Internal Audit Office is structured in accordance with The Bylaws of the Trustees Article IV, Section 6:
“The Treasurer of the Corporation shall maintain an internal audit office independent of any other office of the Corporation or of the University. The Director of Audits shall submit to the Board annually a written report on the work of the internal audit office for the preceding calendar year. In addition, the Director of Audits, prior to the presentation of the written annual report, shall make an annual oral presentation concerning the work of the internal audit office to the Audit and Insurance Committee, which shall be made in the presence of the Treasurer. Immediately following the completion of each oral presentation, the Director of Audits shall confer with the Audit and Insurance Committee, outside the presence of the Treasurer or any other officer of the University on any subject germane to the area of responsibility of the internal audit office. The written annual report to the Board shall be made at a stated meeting selected by the Audit and Insurance Committee, but in no event shall it be deferred beyond July 1 of each year without the consent of the Chairman. In addition, at any time when in the judgment of the Director of Audits circumstances warrant or in response to a request from the Chairman of the Audit and Insurance Committee, the Director of Audits shall make a written or oral report to the Chairman of the Audit and Insurance Committee without informing the Treasurer or any other University officer. Subject to the foregoing, the Treasurer shall attend the meetings of the Audit and Insurance Committee and serve as its Secretary and keep a record of its proceedings.”

**Authority**
The Internal Audit Office provides system-wide audit coverage and has unrestricted access to all University functions, records, property, and personnel, subject to state and federal law.