

AUDIT SUMMARY

Our audit of the University of Virginia for the year ended June 30, 1999, found:

- The financial statements are presented fairly, in all material respects.
- Internal control matters that we consider reportable conditions; however, we do not consider any of these to be material weaknesses. Our findings include the following issues:
 - Strengthen Security over Critical Information Systems and Network,
 - Record Cash Transactions Immediately, and
 - Reconcile Bank Accounts and Resolve Errors Promptly.
- No instances of noncompliance required to be reported under Government Auditing Standards.
- Adequate corrective action of prior audit findings except for finding entitled "Strengthen Security over the PeopleSoft System."

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UNIVERSITY OFFICIALS

October 15, 1999

The Honorable James S. Gilmore, III
Governor of Virginia

The Honorable Richard J. Holland
Chairman, Joint Legislative Audit
and Review Commission

The Board of Visitors
University of Virginia

INDEPENDENT AUDITOR'S REPORT ON SUPPLEMENTARY INFORMATION

We have audited the financial statements of the **University of Virginia** as of and for the year ended June 30, 1999, and have issued our report thereon dated October 15, 1999. Our report on the financial statements is contained in the President's Report 1998-99 issued by the University. The financial statements are the responsibility of the University's management. Our responsibility is to express an opinion on the financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

Our audit was performed for the purpose of forming an opinion on the financial statements of the University taken as a whole. The accompanying Schedule of Auxiliary Enterprises – Revenues and Expenditures and the State Student Loan Schedule are presented for purposes of additional analysis and are not a required part of the financial statements. This information has been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly presented, in all material respects in relation to the financial statements taken as a whole.

INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE AND ON INTERNAL
CONTROL OVER FINANCIAL REPORTING

In planning and performing our audit of the financial statements of the University of Virginia as of and for the year ended June 30, 1999, we considered internal controls over financial reporting and tested compliance with certain provisions of laws, regulations, contracts, and grants in accordance with generally accepted auditing standards and the standards applicable to financial audits contained in Government Auditing Standards.

Management's Responsibility

The University's management is responsible for establishing and maintaining internal controls and complying with applicable laws and regulations. In fulfilling this responsibility, estimates and judgments by management are required to assess the expected benefits and related costs of internal control policies and procedures. The objectives of internal controls are to provide management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition; transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of the financial statements in accordance with generally accepted accounting principles; and the University has complied with applicable laws and regulations.

Compliance

As part of obtaining reasonable assurance about whether the University's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grants, noncompliance with 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 that are required to be reported under Government Auditing Standards.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the University's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide assurance on the internal control over financial reporting. However, we noted certain matters involving the internal control over financial reporting and its operation that we consider to be reportable conditions. Reportable conditions involve matters coming to our attention relating to significant deficiencies in the design or operation of the internal control over financial reporting that, in our judgment, could adversely affect the University's ability to record, process, summarize, and report financial data consistent with the assertions of management in the financial statements. Reportable conditions entitled "Strengthen Security over Critical Information Systems and Network," "Record Cash Transactions Immediately," and "Reconcile Bank Accounts and Resolve Errors Promptly" are described in the section entitled, "Internal Control Findings and Recommendations."

We believe none of the reportable conditions are a material weakness. A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements in amounts that would be material in relation to the financial statements being audited may occur and not be detected promptly by employees in the normal course of performing their duties. Our consideration of the internal control over financial reporting would not

necessarily disclose all matters in the internal control that might be reportable conditions and, accordingly, would not necessarily disclose all reportable conditions that are also considered to be material weaknesses.

Status of Prior Findings

The University has not completed corrective action with respect to the previously reported finding titled, "Strengthen Security over the PeopleSoft System" (currently titled "Strengthen Security over Critical Information Systems and Network"). Accordingly, we have included this finding in the section entitled, "Internal Control Findings and Recommendations." The University has completed corrective action on all previously reported findings not included in this report.

Report Distribution and Exit Conference

The Independent Auditor's Report on Compliance and on Internal Control Over Financial Reporting is intended solely for the information and use of the Governor and General Assembly of Virginia, the Board of Visitors and management, and is not intended to be and should not be used by anyone other than these specified parties. However, this report is a matter of public record and its distribution is not limited.

We discussed this report with management at an exit conference held on November 12, 1999.

AUDITOR OF PUBLIC ACCOUNTS

JHS:whb
whb:163

INTERNAL CONTROL FINDINGS AND RECOMMENDATIONS

MEDICAL CENTER

Strengthen Security over Critical Information Systems and Network

We identified security weaknesses with the Medical Center's network and financial system. These weaknesses could potentially lead to unauthorized use or alteration of the Medical Center's critical data and represent a risk to normal business operations that could allow for malicious actions by unauthorized users. Medical Center management should carefully consider this risk in light of its potential for occurrence and take appropriate corrective action to reduce the risk to acceptable levels. While we noted some of these risks in our last report and Health System Computing Services attempted to implement corrective action, unforeseen circumstances prevented the completion of corrective action. Our specific concerns follow:

Network Security

Health System Computing Services has not completed the purchase and installation of data security firewalls and is not using their network routers as an additional security measure. Furthermore, existing systems do not encrypt all passwords or data crossing the network. Lack of firewalls, router security, and encryption makes it easier for unauthorized external users to gain access to critical systems and compromise the integrity of financial and other mission critical data. While many of the existing systems are old and placed in service before currently available encryption technology, these systems can undergo updating to allow for the encryption of data exchanged among systems. Over the past year, Health System Computing Services has actively pursued developing a comprehensive security infrastructure that includes the addition of firewalls, router security, and encryption. Health System Computing Services has developed and released a Request for Proposal for a vendor to assist in the development of a comprehensive security plan that includes firewall and encryption technology solutions. The Medical Center should continue to actively pursue firewall and encryption solutions and evaluate using network routers as additional security measures.

UNIX Operating System

The UNIX operating system, which houses the PeopleSoft application, contains deficiencies, many of which are correctable using available systems settings. The UNIX operating system requires that important users such as the system's administrative have assigned special accounts.

The special accounts allow these users to make system changes and other important operational actions that can affect the entire system. The current UNIX system account settings do not prevent outsiders from viewing encrypted passwords. Using generally available programs, unauthorized users could convert the encrypted password to the actual password. This would enable unauthorized users to gain access to the system with very powerful abilities. Health System Computing Services should implement the shadow password option to prevent the viewing of encrypted passwords in the password file.

Furthermore, any user gaining access to the UNIX server can delete or alter critical directories and files, and insert viruses and other malicious code that may cause irreversible damage. Additionally, Health System Computing Services should develop a procedure that periodically reviews access permissions given to files and directories and ensure system settings do not permit inappropriate permissions to files and directories. The Medical Center has recognized these deficiencies and is taking corrective action.

Oracle Database

Health System Computing Services does not have a procedure to review the access of users with powerful privileges in the Oracle database. We identified users in the database with powerful privileges that they no longer need. Ensuring that only those users who need these powerful privileges provides for efficient and effective managing of this critical database. The Database Administrator should periodically review user accounts with unique or powerful privileges to ensure their continuing need.

Health System Computing Services should consider using the Oracle audit function to monitor the activity of Database Administrators. The Oracle audit function allows the Security Administrator or Database Administrator to determine when anyone has performed unauthorized actions and provides an additional control for monitoring changes to the database. Enabling full audit capability adds to the processing required by the system and may have an adverse effect on system performance. Due to system performance concerns by the Medical Center, we recommend that Health System Computing Services begin by only auditing the alter and drop actions. When system performance allows for expansion of the auditing capability, Health System Computing Services should consider expanding that feature. Health System Computing Services has begun to use the Oracle audit function.

PeopleSoft Applications

PeopleSoft application password security does not limit the number of failed logon attempts, does not require users to periodically change passwords, and does not use a specific password for a user's initial logon. Providing unlimited logon attempts increases the risk that unauthorized attempts to circumvent application security will go unnoticed. Not changing passwords increases the risk that compromised passwords will allow unauthorized access to the system. Not using a specific password at initial logon increases the risk that users will not assign a unique password to their logon account. Health System Computing Services plans to install third party software in November 1999, in conjunction with a major system upgrade, to correct the PeopleSoft password issues.

ACADEMIC DIVISION

Record Cash Transactions Immediately

Staff in several departments, primarily the Payroll Department and the Treasurer's office, initiated numerous deposits and disbursements without recording the transactions in the accounting system promptly. Employees should not initiate transactions affecting the University's bank accounts without immediately reporting the transactions for recording in the accounting system. Delays in recording withdrawals could result in lost financial resources and could possibly delay the detection of errors or irregularities.

Reconcile Bank Accounts and Resolve Errors Promptly

Unrecorded transactions, like those described in the previous finding, and other errors went uncorrected for up to four months because of a vacancy in the position assigned to perform bank reconciliations. While the position was vacant, management did not assign other staff with sufficient time or training to complete the reconciliations properly. During our audit, the University hired an individual to complete the bank reconciliations and accounting staff had resolved most of the reconciling items. In the case of another vacancy, management should ensure that the bank accounts are reconciled promptly and all reconciling differences resolved promptly.

SUPPLEMENTARY INFORMATION

UNIVERSITY OF VIRGINIA
SCHEDULE OF AUXILIARY ENTERPRISES - REVENUES AND EXPENDITURES
For the Year Ended June 30, 1999
(In thousands)

	Athletics	Faculty Housing	Food Services	Residential Facilities	Stores and Shops	Student Activities	Student Health	Parking and Transportation and Other	Long Distance Telephone	Total
Operating revenues:										
Student fees	\$ 6,152	\$ -	\$ -	\$ 1,270	\$ -	\$ 2,463	\$ 5,241	\$ 1,640	\$ -	\$ 16,766
Sales and services (Note A)	15,468	695	4,095	18,445	28,415	2,043	977	8,791	993	79,922
Gross operating revenues	21,620	695	4,095	19,715	28,415	4,506	6,218	10,431	993	96,688
Cost of sales	1	-	80	-	22,455	75	-	-	-	22,611
Net operating revenues	21,619	695	4,015	19,715	5,960	4,431	6,218	10,431	993	74,077
Operating expenditures:										
Personal services	10,500	27	146	4,764	2,514	1,829	4,173	3,824	19	27,796
Contractual services	4,457	285	2,496	5,937	1,293	1,799	639	2,984	739	20,629
Supplies and materials	1,211	48	74	1,165	358	382	346	320	-	3,904
Equipment	737	2	6	214	5	46	63	44	1	1,118
Miscellaneous	3,518	41	143	165	845	186	165	1,970	12	7,045
Total operating expenditures	20,423	403	2,865	12,245	5,015	4,242	5,386	9,142	771	60,492
Interdepartmental recoveries and charges	(518)	(1)	(1,069)	(272)	44	(276)	(224)	(2,403)	-	(4,719)
Net operating expenditures	19,905	402	1,796	11,973	5,059	3,966	5,162	6,739	771	55,773
Excess of revenues over operating expenditures	1,714	293	2,219	7,742	901	465	1,056	3,692	222	18,304
Nonoperating revenues (expenditures):										
Interest income	10	29	230	283	209	89	210	108	308	1,476
Private gifts	230	-	-	-	-	-	-	-	-	230
Other sources	-	-	-	-	-	-	-	-	-	-
Scholarships and fellowships	(7)	-	-	(9)	(1)	(1)	(1)	-	-	(19)
Total nonoperating revenues (expenditures)	233	29	230	274	208	88	209	108	308	1,687
Transfers:										
Mandatory:										
Debt service	-	-	(766)	(2,659)	(592)	(75)	(1)	(2,439)	-	(6,532)
Nonmandatory:										
Capital improvements	(2,650)	(432)	(1,350)	(4,986)	(443)	(681)	(3,795)	(2,169)	(530)	(17,036)
Other	(81)	(24)	(20)	(125)	(340)	54	(257)	153	-	(640)
Total transfers	(2,731)	(456)	(2,136)	(7,770)	(1,375)	(702)	(4,053)	(4,455)	(530)	(24,208)
Net increase (decrease) for the year	(784)	(134)	313	246	(266)	(149)	(2,788)	(655)	-	(4,217)
Fund balances (deficit) at beginning of year	(209)	479	1,645	1,365	6,676	1,612	2,143	365	-	14,076
Fund balances (deficit) at end of year	\$ (993)	\$ 345	\$ 1,958	\$ 1,611	\$ 6,410	\$ 1,463	\$ (645)	\$ (290)	\$ -	\$ 9,859

Note A: Sales and Services revenue in Athletics is shown net of Atlantic Coast Conference contributions of \$ 890,693.

UNIVERSITY OF VIRGINIA
STATE STUDENT LOAN SCHEDULE
For the Year Ended June 30, 1999

In prior years, the University used its Commonwealth of Virginia Student Loan Fund to provide matching funds to meet the institutional contribution requirements of the federally sponsored Perkins Loan Program. At June 30, 1999, the fund balance of the State Student Loan Fund consisted of the following:

Cash	\$ 8,128
Due from Perkins Loan Program	<u>82,306</u>
Fund balance	<u>\$ 90,434</u>

The University transferred no funds from the State Student Loan Fund to the Perkins Loan Program during the fiscal year.

UNIVERSITY OF VIRGINIA
Charlottesville, Virginia

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