VIRGINIA COMMONWEALTH UNIVERSITY
AUDIT, INTEGRITY AND COMPLIANCE COMMITTEE MEETING
7:45 A.M.
MARCH 22, 2018
JAMES BRANCH CABELL LIBRARY
901 PARK AVENUE – ROOM 311
RICHMOND, VIRGINIA

AGENDA

1. **CALL TO ORDER**   **Keith Parker,** *Chair*

2. **APPROVAL OF AGENDA**   **Keith Parker,** *Chair*

3. **APPROVAL OF MINUTES**   **Keith Parker,** *Chair*
   (December 8, 2017)

4. **AUDIT, INTEGRITY AND COMPLIANCE**   **Bill Cole,** *Executive Director,*
   COMMITTEE DASHBOARD MEASURES   *Audit and Compliance Services*

                                                          Alex Henson, *Chief*
                                                          Information Officer

5. **SEXUAL HARASSMENT PREVENTION**   **Laura Rugless,** *Director,*
   EDUCATION/TRAINING UPDATE   *Equity and Access Services and*
                                                          Title IX Coordinator

6. **COI UPDATE FOR COMMONWEALTH**   **Bill Cole,** *Executive Director,*
   REPORTING REQUIREMENTS   *Audit and Compliance Services*

7. **POLICY STATUS UPDATE**   **Jacqueline Kniska,** *Integrity*
                                                          and Compliance Officer

8. **AUDIT UPDATE FOR INFORMATION**   **Bill Cole,** *Executive Director,*
                                                          Audit and Compliance Services

   a. Audit Reports
       o Institutional Animal Care and Use Program
       o Technology Incident Response Management

   b. Audit Work Plan Status Report

9. **CLOSED SESSION**
   Freedom of Information Act Sections 2.2-3711(A)
   (1) and (7), specifically:

   a. **Audit Updates for discussion:**

      • Update: Parking and Transportation

      • Audit Reports for Discussion: **Bill Cole,** *Executive Director,*
        o Graduate Admissions   *Audit and Compliance Services*
        o College of Humanities and Sciences

Administrative Review (including IT)
    o   School of the Arts in Qatar

b. University Counsel Litigation Update   **Jake Belue,** *Associate University Counsel*

Executive Session

9. RETURN TO OPEN SESSION AND CERTIFICATION   **Keith Parker**, *Chair*
    o   Approval of Committee action on matters discussed in closed session, if necessary

10. ADJOURNMENT   **Keith Parker**, *Chair*

Board of Visitors
Audit, Integrity and Compliance Committee
7:45 a.m.
December 8, 2017
James Cabell Library
901 Park Avenue, Room 311, Richmond, Virginia

Minutes

COMMITTEE MEMBERS PRESENT

Mr. Keith T. Parker, Chair
Mr. Ronald McFarlane, Vice Chair
Mr. Steve L. Worley
Mr. H. Benson Dendy III
Dr. Robert D. Holsworth
Dr. Carol S. Shapiro

COMMITTEE MEMBERS ABSENT

Mr. Edward McCoy

BOARD MEMBERS PRESENT

Mr. John A. Luke, Vice Rector
Dr. Shantaram Telegaonkar

OTHERS PRESENT

Mr. William H. Cole, Jr.
Dr. Michael Rao, President
Mr. Jacob A. Belue
Staff from VCU and VCUHS

CALL TO ORDER

Mr. Keith T. Parker, Chair, called the meeting to order at 7:47 a.m.

APPROVAL OF AGENDA

Mr. Parker asked for a motion to approve the agenda for the December 8, 2017 meeting of the Audit, Integrity and Compliance Committee, as published. After motion duly made and seconded the agenda for the December 8, 2017 meeting of the Audit, Integrity, and Compliance Committee (AICC) meeting was approved.

APPROVAL OF MINUTES

Mr. Parker asked for a motion to approve the minutes of the September 14, 2017 meeting of the Audit, Integrity and Compliance Committee, as published. After motion duly made and seconded the Minutes of the September 14, 2017 Audit, Integrity, and Compliance Committee meeting were approved. A copy of the minutes can be found on the VCU website at the following webpage http://www.president.vcu.edu/board/minutes.html.

AUDITOR OF PUBLIC ACCOUNTS – REPORTS FOR THE FISCAL YEAR ENDING JUNE 30, 2017

Mr. David Rasnic and Ms. Karen Helderman from the Auditor of Public Accounts, discussed the results from the audit reports for the fiscal year ended June 30, 2017 and presented the required communications to those charged with governance.

REPORTS AND RECOMMENDATIONS

Audit, Compliance, and Integrity Committee Dashboard Measures

Mr. Alex Henson, Chief Information Officer, discussed current information technology security measures in place and plans related to the Data Security measure. Mr. Bill Cole reviewed the Committee Dashboard Measures. Indicators for Data Security and Compliance Oversight are yellow and all other indicators are green.

ERM Update

Mr. Tom Briggs, Assistant Vice President for Safety and Risk Management, highlighted current activities of the ERM program.

Data Governance Update

Ms. Kathleen Shaw, Vice Provost for Planning and Decision Support, discussed activities of Data Information Management Council (DIMC) and data security issues.

Overview of Internal Quality Assessment

Mr. Bill Cole discussed the internal auditing standards that require the internal audit function within Audit and Compliance Services to maintain a quality assurance and improvement program, which includes both internal and external assessments. The results of our most recent internal assessment were shared with the Committee.

CLOSED SESSION

On motion made and seconded, the Audit, Integrity, and Compliance Committee of the Virginia Commonwealth University Board of Visitors convened into closed session pursuant to Sections 2.2-3711 (A) (1) and 2.2-3711 (A) (7) of the Virginia Freedom of Information Act to discuss certain personnel matters involving the performance of identifiable employees or faculty of the University, and to discuss the evaluation of performance of departments or schools of the University where such evaluation will necessarily involve discussion of the performance of specific individuals, including Audit Reports of individually identified departments and/or schools, and to consult with legal counsel and receive briefings by staff members regarding legal matters and actual or probable litigation relating to the aforementioned Audit Reports where such consultation or briefing in open session would adversely affect the negotiating or litigating posture of the University.

RECONVENED SESSION

Following the closed session, the public was invited to return to the meeting. Mr. Parker, Chair, called the meeting to order. On motion duly made and seconded the following resolution of certification was approved by a roll call vote:

Resolution of Certification

BE IT RESOLVED, that the Audit, Integrity, and Compliance Committee of the Board of Visitors of Virginia Commonwealth University certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered by the Committee of the Board.

Vote	Ayes	Nays
Mr. Keith Parker, Chair	X	
Mr. Ronald McFarlane, Vice Chair	X	
Mr. Ben Dendy	X	
Dr. Robert Holsworth	X	
Mr. Steve L. Worley	X	
Dr. Carol Shapiro	X	
Dr. Shantaram Telegaonkar	X	

All members responding affirmatively, the motion was adopted.

ADJOURNMENT

There being no further business Mr. Parker, Chair, adjourned the meeting at 9:10 a.m.

Board of Visitors Executive Summary
March 2018

PRESENTATION TITLE: Audit, Integrity, and Compliance Committee Dashboard Measures	
Presenter Name and Title: Bill Cole, Executive Director Alex Henson, Chief Information Officer	
Responsible University Division: Audit and Compliance Services **BOV Committee:** Audit, Integrity, and Compliance Committee	
Quest Theme(s) and Goal(s) to be Addressed:	
Key Presentation Messages	1. The committee's dashboard measures primarily utilize the following signal light rating method: Green = No Significant Matters/Delays, Yellow = Known Matters/Delays requiring increased management action/resources or senior management monitoring, and Red = Significant challenges/issues encountered resulting in delays, budget overages, or institutional risk 2. This Committee's currently rated measures are: Data Governance Program Status, rated Green Data Security, rated Yellow ERM Implementation Time Line; rated Green Planned Audits; rated Green Special Projects; rated Green Compliance Oversight; rated Yellow
Governance Implications	Appropriate resources and business practices are in place to address these dashboard measures.
Governance Discussion Questions	Do the "yellow" measures require any special attention by the committee?
Next Steps for Management (Responsible Division Head; Timeframe for Action)	Take appropriate measures to address Dashboard measures that show need for improvement.
Next Steps for Governance (Responsible Board Member; Timeframe for Action)	Continue to monitor the Dashboard measures provided at each Audit, Integrity, and Compliance Committee meeting.

AUDIT, INTEGRITY, AND COMPLIANCE COMMITTEE DASHBOARD MEASURES

INFORMATION TECHNOLOGY GOVERNANCE - DATA INTEGRITY

### DATA GOVERNANCE PROGRAM (development of program)

Program progressing successfully

Barriers / challenges encountered that may have an impact on issue resolution or implementation. Executive Council to resolve challenge.

Significant challenge encountered; will require decision from Executive Leadership Team to resolve
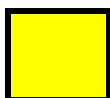
DATA SECURITY (number of security incidents / breaches)
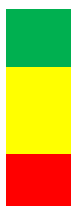
No data breaches have occurred or seem likely to occur; security risks are well understood and being mitigated; resources viewed as aligned with threat and risk environment

No breach has occurred, but minor security incidents or near-misses have occurred; significant audit findings have occurred but are being mitigated; some overload or barriers / challenges encountered that may require adjustment or reallocation of resources

Significant breach requiring notification has occurred or conditions exist where significant barriers/challenges are likely to produce unacceptably high levels of risk

Notes: Since our last meeting, there has been one minor security incident involving inappropriate disclosure of VCU data which has required notification to affected individuals and appropriate regulatory agencies. Phishing and hacking/intrusion attempts continue to be the top threats faced by VCU. Detected cyber intrusion attempts are stable and slightly down over the course of the last 24 months. Some anomalies were observed in the last year and are attributable to high profile global cyber threats (such as the one that compromised Equifax) and the implementation of machine-learning assisted threat detection capabilities in our Security Information and Event Management (SIEM) system (which allowed us to detect more threats). The number of compromised accounts we are seeing is at an all-time low, averaging less than 10 accounts per month for the last year. This is attributable to our wide roll-out of multi-factor authentication (including to students) and expanded phishing simulation and security training.

ERM PROGRAM

Status of ERM mitigation plans
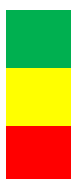
Program progressing on schedule

Program not on schedule; ERM Committee to address.

Program significantly behind schedule; Executive Management attention required.

Notes:The ERM Steering Committee (Committee) continues to review of the Risk Mitigation and Management (RMM) Plans to assess risk appetite and impact to the university.

PLANNED AUDIT STATUS

PLANNED AUDITS (status of audits - planned and unplanned to available resources)

SPECIAL PROJECTS (status of special projects - planned and unplanned to available resources)

Progressing as planned and within overall budget

Some overload or barriers / challenges encountered that may require adjustment or reallocation of resources to resolve

Significant overload or barriers / challenges encountered resulting in major delays or changes to scheduled work plan

COMPLIANCE OVERSIGHT

Compliance requirements compared to known material violations

No known noncompliance

Challenges encountered that have an impact on resolution or implementation

Significant compliance challenge encountered

Notes: Institutional infrastructure to ensure compliance with the multitude of federal and state laws and regulations as well as university policies and procedures still requires attention.

Board of Visitors Executive Summary
March 2018

PRESENTATION TITLE: Sexual Harassment Prevention Education/Training Update	
Presenter Name and Title: Laura Rugless, Director and Title IX Coordinator	
Responsible University Division: Equity and Access Services **BOV Committee:** Audit, Integrity, and Compliance Committee	
Quest Theme(s) and Goal(s) to be Addressed:	
Key Presentation Messages	In its third year, this universitywide training initiative for all employees and students covers primarily dating violence, domestic violence, sexual assault and stalking, as required by federal law. Information about sexual harassment and other sex/gender discrimination also is included. Cabinet level messaging and the recent launch of the learning management system are expected to result in significant improvement in the employee compliance rate. Changes in the onboarding process for incoming students, which take effect in summer 2018, are expected to result in significant improvement in the student compliance rate. Updated data will be shared at the meeting. This report is provided to the governing authority in order to support assurances that appropriate, timely training based in key policy and a risk reflective perspective, is covered. Tracking the compliance rate assists in furtherance of accountability and demonstrated effectiveness of VCU's prevention efforts regarding sexual violence/misconduct and sex/gender discrimination, including sexual harassment.
Governance Implications	This is informational in nature and provides assurances to the governing authority that administration is actively engaged in addressing identified compliance related issues on a universitywide basis and has training in place to advise employees and students of expectations, the university's policy and reporting options.
Governance Discussion Questions	1. Are there any specific areas or risks that require the Committee's attention relative to the Compliance Education? 2. Are you receiving the necessary cooperation and assistance from university administration and compliance partners in providing the education?
Next Steps for Management (Responsible Division Head; Timeframe for Action)	Continued support in treating this request as mandatory and explore options for incentivizing completion or penalizing for non-completion.
Next Steps for Governance (Responsible Board Member; Timeframe for Action)	Continued support in addressing any identified issues as they become apparent.

Title IX/Sexual Harassment Prevention Education: Not Anymore at VCU

In 2013, the Violence Against Women Act (VAWA) amended the Clery Act. The amendments took effect in 2015 and among other provisions, required institutions to provide to incoming students and new employees primary prevention and awareness programs addressing dating violence, domestic violence, sexual assault and stalking. These programs must include: a statement that the institution prohibits the crimes of dating violence, domestic violence, sexual assault, and stalking, as those terms are defined in the regulations; the definitions of these terms in the applicable jurisdiction; the definition of ''consent,'' in reference to sexual activity, in the applicable jurisdiction; a description of safe and positive options for bystander intervention; information on risk reduction; and information on the institution's policies and procedures after a sex offense occurs.

In 2013, the Office on Violence Against Women (OVW)/U.S. Department of Justice awarded a grant to VCU's Wellness Resource Center, in collaboration with the University of Richmond. The two institutions dedicated a portion of the award to identifying and procuring an online education program. VCU convened a statewide meeting of campus advocates to review five programs that met VAWA requirements and rated them based on how engaging and inclusive the program was and whether the program placed responsibility on offender behavior (v. blaming victims). The statewide group ranked Not Anymore, by vendor Student Success, the top program. Later that year, VCU convened a small group from the VCU community to review Not Anymore; this group agreed that it would be an effective program for the university. In 2014, through a procurement process, VCU selected Not Anymore from among three proposals based on content and pricing and launched the student training on a voluntary/pilot basis. (At the completion of the OVW grant, VCU completed another procurement process in 2017 and again selected Not Anymore.) In 2015-2016, VCU instituted the requirement that all students and employees complete Not Anymore training. As of February 19, 2018, a total of 57,379 current and former students and employees have completed the training.

Not Anymore is a suite of interactive online sexual assault prevention programs featuring true student testimonials and is customizable and accessible. VCU has added required information specific to VCU and Virginia (see first paragraph above) and opted to include a sexual harassment module within both the student and employee versions. The entire training takes 45-60 minutes to complete and requires interaction (i.e., content cannot be bypassed) and a test score of 80%. The employee training includes a VCU original Responsible Employee Reporting video. Beginning in 2017, based on assessment of additional university community needs, VCU made available optional International Student and Clarifying Consent modules for student populations.

For more information about Not Anymore at VCU:
Students: https://students.vcu.edu/resources/not-anymore-training/
Employees: https://equity.vcu.edu/training/

Anyone who is not a student or employee and who would like to take the Not Anymore at VCU training may request access by contacting titleix@vcu.edu.

Item 6 – COI Update for Commonwealth Reporting Requirements

- Reporting Closed February 1st

- 100% Compliance (xx individuals)

  - *Financial Disclosure*

  - *Statement of Economic Interest*

- Filings are under review for potential conflicts

VCU

Board of Visitors Executive Summary
March 2018

PRESENTATION TITLE: Policy Program Update	
Presenter Name and Title: Jacqueline Kniska, University Integrity & Compliance Officer	
Responsible University Division: Audit and Compliance Services **BOV Committee:** Audit, Integrity, and Compliance Committee	
Quest Theme(s) and Goal(s) to be Addressed: All	
Key Presentation Messages	As a follow up to information shared at the September meeting, this report includes progress since on the currency of the existing policy population and shares the results of an initial foray into gap assessment. The first phase of policy gap assessment is exclusively driven by federal and state law and regulation for the existence and scope of required policies. Improvements have been made in some areas regarding updating policies. Significant work remains. The prior reported status was 53% overdue; status as of February is 46% overdue. An additional 10% reduction in total number of policies has also occurred through consolidation efforts. The consolidation efforts have assisted with clarity and substance in remaining policies. This report is provided to the governing authority in order to support assurances that information is shared timely as related to the monitoring of the organization's standards and procedures that directly affect risk assessment. Tracking the compliance rates as related to policy quality assists in providing clarity of expectations and in the furtherance of accountability. This is one component used to demonstrate VCU's Ethics and Compliance Program effectiveness.
Governance Implications	This is informational in nature and provides assurances to the governing authority that the independent oversight function continues to track the progress of this topic. It is important that the BOV remain apprised of challenges to full compliance and this report assists in supporting the BOV in fulfilling the good business judgment rule.
Governance Discussion Questions	1. Are there any specific areas or risks that require the Committee's attention relative to policy maintenance? 2. Are you receiving the necessary cooperation and assistance from university administration and compliance partners in providing the education?
Next Steps for Management (Responsible Division Head; Timeframe for Action)	Continued support in prioritizing policy maintenance and creation as a measure of accountability and explore options for incentivizing completion or penalizing for non-completion.
Next Steps for Governance (Responsible Board Member; Timeframe for Action)	Continued support in prioritizing policy maintenance and creation as a measure of accountability and explore options for incentivizing completion or penalizing for non-completion.

Item 7 – Policy Status Update

- Institutional Policy Maintenance: a prior identified risk, presented in the September 2017 BOV, AICC Meeting

- Deficiencies in policy management are a risk to any institution resulting in confusion and frustration

VCU

Policy Status Update
Scope

1. timely review of existing policy

2. current results of the 2017 *preliminary* gap assessment

   The term *preliminary* is used to convey the inaugural activity and its limitation to policies expressly required by state and federal law or regulation [includes the 2008 Management Agreement with the Commonwealth]
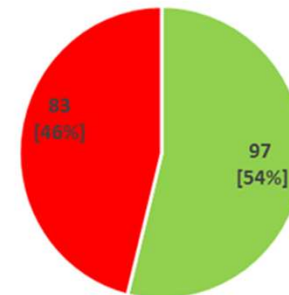
VCU

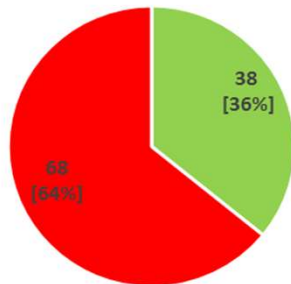# Timely Review Progress over last 7 months

FY 17 - All Policies

94 [47%]
106 [53%]
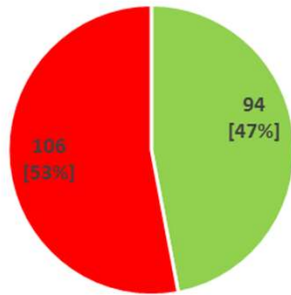
■ Current ■ Outdated

FY 18 (Thru 1/31) - All Policies

83 [46%]
97 [54%]

■ Current ■ Outdated

FY 17 - Outdated Policies

38 [36%]
68 [64%]

■ Outdated - In Progress ■ Outdated - No Progress

FY 18 (Thru 1/31) - Outdated Policies

38 [46%]
45 [54%]
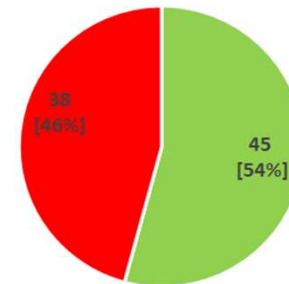
■ Outdated - In Progress ■ Outdated - No Progress

Preliminary Gap Assessment - Process

Survey sent 1.27.2017, inquiring as to:

– Whether all elements are met by existing policy

– What the title of the existing policy covering these elements is

– That policy's location

– Whether there is reason to consider these requirements as not applicable to VCU

– Status recently reported to cabinet members

VCU

Board of Visitors Executive Summary
March 2018

PRESENTATION TITLE: Audit Reports for Information	
Presenter Name and Title: Bill Cole, Executive Director	
Responsible University Division: Audit and Compliance Services **BOV Committee:** Audit, Integrity, and Compliance Committee	
Quest Theme(s) and Goal(s) to be Addressed:	
Key Presentation Messages	The following audit reports are presented to the Committee for information purposes: • Institutional Animal Care and Use • Technology Incident Response Management There are no board level findings in these reports.
Governance Implications	No significant issues were identified.
Governance Discussion Questions	None – Reports are presented for informational purposes.
Next Steps for Management (Responsible Division Head; Timeframe for Action)	Continue to monitor the progress toward completion of corrective action plans for management level findings.
Next Steps for Governance (Responsible Board Member; Timeframe for Action)	Review Annual Report of Outstanding Recommendations for appropriate implementation of corrective action plans.

Animal Care and Use Program

Final Report
February 27, 2018

Audit and Compliance Services

EXECUTIVE SUMMARY

Overview

The Animal Care and Use Program (program) consists of the Division of Animal Resources (DAR), the Occupational Health and Safety Program and the Institutional Animal Care and Use Committee (IACUC). The DAR provides university-wide support to programs using animal species in research and educational efforts. The DAR consults with principal investigators regarding animal selection, use, and costs, and then facilitates the research and educational programs for university faculty.

The DAR is responsible for maintaining animal rooms or vivaria in animal facilities on two campuses and has approximately 130 investigators who perform research. The DAR maintains facilities for 10 different species including mice, rats, rabbits, pigs and primates. Mice and rats are by far the largest population of species within the DAR as they account for over 95% of the total animal population.

The DAR employs approximately 40 full-time and 10 part-time employees. The division's expenses for fiscal year 2017 are outlined in the table below:

Expenses	Amount
Salaries, wages and benefits	$3,115,635
Operation costs	3,074,580
Less: Per diem cost recovery	(3,030,921)
Total	$3,159,294

The VCU IACUC is an internal committee comprised of 26 voting members. The voting members include veterinarians, research specialists, professors, scientists, and non-scientist members. The IACUC meets on a monthly basis, performs two physical inspections of selected animal research facilities each year, and performs a semi-annual program review to evaluate DAR's processes including policy and procedures, disaster plan, training programs and the veterinary care program, as well as a review of Occupational Health and Safety and training within the overall program.

The AAALAC (formally known as the Association for Assessment and Accreditation of Laboratory Animal Care) accredits the Animal Care and Use Program. The *Guide for the Care and Use of Laboratory Animals* is considered the official guidance for lab animal care and use and is used by AAALAC when evaluating an institution for accreditation. AAALAC representatives perform site visits and renew accreditation every three years. In addition, the U.S. Department of Agriculture (USDA) helps regulate the care of laboratory animals through standards set forth by the Animal Welfare Act. The USDA performs inspections every year. There were no significant findings noted in the following reviews and inspections the VCU IACUC (June 21, 2017), AAALAC (July 12, 2016) and the USDA (July 24, 2017).

Purpose

The objectives of the audit were to determine whether:

- Security and facility maintenance were maintained to ensure the integrity of the research being performed
- Financial information was reasonable and accurate
- IACUC followed practices and procedures to ensure proper oversight of the entire program
- Lab animals were properly treated and cared for before, during and after research
- Lab animals were properly disposed of at the end of research

Scope and Audit Procedures

Our scope of the Animal Care and Use Program encompassed an audit of financial and operational activities and processes for the period July 1, 2017 through December 31, 2017. Our audit did not include reviewing scientific research methodologies or how the methodologies were applied to the animals. Additionally, we conducted walk-throughs or viewed selected rooms except for the non-human primates, due to the audit team not having the required immunizations for entry.

Our audit procedures included discussions with Animal Resources management and a walk-through of over half of the animal research facilities. We reviewed policies and procedures of the animal resources, including the department disaster and emergency plan. Data analysis of financial information was performed and a sample of administrative data (i.e., leave records, purchase card transactions and travel reimbursements) was reviewed. We interviewed the VCU Card Services manager about card key access and tested rooms secured with this technology and retinal scanning. We reviewed documentation of committee reports, meeting minutes, committee member rosters and other relevant information of IACUC committee members. We reviewed the most recent inspection and accreditation reports.

Conclusion

In our opinion, based on the results of our audit, security and facility maintenance were maintained to ensure the integrity of the research being performed; financial information appeared reasonable and accurate; the IACUC followed practices and procedures to ensure the proper oversight of the entire program; and lab animals were properly treated and cared for before, during and after research, including disposals.

Our audit of the Animal Care and Use Program began on December 13, 2017. The first draft of this report was submitted to management on February 15, 2018.

Prior to releasing this report in final form, the draft report was reviewed by the following officials:

Mark C. Bates	Director, Animal Resources
Wayne Barbee	Chair, IACUC
Susan Robb	Senior Associate Vice President for Research Administration and Compliance
Frank Macrina	Vice President for Research and Innovation

Our review was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing*, and included an evaluation of internal controls and such procedures, as we considered necessary in the circumstances.

Executive Director
Audit and Compliance Services
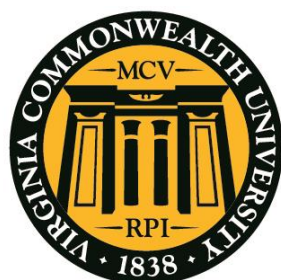
Technology Incident Response Management

Final Report
January 29, 2018

Audit and Compliance Services

EXECUTIVE SUMMARY

Overview

The VCU Information Security Office (ISO) is responsible for protecting the data and technology resources critical to the university's mission, operations and services. The ISO responsibilities also include providing an organized approach for responding to information security breaches or cyberattacks referred to as incidents. Regardless of the strength of university information security and controls, cyberattacks will eventually breach defenses. As a result, the incident response function is a critical component of the overall information security program. For the purposes of this report, incident response (IR) is defined as processes defending against information security threats and mitigating incidents.

Properly designed and managed incident response prevents or minimizes damage to breached (i.e. hacked or human error) sensitive data and mission critical technology systems, operations and services. As a result, the integrity of VCU is protected and legal, financial and reputational costs minimized.

The ISO maintains the VCU Information Security Incident Response Standard, the related Information Security Office Incident Response Plan and the incident response team. The ISO reports to the VCU Chief Information Officer (CIO) of Technology Services and consists of 10 professionals, six of whom also serve as members of the incident response team. The ISO unit responsibilities include:

➢ development of University Information Security Policies, Standards and Guidelines
➢ universitywide information security risk management
➢ identity and access management
➢ data and information management and compliance
➢ information security incident handling, management and reporting
➢ intrusion prevention, detection and monitoring
➢ information security and response training and awareness

Purpose

The objectives of the audit were to determine whether:

- The incident response strategy adequately addresses resources, improvements and growth, technology changes, training, and industry trends and predictions.
- The incident response team structure adequately provides:
  - services including intrusion detection, security advisories, education and awareness, and information sharing
  - appropriate incident response personnel
- Automated technology tools are adequate to support necessary incident prevention, detection and response processes

- Incident response processes and capability are adequate to successfully contain, manage, eradicate and recover from an IT incident, and
- Adequate provisions for returning to normal operations after an incident has occurred.

Scope and Audit Procedures

Our scope included the VCU incident response strategy, team structure, prevention, detection, monitoring, analysis, response and return to normal operations.

Our risk-based audit procedures included review of the Information Security Office's incident response related policies and procedures, strategic plans, response team structure, technical skills development and testing. We also interviewed key information security management and staff and evaluated automated technology tools in use for incident response.

Conclusion

In our opinion, based on the results of our audit, VCU's incident response strategy and team structure, automated technology tools, response processes and capability, and response plan provisions are adequate and are adequately managed.

Recommendations to strengthen VCU Incident Response Management are included in a separate report furnished to management.

Our audit of Technology Incident Response Management began on July 24, 2017. The first draft of this report was submitted to management on January 16, 2017.

Prior to releasing this report, a draft version of the report was reviewed by, and management's action plans were provided or approved by, the following officials:

Mr. Dan Han   Chief Information Security Officer
Mr. James S. Bostick   Senior Director of Technology Services
Mr. Alexander Henson   Chief Information Officer
Dr. Meredith Weiss   Vice President for Administration

Our audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing* and included an evaluation of internal controls and such procedures as we considered necessary in the circumstances.

Executive Director
Audit and Compliance Services

Audit and Compliance Services
Status of Fiscal Year 2017-2018 Audit Work Plan
<u>February 28, 2018</u>

Audit Area	Status	Anticipated Board Issue Date
<u>Risk Based Audits</u>		
Recreational Sports	Completed	December 2017
Vice President – Health Sciences Office	Completed	December 2017
Innovation Gateway (carry-over from FY17)	Completed	December 2017
School of Medicine – Pediatrics (consolidated with HS Audit)	Completed	December 2017
Technology Incident Response (moved from 2017)	Completed	~~December 2017~~ March 2018
College of Humanities and Sciences Administrative Review (including IT)	Completed	March 2018
Graduate Admissions	Completed	March 2018
IACUC (Animal Resources)	Completed	~~September 2018~~ March 2018
School of Dentistry Technology (moved from 2017)	In Progress	~~September 2017~~ May 2018
Controller's Office	In Progress	~~March 2018~~ May 2018
School of Medicine – Research Administration	In Progress	~~September 2018~~ May 2018
Facilities Management – Construction	In Progress	~~May 2018~~ September 2018
HR – New Hire Processes	In Progress	September 2018
Institutional Review Board	Not Started	~~March 2018~~ September 2018
Development and Alumni Relations Technology	Not Started	~~May 2018~~ September 2018
School of Engineering (including IT)	Not Started	~~May 2018~~ September 2018

Audit and Compliance Services
Status of Fiscal Year 2017-2018 Audit Work Plan
February 28, 2018

Annual Audits and Activities		
Review of Selected Accounts, July 1, 2016– June 30, 2017	Completed	December 2017
Risk Assessment	In Progress	May 2018
Follow-Ups on Audit Recommendations Outstanding	In Progress	September 2018
Athletics – Year 2 NCAA Compliance Review	Not Started	September 2018

Special Project	Status
Continuing Projects	
State Employees Fraud, Waste, and Abuse Hotline	In Progress – 1; Closed – 1
Other Projects	
Qatar Campus – Financial and Administrative Review	Completed
IT Security Special Project – Internet of Things (IoT)	In Progress
Facilities Management – Inventory Management	In Progress
Data Analytics / Continuous Monitoring	On going
Fiscal Oversight Analysis	On going
University Centers and Institutes	Not Started