BUSINESS CONTINUITY

CALIFORNIA STATE UNIVERSITY,
CHANNEL ISLANDS

Audit Report 10-59
December 6, 2010

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ABBREVIATIONS

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<tr>
<td>BC</td>
<td>Business Continuity</td>
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<tr>
<td>BCP</td>
<td>Business Continuity Plan(s)</td>
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<td>BCPC</td>
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<td>BIA</td>
<td>Business Impact Analysis</td>
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<td>CGC-1</td>
<td>Continuing Guidance Circular 1</td>
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<td>COOP/COG</td>
<td>Continuity of Operations/Continuity of Government</td>
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<td>CSU</td>
<td>California State University</td>
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<td>HRE</td>
<td>Housing and Residential Education</td>
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<td>OES</td>
<td>Office of Emergency Services</td>
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<td>ORM</td>
<td>Office of Risk Management</td>
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EXECUTIVE SUMMARY

As a result of a systemwide risk assessment conducted by the Office of the University Auditor during the last quarter of 2009, the Board of Trustees, at its January 2010 meeting, directed that Business Continuity (BC) be reviewed. Similar audits of Business Continuity were performed during our Disaster and Emergency Preparedness audits in 2006.

We visited California State University, Channel Islands campus from September 27, 2010, through October 8, 2010, and audited the procedures in effect at that time.

Our study and evaluation revealed certain conditions that, in our opinion, could result in significant errors and irregularities if not corrected. Specifically, the campus did not maintain adequate internal control over the following areas: business continuity planning. These conditions, along with other weaknesses, are described in the executive summary and body of this report. In our opinion, except for the effect of the weaknesses described above, the operational and administrative controls for BC activities in effect as of October 8, 2010, taken as a whole, were sufficient to meet the objectives stated in the “Purpose” section of this report.

As a result of changing conditions and the degree of compliance with procedures, the effectiveness of controls changes over time. Specific limitations that may hinder the effectiveness of an otherwise adequate system of controls include, but are not limited to, resource constraints, faulty judgments, unintentional errors, circumvention by collusion, and management overrides. Establishing controls that would prevent all these limitations would not be cost-effective; moreover, an audit may not always detect these limitations.

The following summary provides management with an overview of conditions requiring attention. Areas of review not mentioned in this section were found to be satisfactory. Numbers in brackets [ ] refer to page numbers in the report.

PROGRAM ADMINISTRATION [6]

The campus had not fully implemented a BC program.

BUSINESS CONTINUITY PLANNING [7]

Business continuity plans did not contain all recommended plan elements.
INTRODUCTION

BACKGROUND

Business continuity (BC) is the ability of an organization to provide service and support for its customers and to maintain viability following a catastrophic event. BC is closely related to emergency preparedness, as they both involve substantial planning, risk assessment, and evaluation of impact to the business. However, the two areas differ in scope. The goal of emergency preparedness is to address the immediate impacts of a disaster and to respond as needed to end the emergency. In contrast, BC is a broader process of preparation that includes disaster, response, recovery, mitigation, risk reduction, prevention, and preparedness.

A business continuity plan (BCP) defines how business activities will be restored after an interruption. Key resources for guidance in creating such a plan include the Federal Emergency Management Agency Continuity Guidance Circular 1 (CGC-1), Continuity Guidance for Non-Federal Entities, which provides broad principles that are applicable to agencies and businesses nationwide. In addition, the Continuity of Operations/Continuity of Government Plan (COOP/COG), released by the California Office of Emergency Services (OES) (now the California Emergency Management Agency), provides guidance on applying the principles put forth in CGC-1 within the State of California.

The California State University (CSU) system has been involved in BC activities for many years. However, it was not until recently that the CSU established formal guidelines for BC activities. In early 2006, the CSU Office of Risk Management (ORM) requested that each campus prepare a written BCP in the event a pandemic influenza were to occur. The ORM distributed the Avian Pandemic Influenza Business Continuity Planning Guide to all CSU campuses in order to aid campus staff involved in emergency and restoration planning to develop their own BCP. To ensure the adequacy and consistency of pandemic influenza BCPs systemwide, the ORM commissioned James Lee Witt Associates, a part of GlobalOptions Group, Inc., to review all pandemic influenza BCP and report the results to the ORM. In August 2007, James Lee Witt Associates’ Pandemic Influenza Business Continuity Plan Assessment Final Report was issued, and it provided key recommendations in the form of strategic themes for each campus and the entire CSU system as a whole.

In October 2007, the CSU finalized and implemented Executive Order (EO) 1014, California State University Business Continuity Program. It models the California OES COOP/COG, though in a streamlined format, and is a fundamental guidance document for the chancellor’s office and the campuses as they develop and implement BCP for essential business units. EO 1014 clearly defines responsibility for BC, including significant roles at the campuses, and outlines specific procedures for the business impact analysis, risk assessment, and development of BCP, as well as testing and exercising of BCP, maintenance of BCP, required communications, training, and record retention. It also indicates that BC programs at campuses must include disaster recovery planning, and therefore necessitates BCP for significant information technology areas.

Under the plan, any business unit that a campus deems essential must develop a business impact analysis, which is defined in EO 1014 as:

A process designed to prioritize business functions by assessing the quantitative (financial) and qualitative (non-financial) impact that might result if an organization was to experience a catastrophic
event. The business impact analysis will identify essential functions and workflow, determine the qualitative and quantitative impacts of a vulnerability/threat to essential functions, prioritize and establish recovery time objectives for the essential functions, and, if appropriate, establish recovery point objectives for essential functions.

In addition, each of these business units must develop a risk assessment, which is defined in EO 1014 as:

A process of identifying risks to an organization, assessing the essential functions necessary for an organization to continue business operations, defining the controls in place to reduce organization exposure, and evaluating the cost for such controls. Risk analysis often involves an evaluation of the probabilities of a particular event. The risk assessment will identify vulnerabilities and threats that may impact the business units’ ability to fulfill the mission of the campus and define the controls in place to reduce the exposure to vulnerabilities/threats.
PURPOSE

Our overall audit objective was to ascertain the effectiveness of existing policies and procedures related to BC and to determine the adequacy of controls that ensure compliance with relevant governmental regulations, Trustee policy, Office of the Chancellor directives, and campus procedures.

Within the audit objective, specific goals included determining whether:

- Administration of BC incorporates a defined mission, stated goals and objectives, and clear lines of organizational authority and responsibility.
- The BC program as a whole coordinates and integrates with the emergency response plan, safety and health plans, or other related plans.
- Necessary contacts for essential business units have been identified.
- Policies and procedures around key aspects of BC programs have been documented and implemented.
- Business resumption and continuity strategies have been developed.
- Information backup procedures are sufficient to provide the availability of backup data subsequent to an emergency.
- Business impact analyses, risk assessments, and BCPs have been developed for each business unit identified as essential to operations continuity.
- Campuses have developed campuswide pandemic influenza BCPs, conducted periodic testing of the plans, and reviewed and updated the plans cyclically.
- BCPs are tested periodically, and test results and lessons learned are reviewed, documented, and applied.
- BCPs are adequately monitored and maintained.
- Ongoing communication of BC activities adequately provides oversight, monitoring, and feedback to involved management.
- A formalized BC training program exists, and all individuals responsible for developing and implementing BCP have been adequately trained.
- All BC records are maintained for no less than five years.
SCOPE AND METHODOLOGY

The proposed scope of the audit as presented in Attachment B, Audit Agenda Item 2 of the January 26 and 27, 2010, meeting of the Committee on Audit stated that BC includes program and facility readiness and resource planning for the recovery, within a predetermined time, from any catastrophic event, be it natural or man-made. Proposed audit scope would include review of Trustee policy, systemwide directives, and campus policies and procedures; a study of the essential functions or operations following a catastrophic event; business impact analysis and risk assessment; BC and disaster recovery plans; testing and exercising of plans; plan maintenance, communications, and training; and necessary retention of key records.

Our study and evaluation were conducted in accordance with the International Standards for the Professional Practice of Internal Auditing, issued by the Institute of Internal Auditors, and included the audit tests we considered necessary in determining that accounting and administrative controls are in place and operative. This review emphasized, but was not limited to, compliance with state and federal laws, Board of Trustee policies, and Office of the Chancellor policies, letters, and directives. The audit focused on procedures in effect from September 27, 2010, through October 8, 2010.

A preliminary risk assessment of campus BC was used to select for our audit testing those areas or activities with highest risk. This assessment was based upon a systematic process using management’s feedback and professional judgments on probable adverse conditions and other pertinent information, including prior audit history in this area. We sought to assign higher review priorities to activities with higher risks. As a result, not all risks identified were included within the scope of our review.

Based upon this assessment of risks, we specifically included within the scope of our review the following:

- Organization and responsibilities for BC.
- Cooperative interaction between the BCP and other internal plans and policies.
- Strategies for business resumption and continuity.
- Policies and procedures documenting key aspects of BC programs.
- Existence of business impact analyses and risk assessments.
- Existence, review, and testing of BCP and pandemic influenza BCP.
- Sufficiency of information backup and recovery procedures for critical data.
- Monitoring and maintenance of BCP and pandemic influenza BCP.
- Sufficiency of BC communications both on and off campuses.
- BC training and formalized training programs.
- Recordkeeping for BC.
OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

PROGRAM ADMINISTRATION

The campus had not fully implemented a business continuity (BC) program.

We noted that the campus had not completed many of the program requirements for each business unit that had been determined by the university to provide essential functions. Specifically:

- The list of business units that provided essential functions to the university had not been updated since May 2007.
- None of the business units determined by the university to provide essential functions had a documented business impact analysis (BIA) or a documented risk assessment.
- Test results and lessons learned had not been consistently documented, approved, and signed by the head of the business unit and the campus BC coordinator, or by the business continuity planning committee (BCPC).
- No formal testing procedure had been established to ensure that some parts of the business continuity plans (BCP) were tested annually and that all parts were tested every seven years.
- No training program had been established to ensure that initial and ongoing training was provided to individuals responsible for developing and implementing the BCP.

Executive Order (EO) 1014, *California State University Business Continuity Program*, dated October 8, 2007, states that each business unit that is determined by the university to provide essential functions shall conduct a BIA and risk assessment. Each business unit that is determined by the university to provide essential functions shall develop a BCP that reflects sufficient forethought and detail to ensure a high probability of successful maintenance or restoration of essential functions following an unfavorable event. EO 1014 further states that business units shall test some part of their BCP once a year, with all parts tested every seven years. At the completion of each test or review, full documentation of test results and lessons learned shall be completed in the form of a corrective action plan or after-action report. Such reports shall be approved/signed off by the head of the business unit and the campus BC coordinator, or the BCPC. Initial training on conducting BC planning shall be provided to all individuals responsible for developing and implementing plans. Additional and/or repeat training shall be provided as determined necessary by the BC coordinator or the BCPC following the review of written plans and plan testing.

The vice president of finance and administration stated that the failure to update the list of essential business units was due to oversight and that the individual business units’ BIAs and risk assessments had not been documented due to the extensive amount of time it takes to implement a campuswide program. She further stated that BC testing activities, documentation, approvals, procedures, and training programs had not been fully implemented because the primary emphasis had been on establishing the required plan documents.
Failure to fully implement a BC program, including all essential program requirements, increases the risk that essential campus functions would be unable to effectively and quickly recover from a catastrophe or disaster.

**Recommendation 1**

We recommend that the campus:

a. Update the list of business units that provide essential functions to the university.

b. Document BIAs and risk assessments for each business unit determined by the university to provide essential functions.

c. Ensure that test results and lessons learned are consistently documented, approved, and signed by the head of the business unit and the campus BC coordinator, or by the BCPC.

d. Establish BC testing procedures to ensure that some parts of the BCPs are tested once a year and all parts are tested every seven years.

e. Provide a documented BC training program for individuals responsible for implementing BCPs.

**Campus Response**

We concur. This will be completed by June 30, 2011.

**BUSINESS CONTINUITY PLANNING**

BCPs did not contain all recommended plan elements.

We reviewed 5 of the 18 individual BCPs and found that the following recommended elements were either not documented or not fully developed:

- Communication contact information for internal personnel, other agencies, and emergency personnel.

- Tests, training, and exercises to familiarize staff members with their roles and responsibilities during an emergency.

- A complete listing of mission-critical systems and equipment.

- Approval and sign-off by the head of the business unit and the BC coordinator, or the BCPC.

- An annual administrative review by the university.
EO 1014 states, in part, that each business unit that is determined by the university to provide essential functions shall develop a BCP. Recommended elements for developing the plan include, but are not limited to:

- Communications, including procedures and plans for communicating with internal personnel, other agencies, and emergency personnel.

- Tests, training, and exercises to familiarize staff members with their roles and responsibilities during an emergency, ensure that systems and equipment are maintained in a constant state of readiness, and validate certain aspects of the BCP.

- Listing and prioritization of essential functions, including the identification of staffing and resource requirements, mission-critical systems and equipment, and support activities for each essential function.

EO 1014 further states that the BCPs shall be approved/signed-off by the head of the business unit and the BC coordinator, or the BCPC, and retained as indicated in Section IV.7. The university shall perform an administrative review of the BCPs at least annually, or more frequently as needed. The reviewed-as-of-date shall appear on the plans after each review.

The vice president of finance and administration stated that the failure to clearly define tests, training, and exercises to familiarize staff members with their roles and responsibilities in the BCPs was due to oversight. She further stated that procedures related to communication information, mission-critical systems and equipment, sign-off and approval of the BCPs, and administrative review of plan documents had not been implemented due to the extensive amount of time it takes to implement a campuswide program that spans multiple departments.

Failure to include all recommended elements in the BCPs increases the risk that essential campus functions would be unable to effectively and quickly recover from a catastrophe or disaster.

**Recommendation 2**

We recommend that the campus document or fully develop the following elements in each BCP:

a. Complete communication contact information for internal personnel, other agencies, and emergency personnel.

b. Tests, training, and exercises to familiarize staff members with their roles and responsibilities during an emergency.

c. A complete listing of mission-critical systems and equipment.

d. Approval and sign-off by the head of the business unit and the BC coordinator, or the BCPC.

e. An annual administrative review by the university.
Campus Response

We concur. This will be completed by June 30, 2011.
### APPENDIX A: PERSONNEL CONTACTED

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Richard R. Rush</td>
<td>President</td>
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<tr>
<td>Pamela Abbot-Mouchou</td>
<td>Executive Administrative Assistant, Finance and Administration</td>
</tr>
<tr>
<td>Michael Berman</td>
<td>Chief Information Officer, Academic and Information Technology</td>
</tr>
<tr>
<td>David Chakraborty</td>
<td>Director, Construction and Operation, Planning, Design</td>
</tr>
<tr>
<td>Joanne Coville</td>
<td>Vice President, Finance and Administration</td>
</tr>
<tr>
<td>Jeffrey Cowgill</td>
<td>Police Administrative Sergeant</td>
</tr>
<tr>
<td>Cindy Derrico</td>
<td>Director, Housing and Residential Education (HRE), HRE Housing Administration</td>
</tr>
<tr>
<td>Caroline Jane Doll</td>
<td>Director, Special Projects, Finance and Administration</td>
</tr>
<tr>
<td>Judy Frazier</td>
<td>Administrative Analyst/Specialist, Academic and Information Technology</td>
</tr>
<tr>
<td>John Reid</td>
<td>Director, Public Safety and Chief of Police</td>
</tr>
<tr>
<td>Janel Suliga</td>
<td>Assistant Director, HRE Operation and Management, HRE Housing Administration</td>
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December 13, 2010

Mr. Larry Mandel  
University Auditor  
401 Golden Shore, 4th Floor  
Long Beach, CA 90802-4200

RE: Business Continuity Audit Report 10-59

Dear Larry,

Enclosed is the documentation to respond to Recommendation 1 and 2 following our recent Business Continuity Plan Audit. Earlier today, the electronic version was sent to the Office of the University Auditor.

As always, please let me know if you need more information.

Very truly yours,

Joanne Coville  
Vice President for Finance and Administration

Enclosure

cc: Dr. Richard Rush, CI President  
    Caroline Doll, Dir. Special Projects
BUSINESS CONTINUITY
CALIFORNIA STATE UNIVERSITY,
CHANNEL ISLANDS
Audit Report 10-59

PROGRAM ADMINISTRATION

Recommendation 1

We recommend that the campus:

a. Update the list of business units that provide essential functions to the university.

b. Document BIAs and risk assessments for each business unit determined by the university to provide essential functions.

c. Ensure that test results and lessons learned are consistently documented, approved, and signed by the head of the business unit and the campus BC coordinator, or by the BCPC.

d. Establish BC testing procedures to ensure that some parts of the BCPs are tested once a year and all parts are tested every seven years.

e. Provide a documented BC training program for individuals responsible for implementing BCPs.

Campus Response

We concur. This will be completed by the end of the fiscal year.

BUSINESS CONTINUITY PLANNING

Recommendation 2

We recommend that the campus document or fully develop the following elements in each BCP:

a. Complete communication contact information for internal personnel, other agencies, and emergency personnel.

b. Tests, training, and exercises to familiarize staff members with their roles and responsibilities during an emergency.

c. A complete listing of mission-critical systems and equipment.
d. Approval and sign-off by the head of the business unit and the BC coordinator, or the BCPC.

e. An annual administrative review by the university.

Campus Response

We concur. This will be completed by the end of the fiscal year.
January 4, 2011

MEMORANDUM

TO: Mr. Larry Mandel
    University Auditor

FROM: Charles B. Reed
      Chancellor

SUBJECT: Draft Final Report 10-59 on Business Continuity,
         California State University, Channel Islands

In response to your memorandum of January 4, 2011, I accept the response as submitted with the draft final report on Business Continuity, California State University, Channel Islands.

CBR/amd