

**SEISMIC SAFETY & DISASTER READINESS**

**CALIFORNIA STATE UNIVERSITY,  
HAYWARD**

**Report Number 97-27  
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## ABBREVIATIONS

CCR	California Code of Regulations
CO	Chancellor's Office
CPB&G	Committee on Campus Planning, Buildings and Grounds, CSU Board of Trustees
CSU	California State University
EH&S	Environmental Health and Safety
EMEP	Earthquake/Major Emergency Preparedness – (a CSU task force formed in spring 1985 and disbanded in 1990)
EO	Executive Orders from the Chancellor
EOC	Emergency Operations Center
ICS	Information and Computing Services, CSU Hayward
OES	Office of Emergency Services, State of California - Governor's Office
OSA	Office of the State Architect, State Department of General Services
PP&D	Physical Planning and Development, Chancellor's Office
SEMS	Standardized Emergency Management System regulations issued by OES in September 1994
SRB	Seismic Review Board of The CSU formed in 1992
UPS	Uninterruptible Power Supply

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## INTRODUCTION

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### PURPOSE

Our overall audit objective was to furnish an independent appraisal of the seismic safety and disaster readiness functions, to ascertain compliance with established policies and procedures, to determine adequacy of internal controls, and to identify opportunities for operational improvements which would help better achieve goals and objectives.

Within the overall audit objective, specific goals included determining whether:

- ▶ necessary seismic retrofitting has been done so facilities meet the relevant building standards in Title 24 of the California Code of Regulations;
- ▶ new construction complies with Board of Trustee policy for seismic peer review (RCPBG 05-93-13);
- ▶ reasonable facility measures for disaster avoidance and prevention have been implemented, e.g., anchoring unsecured furniture and equipment or providing for fire suppression - automatic sprinklers and portable extinguishers;
- ▶ there has been coordinated campuswide planning and preparation for disaster preparedness and response, development and promulgation of sound plans and strategies, and continued vigilance to maintain and update plans;
- ▶ campuses have effective response capabilities to the most probable incidents that may affect the safety of personnel, damage assets, or cause significant business interruption;
- ▶ buildings can be evacuated during disasters/emergencies;
- ▶ reasonable provisions have been made for the availability of equipment, information systems, records, supplies, and trained personnel when needed; and
- ▶ tests/exercises have been conducted to prove plan viability and identify deficiencies or weaknesses in response instructions.

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### SCOPE AND METHODOLOGY

The review emphasized but was not limited to compliance with state laws, Board of Trustee policy, and Chancellor's Office and campus policies, letters, and directives.

Various campus functions and offices were involved including, for example, facilities management, environmental health and safety, public safety, student health center and computer center. Auxiliary organizations were generally excluded from the audit except for the seismic safety of buildings that they occupy which have been prioritized by CSU's Seismic Review Board for retrofitting.

The 1995/96 and 1996/97 fiscal years were the primary periods reviewed for disaster preparedness and planning. However, other earlier years were also included as needed, in part, because the seismic safety action plan for the system dates back to the Board of Trustees resolution in May 1993.

During the course of the audit, we:

- ▶ interviewed responsible personnel;
- ▶ inspected certain facilities such as the emergency operations center, the computer center, and telephone switch rooms;
- ▶ reviewed various plans and documents;
- ▶ examined emergency equipment and supplies; and
- ▶ tested selected devices and features integral to the campus system for disaster mitigation, preparedness, response and recovery.

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## BACKGROUND

As indicated in the May 1993 Agenda Item 7 of the Board of Trustees' Committee on Campus Planning, Buildings and Grounds, the CSU relies upon the requirements of Title 24 of the California Code of Regulations (CCR) for seismic safety building standards. From a structural standpoint, the CSU has been specifically involved in a seismic retrofitting program since 1992. In the 1992/93 Budget Act, funds were provided for seismic reviews of CSU facilities. In implementing this program, the CSU formed a Seismic Review Board (SRB) which has been active with essentially the same membership since its original formation. The focus of this program has been to identify and mitigate the highest life safety risks. Part of the program has been for the SRB to rank order facilities on the degree of seismic risk, subject the highest risks to further engineering investigation and, if warranted capital outlay retrofit projects. The resolution of the committee in May 1993 (RCPBG 05-93-13) also provided for independent technical peer reviews of the seismic aspects of all construction projects from their design initiation, including both new construction and remodeling.

Appendix I<sub>a</sub> of the 7/19/95 Report of the Ad Hoc Committee on Emergency Preparedness contains a recent history of emergency planning in the CSU. This report indicates that much of what is in place within the CSU at the current time can be traced to the Task Force on Earthquake/Emergency Preparedness

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## INTRODUCTION

(EMEP) formed in the spring of 1985. The EMEP Task Force was instrumental in development of Executive Order (EO) 524 issued April 5, 1988. While this EO is dated, it is still in effect as systemwide policy.

In April 1994 (approximately three months after the Northridge earthquake), the CSU convened the Ad Hoc Emergency Preparedness Committee. The July 19, 1995 report of the committee was circulated to the campuses but not implemented on a systemwide basis.

In September 1994, the governor's Office of Emergency Services issued "new Standardized Emergency Management System (SEMS) regulations with which the CSU and all other state agencies as well as local governments and special districts must comply."

Disaster readiness terminology varies. Disaster is associated with emergency management or emergency operations and sometimes with other terms such as business continuity. The "3 R's" of business continuity planning have been described as readiness, recovery, and restoration and defined as follows:

### READINESS

- Disaster Prevention and Avoidance
- Emergency Preparedness
- Corporate-wide Planning
- Business Unit Recovery Planning

### RECOVERY

- Incident Management and Initial Recovery

### RESTORATION

- Long-term Business Recovery

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## OPINION

We visited the California State University, Hayward from September 11, 1997 to October 17, 1997 and reviewed the seismic safety and disaster readiness functions in effect at that time.

We found that most structural hazards posing the highest life safety risk have been retrofitted and that buildings are reevaluated as needed and new construction has been subjected to independent technical peer review for seismic safety. Various actions have been taken to address non-structural falling hazards but, the disposition of certain items had not been well documented. Some specific improvements to environmental controls in the computer center and the main telecommunications switching room are recommended.

We further conclude that the campus has drafted an emergency operations plan with provisions such as an emergency operations center (EOC) and integrated team structure as required by state Standardized Emergency Management Regulations. However, it is our opinion that the plan and the degree of preparedness are deficient in several areas. These deficiencies are addressed in both the executive summary below and in the body of the report.

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## **EXECUTIVE SUMMARY**

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

### **ENVIRONMENTAL AND FACILITY CONTROLS**

#### **FALLING HAZARDS [8]**

The campus had not documented mitigation of possible falling hazards. Documentation of intent to mitigate possible falling hazards reduces the campus exposure to damages and legal liability for injuries.

#### **SEISMIC BRACING [9]**

The campus had not seismically braced all library shelving and information computing services equipment. Bracing would reduce the risk of injury, damage and disruption of operations resulting from equipment falling over in an earthquake.

#### **FIRE SUPPRESSION SYSTEMS [10]**

The automatic fire suppression system in the telecommunication room was not inspected in 1996-97. The main computer room lacked a fully automatic fire suppression system. Periodic inspection of the fire suppression system assures its proper functioning. The installation of an automatic fire suppression system may reduce the risk of computing equipment loss from fire damage.

### **ABOVE GROUND FUEL STORAGE [11]**

The campus had not received a city code variance nor prepared a spill control plan for above ground fuel storage tanks. A variance and plan would bring the campus into compliance with the city fire and State administrative codes.

### **FIRE ALARM SYSTEM [12]**

The campus fire alarm system and procedures were not adequate to provide timely response. Connecting all campus fire alarm systems to an enunciator panel and providing radio communication between all officers and the dispatcher will improve response time and afford a higher level of protection.

### **EMERGENCY GENERATORS [13]**

Several emergency generators were in need of repair and/or upgrading. Maintaining emergency generators in a proper functioning state of readiness would ensure safe evacuation of campus buildings in the event of a disaster.

### **EMERGENCY OPERATIONS CENTER [14]**

The space allotted for the Emergency Operations Center (EOC) does not meet the minimum per person square footage guidelines. Complying with the minimum square footage guidelines assures a more orderly and properly functioning EOC.

### **AIR CONDITIONING [14]**

The campus did not have records documenting inspection and upkeep of the air conditioning system critical to the proper functioning of sensitive voice and data communication equipment. Scheduling and documenting inspections and maintenance of the telecommunications air conditioning system assures it proper functioning.

## **DISASTER PLANNING**

### **DISASTER RECOVERY PLAN [15]**

The Contra Costa campus did not have an emergency operations plan. An emergency operations plan would provide some assurance that employees are not exposed to unnecessary safety risks.

### **ICS RISK ANALYSIS [16]**

Information and Computing Services (ICS) had not conducted a disaster recovery risk analysis. Preparing a disaster recovery risk analysis helps to identify actions to be taken before and after a disaster.

### **NEW EMPLOYEE ORIENTATION [16]**

New employees did not receive orientation on the campus emergency action plan. Providing orientation would reduce the exposure of new employees to unnecessary safety risks and mitigate potential legal liabilities for the campus.

### **PLAN APPROVAL [17]**

The campus emergency operations plan, changes and updates had not been approved by the campus administration. Approval by campus administration signifies both endorsement and commitment to emergency planning.

### **EMERGENCY LOCATOR RECORDS [17]**

Records indicating the locations of utility shut-off, building floor plans and mechanical drawings and faculty, staff and students were not maintained in the EOC. Information transfer is expedited more efficiently when critical records are readily available in the EOC.

### **ACADEMIC INVOLVEMENT [18]**

Involvement of the academic community in the campus disaster planning and recovery process was minimal. Involving the academic community in disaster planning and recovery expands the pool of human resources available for service in the event of a disaster.

### **VIOLENCE IN THE WORKPLACE [19]**

The campus did not have a policy on violence in the workplace that included education and training of departmental employees. Establishing a policy to address violence in the workplace would help to assure a safe environment for the campus community.

## **PLAN VALIDATION AND MAINTENANCE**

### **EXERCISING [19]**

There has not been a combined campus-wide test event. A single campus-wide building evacuation would more closely simulate the conditions of an actual disaster and its impact on campus resources.

### **REGISTERING VOLUNTEERS [20]**

The campus did not have authority to register disaster service volunteers. Obtaining this authority will clarify questions of liability.

### **HAZARDOUS WASTE INSPECTIONS [21]**

Inspection records for all hazardous waste materials were not on file for the period reviewed. Having hazardous waste inspection records on file assures compliance with state regulatory requirements.

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# OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

## ENVIRONMENTAL AND FACILITY CONTROLS

### FALLING HAZARDS

The campus had not documented mitigation of possible falling hazards.

Section I.8 of the campus *Multi-hazard Emergency Management Plan* states:

Measures will be taken to reduce the potential impact of known hazards on campus if feasible.

In April 1993, an engineering investigation identified falling hazards as follows:

- ▶ falling glass at various campus buildings;
- ▶ a brick attachment at Meiklejohn Hall;
- ▶ the granite mosaic attachment at the Library;
- ▶ the brick wall on the west side of the Arts and Education Building; and
- ▶ the Science Building's entrance and garden canopies.

The falling hazards mentioned above were explicitly excluded from the scope of the July 1993 service agreement covering design of abatement/mitigation measures. In discussions with the associate vice president for facilities planning, we were informed that an evaluative peer review concluded that some identified falling hazards constituted no life safety threat. However, there was no documentation of the peer reviewer's evaluation. Additionally, we were informed that staff from the Chancellor's Office (CO) managed all falling hazard retrofit projects, including the awarding of contracts. No records were available from CO staff documenting the status of identified falling hazards where no mitigation measures were taken to correct the hazard.

Failure to document mitigation of possible falling hazards subjects the campus to increased exposure to damages and legal liability for injuries.

### **Recommendation 1**

We recommend that the campus document the disposition of possible falling hazards identified in the 1993 falling hazard assessment.

### **Campus Response**

We concur. The University will report the disposition of each citation of possible falling hazards identified in the 1993 Seismic Review Board Report. The University also agrees to address items listed in the letter from Vi San Juan to Executive Deans (July 18, 1995), and to document the disposition of

all hazards from both reports not later than May 6, 1998. Whenever reinforcement is required, funding will be sought and a schedule for completion provided.

## **SEISMIC BRACING**

The campus had not seismically braced all library shelving and information computing services equipment.

In September 1995, a consultant (VSP Associates) recommended mitigation of non-structural hazards on a more consistent basis. In conjunction with campus personnel, Chancellor's Office staff solicited bids from approved vendors. Returned vendor bids for library shelving exceeded the funds allocated. Subsequently, library falling hazard abatement funds totaling \$139,370 were allocated to the campus via minor capital outlay. To date, no bracing work has taken place.

Information and computing services had secured seismic bracing for some of its computing equipment and all of its critical telecommunication equipment. However, the VAX computer, server racks, and air handlers required bracing.

The associate vice president for facilities planning stated that funds made available to the campus for seismic bracing of library shelving were inadequate.

Without proper bracing, library shelving and computing equipment could fall on personnel causing injury or blocking access paths preventing timely building evacuation.

### **Recommendation 2**

We recommend that the campus seismically brace all library shelving and computing equipment.

### **Campus Response**

By May 1, the University will request funds from the Chancellor's Office to brace Library shelving. As currently designed, the estimated project cost is \$250,000.

The University will brace and secure Library computing equipment by September 30, 1998. This same time frame is adopted for the bracing and securing of the VAX Computer in Information and Computing Services, associated server racks and air handlers in the I & CS machine room.

## **FIRE SUPPRESSION SYSTEMS**

The automatic fire suppression system in the telecommunication room was not inspected in 1996-97. The main computer room lacked a fully automatic fire suppression system.

As part of the telecommunication maintenance contract, the campus agreed to maintain the fire suppression system. Unlike other equipment maintained by the campus under this agreement, only certified individuals may maintain the automatic fire suppression system. The campus did not have an individual certified to maintain the fire suppression system and had not contracted to have maintenance and inspections done by an outside firm or individual.

The director of server and network operations stated that the cost of an automatic fire suppression system was a key factor in the campus decision to not have one installed in the main computer room.

Computer rooms, in general, present a higher risk of fire than other facilities due to the presence of electrical equipment, forced air conditioning and computer paper and tapes. Hand-operated extinguishers may not be adequate or safe for putting out a large fire that could result in the complete loss of the data center.

Appropriate inspections and suppression systems would reduce the extent of loss of computing equipment and the length of time operations are disrupted in the event of a fire.

### **Recommendation 3**

We recommend that:

- a) the campus take appropriate steps to inspect and maintain the telecommunication automatic fire suppression system; and
- b) a cost/benefit analysis be conducted to evaluate the feasibility of installing an automatic fire suppression system in the main computer room.

### **Campus Response**

- a) By April 1998, the campus will obtain the services of a qualified individual to inspect and maintain the fire suppression system in the telephone switch room.
- b) The campus agrees to reinvestigate the costs of an automatic fire suppression system for the main computer room.

## **ABOVE GROUND FUEL STORAGE**

The campus had not received a city code variance nor prepared a spill control plan for above ground fuel storage.

City of Hayward fire codes prohibit the installation and use of above ground tanks greater than sixty gallons for storage of flammable or combustible liquids without a variance from the fire marshal. The State Water Resources Control Board regulates petroleum storage in above ground tanks through registration and reporting requirements and preparation of Spill Prevention, Control and Countermeasure Plans.

In a letter to the campus dated December 2, 1996, the Hayward Fire Department stated that the Office of the State Architect (OSA) had submitted a proposal to obtain a variance for the above ground storage fuel tanks. However, the process stopped and the variance was never obtained. The letter stated further that the campus was required to obtain the variance by a written application to the city fire department. The letter also indicated the need for a spill control plan as required by the State Water Resources Control Board.

The campus environmental compliance manager stated that the OSA was contacted to intercede on behalf of the campus to clarify and/or obtain variance from the City of Hayward Fire Code.

Failure to properly permit (or obtain a variance) with the city and to involve the State in spill control planning denies the campus the benefits of regulatory oversight. It creates the potential for increased property damage and loss of life if the fire department responds inappropriately or if spill containment plans are inadequate.

### **Recommendation 4**

We recommend that:

- a) the campus coordinate with the OSA to obtain a variance from the Hayward fire code for above ground storage of combustible fuel; and
- b) a spill control plan be prepared and submitted to the State Water Resources Control Board.

### **Campus Response**

- a) By April 30, 1998 CSUH will send a written communiqué to the Office of the State Architect and seek resolution of the issue involving the Hayward Fire Code variance.
- b) We concur. In December 1997, a spill control plan was submitted to the State Water Resources Board.

## **FIRE ALARM SYSTEM**

The campus fire alarm system and procedures were not adequate to provide timely response in the event of a fire.

The campus Emergency Multi-hazard Plan, as revised November 1996, states that emergency operations are to be conducted in a timely and effective manner.

Presently, the fire alarm system consists of a wired connection to the public safety dispatch console and an audible fire alarm not connected to the dispatch console. Some alarms were connected to a building annunciator panel that identifies the floor level and room of a fire alarm while other alarms were not.

A fire alarm at the Contra Costa campus signals an alarm on the dispatch console at the Hayward campus requiring confirmation by a public safety or community service officer at Contra Costa. However, the lack of direct radio contact between the Hayward campus dispatcher and the Contra Costa officer investigating the alarm complicates and lengthens the fire alarm response time.

The campus risks greater loss from fire and smoke damage by not having systems and procedures that provide timely response.

### **Recommendation 5**

We recommend that the campus improve its fire response systems and procedures to include upgrading fire detection and communication response equipment.

### **Campus Response**

We Concur. An independent consultant (Engineering Services, Inc.) has been contracted to study the campus fire and security system. The consultation has been initiated and a report is expected by the end of the current calendar year.

To upgrade the communication response system at the University, the Department of Public Safety has reconstructed its dispatch communication center, incorporating emergency generator power, backup radio consoles, and is now ready to receive installation of a 9-1-1 telecommunication system. Installation of an improved radio system is underway and when completed, will improve communications clarity and interconnectivity with the Contra Costa Campus. Final acquisition of a 9-1-1 system is underway (funds secured), which will enable the department to operate as a Public Safety Answering Point (PSAP) and receive 9-1-1 emergency phone calls. This new 9-1-1 system is to be operational by June 30, 1998.

## EMERGENCY GENERATORS

The emergency generator for Warren Hall and the library was in need of repair. This generator, along with four others, is powered from underground natural gas pipe connections with no alternate fuel sources should the gas line rupture. The backup generator at the Contra Costa campus is too small to operate emergency lights and small equipment in the emergency operations center (EOC).

Executive Order (EO) 524 delegates to the campus presidents the responsibility for ensuring that management activities are accomplished in support of multi-hazard emergency preparedness including:

Determination, acquisition and maintenance of facilities, equipment, and related supplies required for emergency preparedness contingent upon provision of the necessary state financial resources via the Office of the Chancellor.

The associate vice president for facilities planning and operations stated that the cost of repairs for the backup generator had been included in its 1996-97 special repair budget request submitted to the Office of the Chancellor. Facilities management staff indicated that the generator does run. However, it is unknown how well it would function in a disaster situation. The director of facilities planning and operations stated that the campus is in the process of changing all of its backup generators from natural gas to diesel fuel to assure emergency power is available in a disaster. The emergency preparedness coordinator indicated that he was aware of a request for a larger backup generator at Contra Costa. However, funds were not available.

In the event of a power failure, campus personnel and students may not be able to safely evacuate these buildings without emergency power and the Contra Costa EOC would not be able to function properly with the present backup generator.

### Recommendation 6

We recommend that:

- a) the campus repair the backup generator that provides emergency power to Warren Hall and the library;
- b) either natural gas backup generators be replaced with diesel fuel generators or backup propane tanks be installed to ensure emergency power in the event a natural gas line ruptures; and
- c) a larger backup generator capable of providing emergency power for light and small emergency equipment be secured for the Contra Costa campus.

### Campus Response

- a) Materials have been ordered to make the necessary repairs to the emergency generator.

- b) There is a special repair project that is #2 in priority on the list submitted to the Chancellor's office. This project will be scheduled pending availability of funds. **PROJECT DESCRIPTION:** Replace all "natural gas" emergency generator units campus-wide with diesel fuel type. Upgrade/Increase electrical output as necessary to meet current/future requirements. Units range in size from 30 KVA up to 200 KVA. Many of these units are between 25-30 years old are too small to handle load demands. They also do not meet the dual fuel source requirement. This is a safety and liability matter. **PROJECT COST:** \$191, 250.
- c) By September, 1998, the Contra Costa Campus will secure a larger backup generator for providing emergency power for light and small emergency equipment.

## **EMERGENCY OPERATIONS CENTER**

The space allotted for the Emergency Operations Center (EOC) does not meet the minimum per person square footage guidelines.

Presently, 200-sq. ft. of space is allotted for the EOC. Office of Emergency Services (OES) guidelines specify 50 to 75-sq. ft per person in the EOC.

The emergency preparedness coordinator indicated that he was aware of the requirement and had identified classrooms adjoining the EOC that could be used by emergency operations staff. However, we note that the classrooms lacked wiring for emergency power.

In an actual disaster, the EOC may not function effectively.

### **Recommendation 7**

We recommend that the campus comply with OES guidelines on per person square footage in the EOC.

### **Campus Response**

Initial steps have been taken to convert adjacent areas for expansion of the EOC.

CSUH will increase the square footage of the EOC and /or provide emergency power to the adjacent room(s). Final completion of expansion and power to be completed by September 30, 1998.

## **AIR CONDITIONING**

The campus did not have maintenance records documenting inspection and upkeep of the air conditioning system critical to the proper functioning of sensitive telecommunications equipment.

In a contract with Pacific Bell, the campus agreed to maintain the air conditioning system.

The engineering manager for facilities planning and operations stated that facilities staff was inspecting and servicing the air conditioning system. However, there were no maintenance records of this work.

Without maintenance records evidencing compliance with the terms of the telecommunication agreement, the campus risks exposure to legal liability for equipment failure.

**Recommendation 8**

We recommend that the campus document inspections and maintenance work performed on the telecommunication air conditioning system.

**Campus Response**

We agree that inspections and maintenance work performed on the telecommunication air conditioning system be documented. Such records do exist and they are included in our newly upgraded Maintenance Management System. These records will be provided upon a request.

**DISASTER PLANNING**

**DISASTER RECOVERY PLAN**

The Contra Costa campus did not have an emergency operations plan.

Executive Order 524 Section II(A)(2) states:

The emergency preparedness plan developed by each campus should be regarded as a permanent and important element in the policy structure of the institution. It should be reviewed on a regular basis and amended to reflect changes on local circumstances.

The emergency preparedness coordinator stated that copies of the draft emergency operations plan were sent to the campus director. However, two key officials at Contra Costa – the director and the facilities manager stated that they were unaware of their emergency operations plan.

By not having an emergency operations plan, the campus is exposed to potential legal liabilities and employees are exposed to unnecessary safety risks.

**Recommendation 9**

We recommend that the campus establish an emergency operations plan for the Contra Costa campus.

**Campus Response**

We concur. An emergency operations plan has been written for the Contra Costa Campus.

## **ICS RISK ANALYSIS**

Information and Computing Services (ICS) had not conducted a disaster recovery risk analysis.

The Director of ICS stated that the risk analysis had not been done because of scarce resources.

The process of performing a risk analysis helps to identify mitigating steps that can be taken before a disaster occurs.

### **Recommendation 10**

We recommend that an ICS disaster risk analysis be conducted.

### **Campus Response**

We concur. A risk analysis was conducted while drafting the recovery plan.

## **NEW EMPLOYEE ORIENTATION**

New employees did not receive orientation on the emergency action plan for the campus.

8CCR3220(e)(3) states:

The employer shall review with each employee upon initial assignment those parts of the plan which the employee must know to protect the employee in the event of an emergency.

The emergency preparedness coordinator stated that new employee orientation at the campus is geared towards benefits and that new employees receive information on the emergency plan through building evacuation drills.

The absence of orientation temporarily exposes new employees to unnecessary safety risks and creates potential legal liabilities for the campus in the window period between the hiring date and the next scheduled evacuation drill.

### **Recommendation 11**

We recommend that the campus incorporate information on the emergency action plan into the new employee orientation process.

### **Campus Response**

CSUH Human Resources has been given emergency procedure information to be distributed in the new employee information packets during the orientation process for all new employees.

## **PLAN APPROVAL**

The campus emergency operations plan, changes and updates had not been approved by the campus administration.

Executive Order (EO) 524 delegates to the campus presidents the responsibility for maintenance and regular updating of the institution's plan, but it does not specifically require that the plan be approved by them. This EO further indicates that the emergency preparedness plan should "be regarded as a permanent and important element in the policy structure of the institution." Page 1 of the campus plan also states that "the campus president establishes the basic policies."

The absence of campus administration approval of the emergency operations plan may result in inconsistent actions by the various campus departments and operating units in a disaster.

### **Recommendation 12**

We recommend that the campus president or designee formally approve emergency planning documents for the campus.

#### **Campus Response**

We concur. Delegation has been established for the Vice President, Administration and Business Affairs to have approval authority. A review of emergency documents requiring approval is to be completed by April 30, 1998.

## **EMERGENCY LOCATOR RECORDS**

Records indicating the location of utility shut-off locations, building floor plans, and staff and students were not maintained in the EOC.

The emergency preparedness coordinator stated that these records were available through various campus databases. However, if a disaster brought these computer systems down, this information will not be available. Storage of these records in the EOC at the start of each academic term would help ensure their immediate availability.

The absence of readily accessible records may delay search and rescue efforts after a disaster response.

### **Recommendation 13**

We recommend that the campus document the locations of utility shut-off, building floor plan and staff and students and locate this information in the EOC.

### **Campus Response**

The Department of Facilities Management will provide a document to the EOC that designates the locations of utility shut-offs, building floor plans and a roster of employees and their area assignments, specifically, custodial, engineering and grounds personnel. This roster will include employee name, building or area assignment location, and radio or pager numbers.

### **ACADEMIC INVOLVEMENT**

Involvement of academic personnel in disaster planning and implementation was minimal.

The July 1995 *Report of the Ad Hoc Committee on Emergency Preparedness* recommended involvement of faculty, staff, and students in all phases of planning and simulation exercises.

The Vice President for Administration and the Emergency Preparedness Coordinator stated that the culture of the campus academic community was evolving and that plans are under way to get greater involvement of academia in disaster planning, implementation, and recovery.

In the event of a disaster, coordination of available resources will be essential to the initial response. Without academic involvement, a critical resource directly linked to students is not being utilized.

### **Recommendation 14**

We recommend that the campus seek greater input and involvement of the academic community in disaster planning and implementation.

### **Campus Response**

Information on emergency procedures was to be distributed to all faculty in fall, 1997 and will be incorporated into the next publication of the faculty handbook. All new faculty will receive procedural guidance as a part of their orientation to campus.

## **VIOLENCE IN THE WORKPLACE**

The campus did not have a policy on violence in the workplace that included education and training of departmental employees.

The July 1995 *Report of the Ad Hoc Committee on Emergency Preparedness* recommended that campuses take action to implement Violence in the Workplace education and training.

The Director of Public Safety stated that training was provided to campus police officers on subjects such as rape and spousal abuse. However, there was no written policy on violence in the workplace.

Campus employees may not be able to adequately control violent or potentially violent situations without education and training in workplace violence.

### **Recommendation 15**

We recommend that the campus develop a policy on violence in the workplace that addresses education and training of campus employees.

#### **Campus Response**

We concur. A policy of “no tolerance to workplace violence” has been developed. The policy incorporates principles set forth in the CAL-OSHA Model Injury and Illness Prevention Program for Workplace Security. Full implementation is planned for no later than June 30, 1998.

## **PLAN VALIDATION AND MAINTENANCE**

### **EXERCISING**

There has not been a combined campus-wide test event. Evacuation drills were staggered to minimize disruption of campus operations.

Executive Order (EO) 524 requires each campus to develop an ongoing program for testing its emergency plan including a single, combined campus-wide test event to be conducted at least once every two years.

Simulated test events have occurred on a staggered basis and not as a single campuswide event. The emergency preparedness coordinator stated that this approach is less disruptive of campus operations. In our opinion, this approach does not meet requirements of EO 524.

By staggering test events to minimize disruption of campus operations, the full impact of an actual disaster on campus resources may be underestimated.

### **Recommendation 16**

We recommend that the campus conduct a single campus-wide test event at least once every two years.

### **Campus Response**

We concur. The campus emergency manager will conduct a campus-wide test event at least once every two years, effective 1998.

## **REGISTERING VOLUNTEERS**

The campus did not have authority to register disaster service volunteers.

According to the State Emergency Services Act, Governor's Executive Order W-9-9, and CSU Executive Order 524, the campus is obligated to maintain a multi-hazard emergency response program. Such a program typically includes some provision for non-employee emergency resource persons. The State OES has a program for delegating authorization to register these volunteers thus providing access to workers compensation coverage if they are injured while performing disaster duties.

The campus had not addressed the issue of volunteer workers because of its unique location. A database of employee skills is presently being compiled for use in the event of a disaster.

In the absence of OES authorization, there are questions as to liability for disaster service volunteers and their access to benefits.

### **Recommendation 17**

We recommend that the campus obtain OES authorization to register disaster service volunteers.

### **Campus Response**

We concur, and by April, 1998, will forward procedural documents to legal counsel for review. Target date is to request that the Office of Emergency Services grant authorization for the University to register disaster service volunteers by September, 1998.

## **HAZARDOUS WASTE INSPECTIONS**

Inspection records for all hazardous waste materials were not on file for the period reviewed.

The California Code of Regulations Section 66264.174 requires weekly inspections of areas used for container storage of transfer of hazardous waste. Campus policy requires the weekly inspections to be logged and forwarded to the EH&S Office.

The Environmental Compliance Manager stated that staffing turnover may have contributed to the inspection reports either not being logged or logged and not forwarded to EH&S.

The campus may be at risk of fines and sanctions from state regulatory agencies by not documenting required inspections of hazardous waste material.

### **Recommendation 18**

We recommend that the campus document weekly inspections of hazardous waste materials and forward these records to EH&S.

### **Campus Response**

Department of Facilities Management will resume their practice of documenting weekly inspections of hazardous waste materials and forwarding these records to Environmental Health & Safety. The recent backlog was due to a vacancy in this area of responsibility.

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## APPENDIX A: PERSONNEL CONTACTED

<u>Name</u>	<u>Title</u>
Norma S. Rees	President
Noreen Alldredge	Director, University Library
Anthony Alvarez	Director of Public Safety
Jon Aman	Sergeant, Department of Public Safety
Lee Bateman	Associate Vice President, Business Affairs
James Banish	Director, Facility Operations – Contra Costa Campus
James Buckley	Assistant Vice President, Human Resources
Frank Correa	Director, Server and Network Operations - Information and Computing Services
Kathleen Coulman	Director, Student Health Center
David Cowden	Engineering Manager, Facilities Management
Craig Ishida	Director, Environmental Health and Safety
Ron Kihara	Assistant Vice President, Administration and Business Affairs
Mario Lavagnino	Sergeant, Department of Public Safety
Richard Metz	Vice President, Administration and Business Affairs
Judy Miller	Telecommunications Coordinator
Mark Nickerson	Director, Contra Costa Campus
Leone Nidiffer	Assistant Vice President, Institutional Research and Analysis
Bob Pitta	Administrative Services Officer, Department of Public Safety
Randall Porter	Associate Vice President, Facilities Planning and Operations
Jordan Rich	Associate Director, Operations and Maintenance - Facilities Management
Jerry Rose	User Services Director, Information and Computing Services
Ricardo Sanchez	Director, Facilities Management
Eric Thompson	Procurement and Support Services Officer
Varon Smith	Environmental Compliance Manager