

**HAZARDOUS MATERIALS MANAGEMENT**

**CALIFORNIA STATE UNIVERSITY,  
SAN MARCOS**

**Report Number 00-20  
December 7, 2000**

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## **ABBREVIATIONS**

CCR	Californian Code of Regulations
CSU	California State University
CSUSM	California State University San Marcos
EH&OS	Environmental Health & Occupational Safety
EH&S	Environmental Health & Safety
EPA	Environmental Protection Agency
HAZCOMM	Hazard Awareness and Communication Program
HAZMAT	Hazardous Material(s)
HMM	Hazardous Materials Management
HMMD	Hazardous Materials Management Division
H&SC	Health & Safety Code
HWMG	Hazardous Waste Management Guide
IIPP	Injury and Illness Prevention Program
MSDS	Material Safety Data Sheet(s)
RCRA	Resource Conservation and Recovery Act
TSD	Transfer, Storage and Disposal
WAS	Waste Accumulation Station

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## INTRODUCTION

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### PURPOSE

Our overall audit objective was to ascertain the effectiveness of policies and procedures concerning Hazardous Materials Management (HMM), determine the adequacy of controls over hazardous materials and waste, and ensure compliance with related governmental regulations.

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

- ▶ administration and management of the HMM program provide clear lines of organizational authority and responsibility, include maintenance of required registrations and permits, and ensure compliance with the key regulatory reporting requirements;
- ▶ hazardous materials (HAZMAT) and waste management policies and procedures are adequately documented;
- ▶ HAZMAT purchasing and receipt processing are conducted in a controlled environment, and material safety data sheets (MSDS) are obtained and readily accessible to employees;
- ▶ a comprehensive HAZMAT communication program has been established, and effective emergency and contingency plans are in place;
- ▶ inventory records are properly maintained for HAZMAT purchases, and HAZMAT safety and equipment inspections are conducted;
- ▶ HAZMAT maintained in containers and tanks are properly labeled and adequately controlled;
- ▶ hazardous waste transfer, storage, and disposal (TSD) agreements exist between the university and TSD contractors and require the contractors to maintain adequate liability insurance;
- ▶ hazardous waste identification procedures are adequately implemented, and waste transportation and disposal processes are in compliance with governmental regulations;
- ▶ employees who handle HAZMAT or generate waste are adequately trained; and
- ▶ hazardous, biomedical and universal waste is properly labeled and not accumulated on-site for greater than the allowable time.

## SCOPE AND METHODOLOGY

This review emphasized but was not limited to compliance with state and federal laws and campus hazardous materials (HAZMAT) policies, letters and directives. The audit review period was June 1999 to date. At California State University San Marcos (CSUSM), Environmental Health and Occupational Safety (EH&OS) Services has overall responsibility for hazardous materials management (HMM).

Our primary focus involved the internal administrative, compliance, and operational controls over the management of the campus HMM function and included visits to three campus units: Biology, Chemistry, and Physical Plant. Specifically, we reviewed and tested:

- ▶ procedures for HAZMAT purchasing, receiving and storage;
- ▶ the use and availability of material safety data sheets (MSDS);
- ▶ HAZMAT communication and training programs, emergency and contingency planning, and related documentation;
- ▶ HAZMAT inventory record keeping practices;
- ▶ procedures for performing HAZMAT safety and equipment inspections;
- ▶ HAZMAT and waste labeling and other forms of required warnings;
- ▶ hazardous waste identification, permit, registration, and manifesting procedures; and
- ▶ the hazardous waste disposal program.

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## BACKGROUND

As a result of a systemwide risk assessment conducted by the Office of the University Auditor during the last quarter of 1999, the Board of Trustees, at its January 2000 meeting, directed that *Hazardous Materials Management* be reviewed.

The proposed scope of such audits as presented in Attachment B, Agenda Item 3 of the January 25-26, 2000 meeting of the Committee on Audit, stated that the review would include the systems and procedures for controlling the purchase, generation, storage, treatment, use and disposal of hazardous materials (HAZMAT) and wastes and responding to hazardous spills. Potential impacts include environmental damage, adverse publicity, excessive costs and legal liabilities, facilities with inordinate health risks, regulatory fines and sanctions, and the inability to identify HAZMAT in emergency situations. *Hazardous Materials Management* was previously audited in 1992 and a follow-up review was completed in 1996.

In 1976, the Federal Resource Conservation and Recovery Act (RCRA) was enacted to address solid waste

generated nationwide and the growing public concern regarding HAZMAT health risks, waste generation, and waste disposal. RCRA initiated the “cradle to grave” tracking and management of hazardous waste that is, from the generator to transporter to treatment, storage or disposal. RCRA regulations addressed, but were not limited to, the following management issues: a) generation of hazardous waste, b) hazardous waste treatment, transportation, storage, and disposal, c) federal and state reporting, d) federal, state, or local permits/registration, and e) waste minimization.

RCRA provided the federal government with the authority to authorize states to develop, implement and enforce their own HAZMAT and waste management regulations. However, the state programs must be as stringent or broader in scope than the federal regulations. In 1992, California received such authority from the Environmental Protection Agency (EPA). Most of the California regulations are codified in the Health & Safety Code (H&SC) and the California Code of Regulations (CCR); specifically, titles eight and twenty-two. The California Department of Toxic Substances Control is responsible for enforcing the enacted codes and administrative laws.

All CSU campuses purchase some amount of HAZMAT that result in the generation of hazardous waste. To limit regulatory compliance risks and control waste processing costs, the campuses enter into contracts with waste transfer, treatment, storage and disposal companies. For the most part, campus Environmental Health and Safety (EH&S) departments are responsible for developing, implementing, and monitoring programs that assure compliance with state and federal hazardous materials and waste regulations. Other services provided by EH&S include, but are not limited to, waste consulting and pick-up; transfer, treatment, storage, and disposal coordination; waste tracking and record keeping; employee and student communication and training; and emergency/contingency planning.

The systemwide report related to the 1992 Office of the University Auditor review identified several HAZMAT and waste management topics that required further attention. Specifically, concerns were expressed over training, inspections, waste manifesting, material safety data sheets (MSDS), inventory record keeping, and the monitoring of contractors for adequate insurance and current registration. As a result, the Chancellor’s Office developed a sample Hazardous Waste Management Guide (HWMG) to assist the campus administrators in understanding and complying with applicable health, safety and environmental laws and regulations. The HWMG covered the basic elements involved in understanding hazardous materials management but was not designed to serve as a policy and procedure manual. The HWMG was intended to be a sample document that could be tailored to and serve local campus needs.

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## **OPINION**

We visited the CSU, San Marcos (CSUSM) campus from August 14, 2000 through September 19, 2000, and audited the procedures in effect at that time.

In our opinion, the administration and management of the Hazardous Materials Management (HMM) program provided reasonable assurance that CSUSM was in compliance with applicable regulations and, for the most part, the HMM function operated effectively. Areas in need of improvement are referenced in the executive summary.

## **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.

### **HAZARDOUS MATERIALS ADMINISTRATION [6]**

#### **HAZARDOUS MATERIALS TRANSPORTERS [6]**

Hazardous waste removal contractual relationships and transporter liability insurance did not meet current CSU requirements. The California State University is protected when agreements are supported by signed contracts, and adequate liability insurance is maintained by hazardous waste transporters.

#### **MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROL [7]**

MSDS administrative controls were in need of strengthening. MSDSs that are readily accessible to employees enhance the university's ability to appropriately and expeditiously respond to an emergency.

#### **HAZARD CONTROL PROGRAM DOCUMENTATION [8]**

Several locally prepared hazardous material management policies and procedures had not been properly reviewed and approved. Approved operating and control policies and procedures provide assurance that employees are performing necessary work that addresses the relevant risks and controls associated with hazardous materials and waste.

#### **HAZARDOUS MATERIAL INVENTORY [9]**

The Central Plant, Auto Shop, and Building Maintenance areas did not maintain HAZMAT inventory listings. A complete and accurate inventory listing assures compliance with regulatory requirements.

### **HAZARDOUS MATERIALS COMMUNICATION, REPORTING AND TRAINING [10]**

#### **HAZARDOUS MATERIAL TRAINING [10]**

Controls over employee hazardous materials (HAZMAT) orientation and refresher training were not adequate. When employees are properly trained, job-related injuries are reduced, and there is an increased probability that an appropriate response will be made in an emergency.

### **BUSINESS PLAN CERTIFICATION AND UPDATE [12]**

A HAZMAT business plan had not been completed since 1995, and documentation was not on file to certify that the plan and supplemental inventory were submitted to the administering agency according to the regulatory timetable. Maintaining adequate documentation strengthens internal controls over the business plan and inventory review processes, ensures compliance with state regulations, and reduces the likelihood that fines will be assessed.

### **EMERGENCY EYEWASH AND SAFETY SHOWER EQUIPMENT [13]**

The waste accumulation station and shared Auto Shop/Building Maintenance emergency eyewash and shower units were not readily accessible. Compliance with eyewash and shower regulations increases the likelihood that emergency facilities will be easily accessible in the event of an accident.

### **HAZARDOUS MATERIALS SYSTEMS CONTROL [14]**

Personal computer data access security and file backup controls were not sufficient. Adequate system access security and records protection helps to preserve and safeguard EH&OS information assets.

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## OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

### HAZARDOUS MATERIALS ADMINISTRATION

#### HAZARDOUS MATERIALS TRANSPORTERS

Hazardous waste removal contractual relationships and transporter liability insurance did not meet current CSU requirements.

We found that:

- ▶ the relationships between the campus and all three hazardous waste transporters were established via purchase orders rather than the CSU model agreement for hazardous waste transporters;
- ▶ the purchase orders did not include the contract terms and conditions and additional insured requirements specified in the CSU model agreement; and
- ▶ insurance liability coverage did not meet CSU Policy Manual for Contracting and Procurement (412.07 – Contracts Involving Hazardous Materials) requirements.

The CSU Policy Manual for Contracting and Procurement (412.07 – Contracts Involving Hazardous Materials) states that contracts involving the handling, removal or disposal of hazardous materials shall be developed in accordance with the CSU model agreement for hazardous material removal, and comply with all State and Federal requirements. The CSU model agreement states that a contractor shall provide the CSU with the following insurance documents on or before the effective date of the agreement: a) certificates of insurance for all required coverages, and b) full copies of all liability policies, which are to include additional insured endorsements and 30 days' notice cancellation clause endorsements.

The business services and risk management director stated that purchase orders were used because the annual billing was under \$10,000 and, in a worst case scenario, the existing vendor insurance would be sufficient to cover the amount of waste transported. Furthermore, the campus performed an analysis and, as a result, requested that one vendor raise the coverage limitation.

HAZMAT contractor insurance coverage that is below the required minimum and agreements that are not governed by model contracts increase CSU insurance risk and liability exposure.

#### **Recommendation 1**

We recommend that the campus:

- a. incorporate the applicable model agreement language in purchase orders used for removal of all hazardous materials; and

- b. ensure that all HAZMAT contractors maintain the minimum insurance coverage or conduct and document a complete risk identification and evaluation if campus management believes that a contractor's current insurance liability coverage is adequate.

### **Campus Response**

We concur, and will take the following actions:

- a. By July 1, 2001, Environmental Health & Occupational Safety (EH&OS) and Procurement Services will modify purchase and service order agreements for hazardous waste to incorporate the applicable model agreement. This date represents the new fiscal year and renewal of existing purchase orders, service agreements or contracts with HAZMAT contractors.
- b. By July 1, 2001, EH&OS will either obtain the minimum insurance requirements from all HAZMAT contractors or will conduct a complete risk assessment to accept lower insurance limits as allowed in Executive Order No. 743. This issue will be addressed as each agreement with the three HAZMAT contractors for Cal State San Marcos is renewed. All agreements will be renewed by July 1, 2001.

### **MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROL**

MSDS administrative controls were in need of strengthening.

Our review and evaluation of MSDS administrative controls disclosed that MSDSs were not readily accessible to Auto Shop and Building Maintenance workers. In eight of the ten instances where MSDSs could not be located, the manufacturer's label indicated that the material was hazardous.

CCR Title 8 §5194(g)(1) and (8) states, in part, that employers shall have a MSDS for each hazardous substance they use. Further, the employer shall maintain copies of the required MSDS for each hazardous substance in the workplace, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s).

CCR Title 8 §5194(d)(1) and CCR Title 8 §5194(d)(2) state that manufacturers and importers shall evaluate substances produced in their workplaces or imported by them to determine if they are hazardous. Employers are not required to evaluate substances unless they choose not to rely on the evaluation performed by the manufacturers or importer for the substance to satisfy this requirement. Manufacturers, importers, or employers evaluating substances shall identify and consider the available scientific evidence concerning such hazards.

The EH&OS director stated that many items present in the Auto Shop and Building Maintenance areas are not considered hazardous by the campus and therefore, do not require a MSDS.

Hazardous substance MSDSs that are not readily accessible to employees could negatively impact the university's ability to appropriately and expeditiously respond to an emergency.

## **Recommendation 2**

We recommend that the campus:

- a. either use the manufacturer's hazardous determination as specified on the HAZMAT container label or document hazardous substance determination procedures that are aligned with Title 8 §5194(d); and
- b. ensure that MSDSs are readily accessible to employees, which may include instructing employees on how to obtain MSDS data on-line.

## **Campus Response**

We concur.

- a. Effective immediately, the campus will use the manufacturer's hazardous determination as specified on the HAZMAT products container label. EH&OS is requiring MSDSs on all hazardous materials as they are added to the campus inventory.
- b. EH&OS now requires MSDSs to be provided with the purchase of materials by all departments. MSDSs are placed on file in the area where they are being used and/or in the main office area. Employee training for Facility Services was administered on November 21, 2000 regarding: "Understanding MSDSs and how to acquire MSDSs". Part of this training was to inform employees where the "hard copies" of the MSDSs are located and their responsibility to obtain them. For items that are in the inventory and for which an MSDS is not present in hard copy, the internet or FAX sources will be listed for employees to access the MSDS.

Training to access MSDSs electronically is scheduled for early March 2001. EH&OS will be working with Facility Services to implement this program. A desktop icon will be placed on the personal computers in the Facility Services' Main Office, the Shops and Central Plant. This icon will be a shortcut to the folder containing downloaded MSDSs for the hazardous substances in the work areas. Also, bookmarks for the primary vendors will be placed in their web browser. The icons and bookmarks will be placed on the above computers by February 28, 2001.

## **HAZARD CONTROL PROGRAM DOCUMENTATION**

Several locally prepared hazardous material management policies and procedures had not been properly reviewed and approved.

The EH&OS director had not reviewed and approved the following policies and procedures: Laboratory Fume Hood Certifications, Hazardous Waste Identification, Chemical Inventory – EMS System, and Bio-hazardous Waste Generator Instructions.

SAM §20050 states that one symptom of a deficient internal control system is policy and procedural or operational manuals that are either not currently maintained or are non-existent.

The EH&OS director stated that many of the policies and procedures were being revised to reflect current practices. The delay in revising this document was due to past employee turnover in the department.

The absence of approved operating and control policies and procedures could lead to employees performing unnecessary work, allocating time to risks that are minimal or non-existent, and poor control over hazardous materials and waste.

### **Recommendation 3**

We recommend that the EH&OS director review, update, and approve all draft CSUSM HAZMAT policies and procedures.

### **Campus Response**

We concur, and believe that we are now in compliance. All six (6) Policy and Procedure copies have been reviewed and signed. The policies are:

- ▶ Biological Waste Generation Instructions
- ▶ EMS Chemical Inventory Instructions
- ▶ Lab Fume Hood Certifications
- ▶ Hazardous Waste Identification
- ▶ Hazardous Waste Collection
- ▶ Radioactive Package Receipt Processing

## **HAZARDOUS MATERIAL INVENTORY**

The Central Plant, Auto Shop, and Building Maintenance areas did not maintain HAZMAT inventory listings.

Our review of fifteen HAZMAT items disclosed that eleven of the fifteen items were not listed on the CSUSM inventory.

CCR Title 8 §5194(h)(1) requires that employers provide employees with the location and availability of the written *hazardous communication* program, including the list(s) of hazardous substances and material safety data sheets required by this section.

The CSUSM Chemical Safety & Hazard Communication safety training documentation states that copies of this regulation (Title 8 §5194) and its list of hazardous substances are on file in EH&OS.

The EH&OS director stated that many of these items are available over-the-counter and to track them in the campus inventory would not be a good use of manpower.

An incomplete or inaccurate HAZMAT inventory listing limits the university's ability to comply with regulatory requirements.

#### **Recommendation 4**

We recommend that the campus maintain a complete and accurate inventory listing of hazardous substances.

#### **Campus Response**

We concur with the finding. The campus does maintain a complete and accurate inventory listing of materials that are evaluated to be hazardous by the Chemical Hygiene Officer through the Environmental Management System. EH&OS and Facility Services will begin a program in May 2001 to maintain a complete and accurate inventory of over-the-counter materials determined by the manufacturer as hazardous. This determination will be made by specifications on the products container.

The training for this program will be offered in April 2001. By July 2001, a database will be established by the Facility Services department and changes will be submitted to EH&OS as they occur.

## **HAZARDOUS MATERIALS COMMUNICATION, REPORTING AND TRAINING**

### **HAZARDOUS MATERIAL TRAINING**

Controls over employee hazardous materials (HAZMAT) orientation and refresher training were not adequate.

We noted that:

- ▶ the documented Chemistry and Biology training program did not include reference to the campus Chemical Hygiene Plan;
- ▶ training support documentation was not maintained for some employees. We were unable to locate supporting documentation for five employees hired during the prior eighteen months; and
- ▶ Chemistry and Biology principle investigators and supervisors who work with hazardous materials did not consistently attend annual HAZMAT refresher training.

CCR Title 8 §5191(f)(3)(4) requires that the employer provide employees with certain information and training to ensure that they are apprised of the hazards of chemicals present in their work area. In part, the information and training should include the employer's Chemical Hygiene Plan.

CCR Title 8 §5194(h)(1), *Hazard Communication*, requires that employers provide employees with information and training on hazardous substances in their work area at the time of their initial assignment, and whenever a new hazard is introduced into their work area. Information and training

may relate to general classes of hazardous substances to the extent appropriate and reasonably foreseeable exposures on the job.

The CSUSM Injury and Illness Prevention Program (IIPP) requires EH&OS to provide HAZCOMM training to all new university employees as part of the new employee safety orientation.

The CSUSM Chemical Hygiene Plan, Attachment I, requires that employees sign a form after completing initial training, and the signed forms be forwarded to EH&OS.

The CSUSM safety-training matrix states that the frequency of HAZMAT training shall be on an annual basis for campus personnel working in areas as outlined on the schedule.

The EH&OS director stated that the new employee training material had been written to comply with CCR Title 8 §5194, since it generally applied to all employees and that the additional requirements of CCR Title 8 §5191 might be addressed in other materials available to employees. He further stated that new employee training in the area of Physical Plant needed to be strengthened, and the documentation in all areas needed to be tracked more vigorously. He felt that the safety-training matrix had been worded to comply with regulations, yet allow flexibility for principle investigators and supervisors.

Failure to ensure that all employees attend required HAZMAT training increases the risk of job related injuries and inappropriate responses during an emergency.

### **Recommendation 5**

We recommend that the campus:

- a. ensure that orientation training materials reference the Chemical Hygiene Plan;
- b. ensure that all new employees who work with hazardous materials undergo orientation training, and that signed acknowledgements are forwarded to EH&OS; and
- c. establish a refresher training frequency for those principle investigators and supervisors who work with hazardous materials.

### **Campus Response**

We concur.

- a. CSUSM has made changes to the Hazard Communication training program to ensure that the Chemical Hygiene Plan, as well as CCR Title 8 §5191, is referenced.
- b. To ensure that all new employees who work with hazardous materials undergo the required trainings per CCR Title 8 §5191 and 5194, EH&OS will take the following steps:
  1. Remind management and supervisors of their responsibility to train their employees as a requirement of the Injury and Illness Prevention Program approved by CSUSM President Gonzalez.

2. Monitor the training provided by supervisors, provide training annually, receive the signed acknowledgment of training, and provide assistance to the supervisor in establishing training.
  3. Offer "ON-LINE-WEB-BASED" training prior to August 2001. The training was funded by a CSU Chancellor's Office grant. Part of this training package will include administrative records of training received and a measurement of comprehension.
- c. For PI and supervisors who work with hazardous materials, we have established the following procedures: EH&OS will:
1. Monitor supervisor training, provide training annually, receive the signed acknowledgment of training, and provide assistance to the supervisor in establishing training. Refresher training will be in accordance with CCR Title 8 §5194(h)(1), which states that this training should reoccur "... whenever a new hazard is introduced into their work area."
  2. EH&OS has established the following training frequencies for employees working with hazardous materials; notwithstanding regulatory requirements, supervisors, faculty and principal investigators that work with hazardous substances will be required to complete refresher training every three years.

## **BUSINESS PLAN CERTIFICATION AND UPDATE**

A HAZMAT business plan had not been completed since 1995, and documentation was not on file to certify that the plan and supplemental inventory were submitted to the administering agency according to the regulatory timetable.

Health and Safety Code §25505(c), *Review of business plan; modification of operation and plan; periodic review*, specifies that the handler shall at least once every three years determine if a revision is needed and shall certify to the administering agency that the review was made and that any necessary changes were made to the plan. A copy of these changes shall be submitted to the administering agency as a part of this certification. Health and Safety Code §25505(d) specifies that each handler shall annually report its hazardous materials inventory or submit a certification statement to the administering agency of the county or city in which the handler is located. Further, per the Health and Safety Code, Chapter 6.95, each business shall prepare a business plan if that business uses, handles, or stores a hazardous material or an extremely hazardous material in quantities greater than or equal to specified amounts.

The director of EH&OS stated that while CSUSM is a small quantity generator, it does have a certain hazardous material that exceeds the regulated threshold that necessitates business plan filing. The HAZMAT threshold was not exceeded at the time of the 1995 filing but has been exceeded in recent years. The director of EH&OS also stated that the campus was tracking their business plan inventory, but did not file a certification with the administering agency based on the size of their operation.

Inadequate documentation weakens internal controls over the business plan and inventory review processes, increases the risk of non-compliance with state regulations, and could result in the assessment of fines.

### **Recommendation 6**

We recommend that the campus submit a business plan and inventory report/certification according to the regulatory timetable and obtain a receipt acknowledgement from the administering agency or maintain internal documentation to evidence compliance with applicable regulations.

### **Campus Response**

We concur and believe we are in compliance. The University's Business Plan was amended and submitted for review and approval on November 20, 2000 to the San Diego CUPA (Certified Unified Protection Agency). The University has received written confirmation of receipt of our Business Plan through the County of San Diego Compliance Inspection Report received 2/6/01.

## **EMERGENCY EYEWASH AND SAFETY SHOWER EQUIPMENT**

The waste accumulation station (WAS) and shared Auto Shop/Building Maintenance emergency eyewash and shower units were not readily accessible.

The aforementioned emergency eyewash and shower units required more than 10 seconds for an injured person to reach, and access to the shared unit was obstructed by material and equipment.

CCR Title 8 §5162(c) states, in part, that emergency eyewash and shower equipment shall be in accessible locations that require no more than 10 seconds for the injured person to reach. The area of the eyewash and shower equipment shall be maintained free of items, which obstruct their use.

The EH&OS director stated that the location of the emergency eyewash and showers units had not been relocated in response to changes in the building construction plans. Consequently, the planned distances between the WAS and facilities buildings and the eyewash/shower units increased. He further stated that the campus was aware of the need to move the unit closer to the WAS, but was waiting on the funds to be identified.

Non-compliance with eyewash and shower equipment regulations increases the risk that emergency equipment will not be quickly or easily accessible in the event of an accident.

### **Recommendation 7**

We recommend that the campus locate emergency eyewash and shower equipment as required by CCR Title 8 §5162.

### **Campus Response**

We concur. The relocation of the USB emergency eyewash and shower equipment was completed on January 3, 2001. The installation of the Waste Accumulation area emergency eyewash and shower equipment will be completed by March 31, 2001(Job Order #00-00747). At that time, Cal State San Marcos will be in full compliance with CCR Title 8 §5162.

## **HAZARDOUS MATERIALS SYSTEMS CONTROL**

Personal computer data access security and file backup controls were not sufficient.

We noted that:

- ▶ EH&OS personal computer access security was compromised by recording department passwords on a routed document;
- ▶ the network terminal inactivity time limit and periodic forced password change features were not enabled; and
- ▶ EH&OS did not take advantage of the automated daily data backup feature provided to network users. Instead, transactions were processed on the “C” drive versus the network drive and backed up weekly instead of daily.

SAM §20050 requires, in part, that there be a plan that limits access to state agency assets to authorized personnel who require these assets in the performance of their assigned duties.

SAM §4819.31 requires that state agencies protect the integrity of its information management capabilities and databases and ensure the security and confidentiality of information it maintains.

The EH&OS director stated that the passwords were recorded in the event that a backup person was needed to fill in for an employee, and that the decision has since been revoked. He further stated that the IT department planned on phasing in terminal inactivity time limits and periodic forced password change features, and work was processed on the “C” drive instead of the network drive because of a space limitation issue on the assigned network partition. Additionally, there was some concern regarding the copyright implication of storing a single user copy of the purchased application on a network drive, which may be accessed by others.

Failure to provide adequate data security and records protection programs jeopardizes the preservation of EH&OS information assets.

### **Recommendation 8**

We recommend that EH&OS:

- a. instruct employees whose confidential passwords were recorded to change them;
- b. consult with the campus network administrator and strengthen the system and server access security controls by enabling the available automated system controls; and

- c. process and store EH&OS data on the network drive rather than the "C" drive to permit daily backup.

### **Campus Response**

We concur and have taken the following steps to comply:

- a. Passwords that were divulged internally were changed in September 2000.
- b. The response from Norm Nicolson, Dean of Instructional and Information Technology Services, on December 8, 2000 regarding strengthening the system and server access security controls indicates that a comprehensive system will be fully implemented and operational campus-wide by April 2001.
- c. Effective November 2000, EH&OS data is now processed and stored on the network drive. The Environmental Management System (EMS), which manages our Chemical Inventory has not been moved to the network, however. There is a functional problem with placing the system on such a network and a licensing issue that we are discussing with Chemical Safety (the company that maintains EMS). At this time there is no estimated completion date. In the interim, EH&OS has implemented a procedure whereby any data that is manipulated or changed within EMS is then backed up to the network.

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## **APPENDIX A: PERSONNEL CONTACTED**

<b><u>Name</u></b>	<b><u>Title</u></b>
Dr. Alexander Gonzalez	President
Floyd Dudley	Building Systems Engineer
Regina Frasca	Hazardous Materials Coordinator/Radiation Safety Officer
Elizabeth Grace	Buyer and Contracts Specialist
Suzanne Green	Interim Vice President, Finance and Administrative Services
Linda Hawkins	Director, Procurement Services
Mike Irick	System Analyst Specialists
Melody Kessler	Director, Human Resources
Linda Leiter	Director, Business Service and Risk Management
David Medeiros	System Analyst Specialists
Ron Neu	Supervisor, Procurement Support and Materials Management
J. Steven Orsak	Director, Environmental Health and Occupational Safety
Greg Svatora	Business Manager, Foundation
Christine Wilde	Biology Instructional Technician
Marcia Wolfe	Grants and Contract Specialist, Foundation



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Office of the President

## MEMORANDUM

DATE: February 7, 2001

TO: Larry Mandel  
University Auditor

FROM: Alexander Gonzalez  
President

SUBJECT: Campus Response to Recommendations of Audit Report Number 00-20 on  
*Hazardous Materials Management* at California State University San Marcos

RECEIVED  
UNIVERSITY AUDITOR

FEB 14 2001

The California State  
University

Below are the responses of California State University San Marcos to the HazMat audit recommendations.

## HAZARDOUS MATERIALS TRANSPORTERS

### Recommendation 1

We recommend that the campus:

- a. incorporate the applicable model agreement language in purchase orders used for removal of all hazardous materials; and
- b. ensure that all HAZMAT contractors maintain the minimum insurance coverage or conduct and document a complete risk identification and evaluation if campus management believes that a contractor's current insurance liability coverage is adequate.

### Campus Response

We concur, and will take the following actions:

- a. By July 1, 2001, Environmental Health & Occupational Safety (EH&OS) and Procurement Services will modify purchase and service order agreements for hazardous waste to incorporate the applicable model agreement. This date represents the new fiscal year and renewal of existing purchase orders, service agreements or contracts with HAZMAT contractors.
- b. By July 1, 2001, EH&OS will either obtain the minimum insurance requirements from all HAZMAT contractors or will conduct a complete risk assessment to accept lower insurance limits as allowed in Executive Order 743. This issue will be addressed as each agreement with the three HAZMAT contractors for Cal State San Marcos is renewed. All agreements will be renewed by July 1, 2001.

### The California State University

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## **MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROL**

### **Recommendation 2**

We recommend that the campus:

- a. either use the manufacturer's hazardous determination as specified on the HAZMAT container label or document hazardous substance determination procedures that are aligned with Title 8 5194(d); and
- b. ensure that MSDSs are readily accessible to employees, which may include instructing employees on how to obtain MSDS data on-line.

### **Campus Response**

We concur.

- a. Effective immediately, the campus will use the manufacturer's hazardous determination as specified on the HAZMAT products container label. EH&OS is requiring MSDSs on all hazardous materials as they are added to the campus inventory.
- b. EH&OS now requires MSDSs to be provided with the purchase of materials by all departments. MSDSs are placed on file in the area where they are being used and/or in the main office area. Employee training for Facility Services was administered on November 21, 2000 regarding: "Understanding MSDSs and how to acquire MSDSs". Part of this training was to inform employees where the "hard copies" of the MSDSs are located and their responsibility to obtain them. For items that are in the inventory and for which an MSDS is not present in hard copy, the internet or FAX sources will be listed for employees to access the MSDS.

Training to access MSDSs electronically is scheduled for early March 2001. EH&OS will be working with Facility Services to implement this program. A desktop icon will be placed on the personal computers in the Facility Services' Main Office, the Shops and Central Plant. This icon will be a shortcut to the folder containing downloaded MSDSs for the hazardous substances in the work areas. Also, bookmarks for the primary vendors will be placed in their web browser. The icons and bookmarks will be placed on the above computers by February 28, 2001.

## **HAZARD CONTROL PROGRAM DOCUMENTATION**

### **Recommendation 3**

We recommend that the EH&OS director review, update and approve all draft CSUSM HAZMAT policies and procedures.

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### **Campus Response**

We concur, and believe that we are now in compliance. All six (6) Policy and Procedure copies have been reviewed and signed. *See Attachment A.* The policies are:

Biological Waste Generation Instructions,  
EMS Chemical Inventory Instructions,  
Lab Fume Hood Certifications,  
Hazardous Waste Identification,  
Hazardous Waste Collection, and  
Radioactive Package Receipt Processing.

## **HAZARDOUS MATERIAL INVENTORY**

### **Recommendation 4**

We recommend that the campus maintain a complete and accurate inventory listing of hazardous substances.

### **Campus Response**

We concur with the finding. The campus does maintain a complete and accurate inventory listing of materials that are evaluated to be hazardous by the Chemical Hygiene Officer through the Environmental Management System. EH&OS and Facility Services will begin a program in May 2001 to maintain a complete and accurate inventory of over-the-counter materials determined by the manufacturer as hazardous. This determination will be made by specifications on the products container.

The training for this program will be offered in April 2001. By July 2001, a database will be established by the Facility Services department and changes will be submitted to EH&OS as they occur.

## **HAZARDOUS MATERIAL TRAINING**

### **Recommendation 5**

We recommend that the campus:

- a. ensure that orientation training materials reference the Chemical Hygiene Plan;
- b. ensure that all new employees who work with hazardous materials undergo orientation training, and that signed acknowledgments are forwarded to EH&OS; and
- c. establish a refresher training frequency for those principle investigators and supervisors who work with hazardous materials.

### **Campus Response**

We concur.

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- a. CSUSM has made changes to the Hazard Communication training program to ensure that the Chemical Hygiene Plan, as well as CCR Title 8 § 5191, is referenced. *See Attachment B.*
- b. To ensure that all new employees who work with hazardous materials undergo the required trainings per CCR Title 8 § 5191 and 5194, EH&OS will take the following steps:
  - 1) remind management and supervisors of their responsibility to train their employees as a requirement of the Injury and Illness Prevention Program approved by CSUSM President Gonzalez.
  - 2) monitor the training provided by supervisors, provide training annually, receive the signed acknowledgment of training, and provide assistance to the supervisor in establishing training.
  - 3) offer "ON-LINE-WEB BASED" training prior to August 2001. The training was funded by a CSU Chancellor's Office grant. Part of this training package will include administrative records of training received and a measurement of comprehension.
- c. For PI and supervisors who work with hazardous materials, we have established the following procedures: EH&OS will:
  - 1) monitor supervisor training, provide training annually, receive the signed acknowledgment of training, and provide assistance to the supervisor in establishing training. Refresher training will be in accordance with Title 8 CCR § 5194 (h)(1), which states that this training should reoccur "...whenever a new hazard is introduced into their work area."
  - 2) EH&OS has established the following training frequencies for employees working with hazardous materials: notwithstanding regulatory requirements, supervisors, faculty and principal investigators that work with hazardous substances will be required to complete refresher training every three years. *See Attachment C.*

## **BUSINESS PLAN CERTIFICATION AND UPDATE**

### **Recommendation 6**

We recommend that the campus submit a business plan and inventory report/certification according to the regulatory timetable and obtain a receipt acknowledgement from the administering agency or maintain internal documentation to evidence compliance with applicable regulations.

### **Campus Response**

We concur and believe we are in compliance. The University's Business Plan was amended and submitted for review and approval on November 20, 2000 to the San Diego CUPA (Certified Unified Protection Agency). The University has received written confirmation of receipt of our Business Plan through the County of San Diego Compliance Inspection Report received 2/6/01. *See Attachment D.*

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## EMERGENCY EYEWASH AND SAFETY SHOWER EQUIPMENT

### Recommendation 7

We recommend that the campus locate emergency eyewash and shower equipment as required by CCR Title 8 § 5162.

### Campus Response

We concur. The relocation of the USB emergency eyewash and shower equipment was completed on January 3, 2001. The installation of the Waste Accumulation area emergency eyewash and shower equipment will be completed by March 31, 2001 (JOB ORDER # 00-00747). At that time, Cal State San Marcos will be in full compliance with CCR Title 8 § 5162.

## HAZARDOUS MATERIALS SYSTEMS CONTROL

### Recommendation 8

We recommend that EH&OS:

- a. instruct employees whose confidential passwords were recorded to change them;
- b. consult with the campus network administrator and strengthen the system and server access security controls by enabling the available automated system controls; and,
- c. process and store EH&OS data on the network drive rather than the "C" drive to permit daily backup.

### Campus Response

We concur and have taken the following steps to comply:

- a. Passwords that were divulged internally were changed in September 2000.
- b. The response from Norm Nicolson, Dean of Instructional and Information Technology Services, on December 8, 2000 regarding strengthening the system and server access security controls indicates that a comprehensive system will be fully implemented and operational campus wide by April 2001. *See Attachment E.*
- c. Effective November 2000, EH&OS data is now processed and stored on the network drive. The Environmental Management System (EMS), which manages our Chemical Inventory has not been moved to the network, however. There is a functional problem with placing the system on such a network and a licensing issue that we are discussing with Chemical Safety (the company that maintains EMS). At this time there is no estimated completion date. In the interim, EH&OS has implemented a procedure whereby any data that is manipulated or changed within EMS is then backed up to the network.

AG:ac

Cc: Stephen Garcia  
Suzanne Green  
Linda Leiter  
Regina Frasca

THE CALIFORNIA STATE UNIVERSITY  
OFFICE OF THE CHANCELLOR

BAKERSFIELD

March 28, 2001

CHANNEL ISLANDS

CHICO

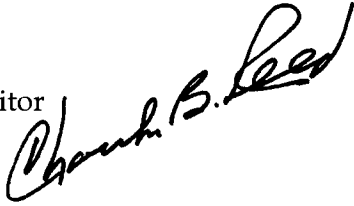
**MEMORANDUM**

DOMINGUEZ HILLS

FRESNO

TO: Larry Mandel  
University Auditor

FULLERTON

FROM: Charles B. Reed 

HAYWARD

SUBJECT: Draft Final Report Number 00-20 on *Hazardous Materials Management*,  
California State University, San Marcos

HUMBOLDT

LONG BEACH

LOS ANGELES

In response to your memorandum of March 23, 2001, I accept the response as submitted with the draft final report on Hazardous Materials Management, California State University, San Marcos.

MARITIME ACADEMY

MONTEREY BAY

NORTHBRIDGE

CBR/dl

POMONA

Enclosure

SACRAMENTO

cc: Dr. Alexander Gonzalez, President

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSE

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS