

HAZARDOUS MATERIALS MANAGEMENT

SYSTEMWIDE

Report Number 00-13

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ABBREVIATIONS

CCR	California Code of Regulations
CSU	California State University
EH&OS	Environmental Health & Occupational Safety
EO	Executive Order
EPA	Environmental Protection Agency
HAZCOM	Hazard Awareness and Communication Program
HAZMAT	Hazardous Material(s)
HMM	Hazardous Materials Management
H&SC	Health & Safety Code
HWMG	Hazardous Waste Management Guide
IIPP	Injury and Illness Prevention Program
MSDS	Material Safety Data Sheet(s)
PMCP	Policy Manual for Contracting and Procurement
RCRA	Resource Conservation and Recovery Act
SAM	State Administrative Manual
TSD	Transfer, Storage and Disposal

INTRODUCTION

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 campuses, Environmental Health and Occupational Safety (EH&OS) 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 (also known as Facilities and Plant Operations). 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.

During the course of the audit, we visited nine campuses: Fullerton, Los Angeles, Northridge, Pomona, Sacramento, San Diego, San Francisco, San Jose, and San Marcos. We interviewed campus personnel and audited procedures in effect at that time.

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 Occupational Safety (EH&OS) 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&OS 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.

OPINION

We visited nine campuses from February 29, 2000, through November 29, 2000, and audited the procedures in effect at that time. Campus specific findings and recommendations have been discussed and reported individually.

In our opinion, the administration and management of the Hazardous Materials Management (HMM) programs at the nine campuses provided reasonable assurance that the CSU was in compliance with applicable regulations and, for the most part, the HMM function operated effectively. We noted significant improvement since the previous audit in 1992. All campuses audited had documented local policies and procedures in addition to those mandated by state regulations such as the Hazardous Communication (HAZCOM) Policy, the Injury and Illness Prevention Program (IIPP), and the Emergency Response/Contingency Plans. It was also noteworthy to report that, for the most part, the campuses reviewed were adequately staffed with experienced management and professional staff. Further, we noted an overall improvement in the consistency of conducting IIPP inspections and notifying employees of the existence and location of asbestos. However, there were several areas that still required improvement. Specifically, the campuses did not maintain adequate control over contractual arrangements and insurance coverage for waste transporters, Material Safety Data Sheets (MSDS), and staff HAZMAT orientation and refresher training. Each of these issues was reported in the prior HAZMAT systemwide report.

These and other areas that warrant the attention of systemwide management are described in the body of the report and mentioned 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 [7]

HAZARDOUS MATERIALS TRANSPORTERS [7]

Hazardous waste removal contractual relationships and/or waste transport liability coverage were not aligned with California State University (CSU) policies at eight of the nine campuses visited. CSU liability exposure and insurance risk are reduced when waste transporter agreements are governed by the CSU model agreement and waste transporters maintain adequate liability insurance.

MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROLS [8]

Administrative controls over Material Safety Data Sheets (MSDS) needed to be strengthened at the nine campuses visited. Readily accessible MSDS and alerting shipping and receiving of impending hazardous materials (HAZMAT) deliveries enhance the university's ability to appropriately and expeditiously respond to an emergency or accident.

HAZARDOUS MATERIALS COMMUNICATION, REPORTING, AND TRAINING [9]

NEW EMPLOYEE AND ANNUAL REFRESHER TRAINING [9]

Hazardous materials orientation and refresher training controls were weak at all the campuses visited. Trained employees are better equipped to appropriately respond in the event of an emergency or accidental release of hazardous substances.

REGULATORY REPORTING [11]

Updated HAZMAT business plans and/or biennial reports had not been submitted to administering agencies according to regulatory timetables for six of the nine campuses. Adequate documentation and internal controls strengthen the regulatory reporting process and reduce the risk of fines due to noncompliance with state regulations.

EMERGENCY EYEWASH AND SAFETY SHOWER EQUIPMENT [12]

Emergency eyewash and shower equipment was not installed and/or inspected in compliance with state regulations at seven of the nine campuses. Compliance with eyewash and shower regulations increases the likelihood that emergency facilities will be available and operate effectively in the event of an accident.

HAZARDOUS WASTE DETERMINATION, STORAGE, TRANSPORTATION, AND DISPOSAL [13]

Waste accumulation area management and hazardous waste labeling controls needed improvement at seven of the nine campuses visited. Proper storage and labeling of hazardous waste reduce the likelihood of operational mishaps and job-related injuries.

HAZARDOUS MATERIALS SYSTEMS CONTROL [14]

End-user computing data security access and/or file backup controls were not adequate for personal computers at six of the nine campuses. Adequate system access controls and file backup ensures the preservation of data confidentiality and information assets.

OBSERVATIONS, RECOMMENDATIONS, AND MANAGEMENT RESPONSES

HAZARDOUS MATERIALS ADMINISTRATION

HAZARDOUS MATERIALS TRANSPORTERS

Hazardous waste removal contractual relationships and/or waste transport liability coverage were not aligned with California State University (CSU) policies at eight of the nine campuses visited.

We found that:

- ▶ relationships between campuses and their waste transporters were established via purchase orders rather than the CSU model agreement at the eight campuses and the purchase orders did not always include or incorporate by reference the contract terms and conditions required by CSU policy;
- ▶ waste transporter insurance coverage was less than specified by CSU policy at three campuses and the reduced insurance coverage limits were not supported by documented risk assessments; and
- ▶ proof of insurance could either not be located or was received after the start of service at four campuses.

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.

Executive Order (EO) No. 743, *CSU Insurance Requirements*, dated May 5, 2000, states that in the absence of risk identification and evaluation, the minimum insurance limits and hold harmless provisions as specified in the EO are required. Following a risk identification and evaluation in special situations, the campus may permit exceptions to the specified requirements.

Both the *CSU Policy Manual for Contracting and Procurement* (§412.06 – Contracts Requiring Insurance Coverage) and EO No. 743 require contractors to provide proof of insurance. The *CSU Policy Manual for Contracting and Procurement* specifies that such proof should be provided prior to the commencement of work.

In most instances, management felt that the *CSU Policy Manual for Contracting and Procurement* was not clearly worded and subject to differing interpretations since the policy did not distinguish between hazardous materials and hazardous waste. Additionally, the policy did not clearly articulate the unique requirements relative to regulatory waste versus other types of waste (e.g., biohazardous, universal), and EO No. 743 did not require that a risk assessment be documented and approved. Management further stated that purchase orders were used rather than the CSU model agreement due to the low-dollar value of services provided.

Failure to contractually protect the university and inadequate liability insurance coverage could result in the CSU sharing responsibility for the failures and/or oversights of hazardous waste transporters.

Recommendation 1

We recommend that the chancellor's office review, update, and reissue the *CSU Policy Manual for Contracting and Procurement* §412.07 and EO No. 743. Policy §412.07 should clarify the distinction between hazardous materials and hazardous waste and establish exception criteria. EO No. 743 should require that insurance coverage below minimum requirements be supported by a documented and independently approved risk assessment.

Management's Response

We concur. The offices of Systemwide Risk Management and Contracts and Procurement will work together to redefine and delineate the distinction between hazardous materials and hazardous wastes. EO No. 743 will be reviewed and revised to require written documentation of the risk assessment performed when coverage limits are selected below the minimum limits for hazardous materials, by October 2001.

MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROLS

Administrative controls over Material Safety Data Sheets (MSDS) needed to be strengthened at the nine campuses visited.

We found that:

- ▶ MSDS were not always readily accessible to employees within their work areas, including access via the Internet, at eight campuses; and
- ▶ purchase orders were not routinely annotated with a request for MSDS at four campuses, which results in shipping and receiving not receiving advance notification concerning the delivery of hazardous materials.

California Code of Regulations (CCR) Title 8 §5194(g) states, in part, that employers shall have an 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).

The *CSU Policy Manual for Contracting and Procurement* (§303.3 – Hazardous Materials) states that the Hazardous Substances Information and Training Act in the California Labor Code specifies that purchase orders for chemicals, solvents, or other products that may contain any kind of hazardous material include a vendor requirement to furnish a MSDS for the commodity being purchased.

State Administrative Manual (SAM) §2590.2 states that all vendors are required to supply MSDS to departments ordering hazardous substances, and receiving clerks should be advised to follow internal departmental procedures in making the appropriate filing and distribution of the MSDS.

It was the opinion of several campuses that although MSDS may not have been stored in a particular lab or workshop, they could be obtained in enough time to respond appropriately to an emergency. Several of the campus Environmental Health and Occupational Safety (EH&OS) directors also stated that regulatory agencies had not cited the campus for infractions of MSDS regulations. In most instances, failure to annotate purchase orders with a request for MSDS was attributable to a change in the process or purchase order system.

MSDS not readily accessible to employees and failure to alert the shipping and receiving department of impending hazardous materials (HAZMAT) deliveries could negatively impact the CSU's ability to appropriately and expeditiously respond to an emergency or accident.

Recommendation 2

We recommend that the chancellor's office establish minimum guidelines relative to employee access to and management control of MSDS. These guidelines should address, but not be limited to, MSDS administrative matters such as: a) storage location (i.e., centralized vs. decentralized), b) form and accessibility (e.g., hardcopy vs. online), c) process (e.g., vendor MSDS requests and follow-up procedures), and d) MSDS controls (e.g., reconciliation and/or existence confirmation).

Management's Response

We concur. The Office of Systemwide Risk Management in consultation with campus Environmental Health and Safety Directors and Procurement departments will review current OSHA guidelines and include these in an advisory publication to all campuses, including the areas: a) storage location, b) form and accessibility, c) process, and d) MSDS controls by October 2001. This advisory publication will also be posted on the Risk Management website.

HAZARDOUS MATERIALS COMMUNICATION, REPORTING, AND TRAINING

NEW EMPLOYEE AND ANNUAL REFRESHER TRAINING

Hazardous materials orientation and refresher training controls were weak at all the campuses visited.

We found, in varying degrees, that:

- ▶ employees and student assistants had either not undergone orientation training or training had not taken place within the first month of hire at the nine campuses;

- ▶ chemistry, biology, and/or physical plant employees had not attended HAZMAT refresher training at six campuses;
- ▶ EH&OS had not established and/or effectively monitored the frequency of refresher training at four campuses; and
- ▶ training documentation was not on file to evidence that the campus HAZMAT emergency response team had met the annual training regulatory requirement at two campuses.

CCR Title 8 §5194(h)(1) requires employers to 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.

CCR Title 8 §5191(f) requires that employers provide laboratory employees with refresher training on a frequency determined by the employer.

CCR Title 8 §5192(e)(8) requires that HAZMAT emergency response team members receive eight hours of refresher training annually.

Several reasons were given for the training deficiencies. Management stated that principle investigators and supervisors were not maintaining training records, or there was confusion concerning training responsibilities (EH&OS vs. area supervision). We also noted that, in some instances, there was no mechanism in place to notify EH&OS of new employees. In addition, management stated that it was sometimes difficult to motivate certain faculty members to attend refresher training.

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

Recommendation 3

We recommend that the chancellor's office remind all campuses of the importance of a consistently implemented training program to ensure that employees are adequately trained and refreshed in the use and dangers of working with hazardous materials and waste.

Management's Response

We concur. The Office of Systemwide Risk Management will issue an advisory memorandum reminding campuses of the importance of a consistently implemented training program to ensure that employees are adequately trained and refreshed in the use and dangers of working with hazardous materials and wastes by July 2001. The Office of Systemwide Risk Management will offer to assist each campus in determination of who needs to take the refresher courses and the frequency these courses need to be taken, based upon exposure.

REGULATORY REPORTING

Updated HAZMAT business plans and/or biennial reports had not been submitted to administering agencies according to regulatory timetables for six of the nine campuses.

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.

H&SC §25505(d) specifies that any business that handles a hazardous material shall annually submit a completed inventory form to the administering agency of the county or city in which the business is located.

CCR Title 22 §66262.41, *Biennial Report*, specifies that a generator who ships any hazardous waste off-site to a transfer, treatment, storage, or disposal facility within the U.S. shall prepare and submit a single copy of a biennial report. The biennial report shall be submitted on forms provided by the department and shall cover generator activities during the previous calendar year.

In most instances, management stated that the administering agency either did not demonstrate an interest in the business plan or biennial report or did not provide the campus with an acknowledgment when the documentation was submitted. One campus stated that they were considered a small quantity waste generator and were not required to prepare a biennial report.

Inadequate documentation and/or failure to report weakens internal controls over the regulatory reporting process and increases the risk of noncompliance with state regulations, which could result in the assessment of fines.

Recommendation 4

We recommend that the chancellor's office encourage the campuses to either obtain a business plan/biennial report receipt acknowledgement from the administering agency or maintain documentation on file for a reasonable length of time to evidence compliance with HAZMAT regulatory reporting requirements.

Management's Response

We concur. We will prepare a strongly worded advisory to the campuses of their responsibilities under the Health and Safety Code and the California Code of Regulations. The HAZMAT regulatory reporting requirements will also be posted on the Risk Management website by October 1, 2001.

EMERGENCY EYEWASH AND SAFETY SHOWER EQUIPMENT

Emergency eyewash and shower equipment was not installed and/or inspected in compliance with state regulations at seven of the nine campuses.

We found, in varying degrees, that:

- ▶ equipment had not been installed in certain work and waste accumulation locations or installed without drainage systems at three campuses;
- ▶ equipment could not be expeditiously reached in an emergency at two campuses;
- ▶ eyewash and shower units were inoperative or could not be used simultaneously at two campuses; and
- ▶ equipment was not inspected on a monthly basis, as specified by state regulations, at six campuses.

CCR Title 8 §5162(a)(c)(d) states that eyewash and shower equipment shall be provided at all work areas where, during routine operations or foreseeable emergencies, the eyes of an employee may come into contact with a substance which can cause corrosion, severe irritation, or permanent tissue damage or which is toxic by absorption. Further, eyewash and showers shall be in accessible locations that require not more than 10 seconds for the injured person to reach. In addition, if both an eyewash and shower are needed, they shall be located so that one person can use both at the same time. The control valve shall be designed so that the water flow remains on without requiring the use of the operator's hand.

CCR Title 8 §5162(e) states that eyewash and shower equipment shall be activated at least monthly to flush the line and to verify proper operation.

In a number of instances, management stated that eyewash/shower structural deficiencies were attributable to budget constraints imposed by the chancellor's office. Management indicated that inspections were not conducted on a monthly basis due to resource constraints or miscommunication regarding inspection responsibility.

Noncompliance with eyewash and shower equipment regulations and failure to perform monthly inspections increase the risk that emergency equipment will not be available or operate effectively in the event of an accident.

Recommendation 5

For campuses with emergency eyewash and shower equipment and/or structural deficiencies, we recommend that the chancellor's office consider whether the risk assumed by the campus is acceptable or reemphasize the importance of full compliance with applicable regulations.

Management's Response

The Office of Systemwide Risk Management will issue a directive to the campuses to reemphasize the importance of full compliance with applicable regulations and to understand that noncompliance is not an acceptable risk to be assumed by the campuses.

HAZARDOUS WASTE DETERMINATION, STORAGE, TRANSPORTATION, AND DISPOSAL

Waste accumulation area management and hazardous waste labeling controls needed improvement at seven of the nine campuses visited.

During our walk-through inspections of campus waste accumulation areas, laboratories, and work areas, we noted the following:

- ▶ waste was not properly stored and/or segregated at six campuses, including waste containers filled to or beyond capacity, untied biohazard bags in classroom trash receptacles, and HAZMAT waste stored in secondary containers;
- ▶ food was stored in clearly marked HAZMAT storage refrigerators at two campuses;
- ▶ waste containers without hazardous waste labels and/or incomplete/inaccurate labels at six campuses; and
- ▶ waste maintained and/or processed for disposal outside the waste accumulation station at two campuses.

CCR Title 8 §5164(a) states that substances which, when mixed, react violently, or evolve toxic vapors or gases, or which in combination become hazardous by reason of toxicity, oxidizing power, flammability, explosibility, or other properties shall be separated from each other in storage by distance, by partitions, or otherwise so as to preclude accidental contact between them.

CCR Title 22 §66262.34 allows a generator to accumulate hazardous waste if the initial date of waste accumulation is clearly marked and visible for inspection on each container used for accumulation of hazardous waste.

CCR Title 22 §66262.31 requires that before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator shall label each package in accordance with the applicable Department of Transportation regulations.

Management stated that, for the most part, the particular waste storage and labeling infractions had not been detected by the principle investigators, supervisors, or EH&OS during their walk-throughs and inspections. Management further stated that several of the hazardous waste storage facilities were built

when the campus was not producing much hazardous waste and were not adequate to handle waste accumulation from the current level of research activity.

Failure to properly label and store waste increases the likelihood of operational mishaps and job-related injuries.

Recommendation 6

We recommend that the chancellor's office reemphasize to the campuses the importance of compliance with hazardous waste labeling and storage regulations. To reduce the amount of waste generated and increase compliance, the chancellor's office should encourage the campuses to consider migration to microchemistry processes.

Management's Response

We concur. The Office of Systemwide Risk Management will issue an advisory memorandum to the campuses regarding the migration to microchemistry processes by November 2001. This memorandum will strongly encourage each campus to audit their hazardous waste use and storage areas to insure that they are in compliance with the hazardous waste labeling and storage regulations. It will also encourage each campus to reduce the amount of waste generate by the migration to microchemistry processes.

HAZARDOUS MATERIALS SYSTEMS CONTROL

End-user computing data security access and/or file backup controls were not adequate for personal computers at six of the nine campuses.

We found that:

- ▶ system access was not automatically disabled after prolonged terminal inactivity or an excessive number of failed attempts to gain access to the server or data files and users were not prompted to periodically change their passwords at four campuses;
- ▶ user identification/password controls were not used to limit access to data on personal computers at one campus, users could reuse the same password within a relatively short period of time at one campus, and a terminated employee was still listed as an active user at another campus; and
- ▶ backup data files were not maintained or not sent off-site at three campuses and one other campus was not using the campus network automated backup feature.

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

SAM §4989.7 requires state agencies to implement appropriate safeguards to security workgroup computing configurations and their associated files. Management should protect computing configurations from theft and unauthorized used. Further, policies that mandate standards for the regulator backup of all data should be in place. The method and frequency depend on the nature of the data.

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.

In several instances, the campus IT analyst stated that the security features were available but had not been enabled, and other security infractions were oversights. We were told in one instance that the security rules were established for the convenience of the user. In addition, a number of managers stated that backup procedures were in place, but the data files were maintained within the office.

Inadequate system access controls and failure to properly protect and backup data jeopardizes the confidentiality and preservation of campus information assets.

Recommendation 7

We recommend that the chancellor's office develop an end-user computing policy that addresses such issues as: a) system access security, b) information asset protection and retention, c) system documentation requirements, d) application maintenance, and e) software copyright guidelines.

Management's Response

We concur. In partnership with the IT Division, a policy statement which addresses access security, information protection, information retention, documentation requirements, application maintenance and software copyright guidelines will be issued by October 1, 2001. This policy statement will also be posted on the Risk Management website.

APPENDIX A: PERSONNEL CONTACTED

CHANCELLOR'S OFFICE

Patrick Drohan	Assistant Vice Chancellor, Capital Planning, Design and Construction
Deborah Hill	Energy Program Manager, Capital Planning, Design and Construction
Charlene Minnick	Director of Risk Management
Elvyra San Juan	Chief of Facilities Planning, Capital Planning, Design and Construction
Brad Wells	Assistant Vice Chancellor, Financial Services
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Marsha Farwick	Associated Student Incorporated (ASI)
Sue Fisher	Radiation Safety Officer
Robert Gill	EH&IS Environment Compliance Manager
Robin Graboyes	Personnel Assistant, Human Resources
Willie Hagan	Vice President for Administration
Lou Hamby	Buyer
Skip Hines	Chemical Hygiene Officer
Fatima Khan	Biology Supply Stock Room Manager
Mike Marcinkevicz	Network Manager
Dana Melton	Chemical Stock Room Manager
Danny Miranda	Shipping and Receiving
Louella Mitchell	Biology Stock Room Manager
Mike Parker	Chief Information Officer
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Joseph Mitchell	Manager, Material Management
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Scott Byars	Supervisor, Paint Shop
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Dudley D'Apremont	Manager, Receiving/Stores
Peter Dinauer	University Internal Auditor
Nancy Edwards	Manager, Payroll Services
Benjamin Elisondo	Safety Coordinator, Physical Plant Management
Hildo Hernandez	Director, Physical Plant Management
Nicki Keller	Health and Safety Specialist, EH&S
Robert Kiddoo	Assistant Vice President/University Controller
William Krohmer	Manager of Technical Services and Safety, Biology Department
William Kupfer	Environmental Compliance Manager
Irving Langworthy	Supervisor, Auto Shop
William Lee	Chemical Hygiene Technician, Chemistry Department
Jan Loritz	Assistant Director for Administration, Student Health Center
Ronald Norton	Director, EH&OS
Mohammed Qayoumi	Vice President and Chief Fiscal Officer
Sandor Reichman	Chair, Chemistry Department
Mary Sosa	Contracts Administrator, Purchasing
Elizabeth Soto	Assistant Controller, University Corporation
Tom Tindall	Director, Facilities Planning

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Genie Apodaca	Director of Human Resources, Foundation
Thomas Barber	Senior Safety Coordinator
Bill Benaquista	Chemistry Stock Room
Armando Bustamonte	Shipping and Receiving
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Lynne Cywan	Employment Coordinator, Human Resources
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Carolyn Forrester	Chemistry Stock Room
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Don Green	Director, Procurement
Donna Griffith	Customer Service Coordinator, Human Resources
Michael Huyter	Environmental Specialist
Tye Kitasato	Manager of Landscape Services, Facilities Management
Darwin Labordo	Associate Vice President for Finance and Administrative Services
Richard Marvin	Hazardous Materials Specialist
Patrick Mobley	Professor, Biology
David Patterson	Director, Environmental Health and Safety
Frank Pegram	Plumbing Supervisor, Facilities Management
David Prenovost	Chief Financial Officer, Foundation
Eloise Pro	Biology Stock Room
Debra Schneck	Contracts Administrator
Andrea Vestey	Biology Stock Room
Marilyn Wilkerson	Manager of Custodial Services, Facilities Management

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Bruce Balon	Manager, Work Control, Facilities Management
Corynn Converse	Instructional Support Assistant, Biological Sciences
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Howard Harris	Associate Vice President, Facilities Management
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James Hill	Chair, Chemistry
Jeanine Jenovino	Service Center Coordinator, Chemistry
Stewart McConnell	Management Auditor
Kathi McCoy	Senior Management Auditor
Gary McRoberts	Lead Groundsworker, Facilities Management
Paul Noble	Associate Dean, College of Natural Sciences & Mathematics
Donna Parenti	Controller, CSUS Foundation
Mario Ruiz	Director of Plant Services, Facilities Management
Jonathan Self	Associate Vice President for Finance

David Shannon	Manager, Procurement and Contract Services
Nancy Shulock	Associate Vice President, Academic Affairs
Suzanne Swartz	Buyer, Procurement and Contract Services
Roman Worobel	Acting Director, EH&S
Peggy Yasukochi	Senior Medical Technician, Student Health Center

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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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M.C. Hull	Director, Environmental Health & Safety
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Gretchen Jones	Associate Director, Physical Plant
David Palmer	Hazardous Material Specialist
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Helen Shirk	Professor, Art Department
Joe Stahley	Assistant Director, Physical Plant
Charlene Weidell	Graduate Student, Art Department
Bruce Wingerd	Business Manager, Biology

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Troy Boone	Stock Room Manager, Biology
Victor Castillo	Director, Plant Operations
John E. Hafernik, Jr.	Chair, Department of Biology
Daniel Ho	Hazardous Materials Coordinator, EHOS
Robert Hutson	Associate Vice President, Facilities & Service Enterprises
David O'Brien	Director, Procurement Department
Jim Orenberg	Chair, Chemistry & Bio-Chemistry
Robert L. Quinn	Vice President, Physical Planning & Development
Ricky Ledbetter	Supervisor, Central Plant Operations
James E. Matheson	Administrative Analyst, Fleet Services
Leroy Morishita	Associate Vice President, Budget, Planning and Resource Management
Don W. Scoble	Vice President, Business & Finance
Robert W. Shearer	Director, Environmental Health & Occupational Safety
Don Smalley	Contracts Coordinator, Procurement
Rich Stevens	Chief Engineer, Central Plant Operations
Bernadette Tano	Compliance Specialist, EH&OS
Linda Vadura	Health & Safety Specialist, COSE
Jim Van Ness	Internal Auditor
Carmelita Wu	Administrative & Logistics Services Supervisor, FSE
Harold Yee	Supervisor, Paint
Andrew Yu	EH&OS Technician

SAN JOSE STATE UNIVERSITY

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Ray Balaoro	Special Project & Safety Manager, Facilities Development & Operations
Maria Blake	Manager, Sponsored Programs
Kenneth Coate	Acting Director, Moss Landing Marine Laboratories
Barbara Coats	Director, Safety and Risk Management
Gustavo De La Torre	Associate Vice President, Human Resources
Jocelyn Douglas	Chemical Safety Officer
Lyle Fifield	Manager, Distribution Services
Linda Goff	Micro/Physician Manager, Biological Sciences
John Gorvad	Lead Auto Mechanic
Chandra Gowda	Hazardous Materials Specialist
John Hawk	Assistant Safety Coordinator, College of Science
Don W. Kassing	Vice President for Administration
Robert Lamp	Technician, Art Foundry
Christine Little	Industrial Hygienist
Carl Panther	Technician, Aviation Department
William Petchauer	Director, Business and Finance, SJSU Foundation
Richard Staley	Manager, Emergency Preparedness
Dennis Suit	Manager of Grounds and Transportation

APPENDIX A

Dian Tollinger

Janice Uyeda

Jamie Van Brocklin

Paul Wood

Associate Director, Safety and Risk Management

Nursing Supervisor, Student Health Center

Administrative Coordinator, Safety and Risk Management

Safety Coordinator/Chemical Safety Manager, College of Science

The California State University System

Office of the Chancellor
RECEIVED
University Auditor

Memorandum

JUN 20 2001

The California State
University**To:** Mr. Larry Mandel
University Auditor**Date:** June 18, 2001**From:** Richard P. West
Executive Vice Chancellor/Chief
Financial Officer**Phone:** 562-951-4580**Subject:** Hazardous Materials Management, Audit Report Number 00-13

We have reviewed the above captioned report and express our responses below:

Recommendation 1

We recommend that the Chancellor's Office review, update, and re-issue the CSU Policy Manual for Contracting and Procurement §412.07 and EO No. 743. Policy §412.07 should clarify the distinction between hazardous materials and hazardous wastes and establish exception criteria. EO No. 743 should require that insurance coverage below minimum requirements be supported by a documented and independently approved risk assessment.

Management's Response

We concur. The offices of Systemwide Risk Management and Contracts and Procurement will work together to re-define and delineate the distinction between hazardous materials and hazardous wastes. EO No. 743 will be reviewed and revised to require written documentation of the risk assessment performed when coverage limits are selected below the minimum limits for hazardous materials, by October 2001.

Mr. Larry Mandel
June 18, 2001
Page Two

Recommendation 2

We recommend the Chancellor's Office establish minimum guidelines relative to employee access to and management control of MSDS. These guidelines should address, but not be limited to MSDS and administrative matters such as: a) storage location (i.e., centralized vs. decentralized), b) form and accessibility (e.g., hardcopy vs. on-line), c) process (e.g., vendor MSDS requests and follow-up procedures), and d) MSDS controls (e.g., reconciliation and/or existence confirmation).

Management Response

We concur. The Office of Systemwide Risk Management in consultation with campus Environmental Health and Safety Directors and Procurement departments will review current OSHA guidelines and include these in an advisory publication to all campuses, including the areas: a) storage location, b) form and accessibility, c) process, and d) MSDS controls by October 2001. This advisory publication will also be posted on the Risk Management web site.

Recommendation 3

We recommend that the chancellor's Office remind all campuses of the importance of a consistently implemented training program to ensure that employees are adequately trained and refreshed in the use and dangers of working with hazardous materials and waste.

Management Response

We concur. The office of Systemwide Risk Management will issue an advisory memorandum reminding campuses of the importance of a consistently implemented training program to ensure that employees are adequately trained and refreshed in the use and dangers of working with hazardous materials and wastes by July 2001. The Office of Systemwide Risk Management will offer to assist each campus in determination of who needs to take the refresher courses and the frequency these courses need to be taken, based upon exposure.

Mr. Larry Mandel
June 18, 2001
Page Three

Recommendation 4

We recommend that the Chancellor's Office encourage the campuses to either obtain a business plan/biennial report receipt acknowledgement from the administering agency or maintain documentation on file for a reasonable length of time to evidence compliance with HAZMAT regulatory reporting requirements.

Management Response

We concur. We will prepare a strongly worded advisory to the campuses of their responsibilities under the Health and Safety Code and the California Code of Regulations. The HAZMAT regulatory reporting requirements will also be posted on the Risk Management website by October 1, 2001.

Recommendation 5

For campuses with emergency eyewash and shower equipment and/or structural deficiencies, we recommend that the Chancellor's Office consider whether the risk assumed by the campus is acceptable or re-emphasize the importance of full compliance with applicable regulations.

Management Response

The Office of Systemwide Risk Management will issue a directive to the campuses to re-emphasize the importance of full compliance with applicable regulations and to understand that non-compliance is not an acceptable risk to be assumed by the campuses.

Mr. Larry Mandel
June 18, 2001
Page Four

Recommendation 6

We recommend that the Chancellor's Office re-emphasize to the campuses the importance of compliance with hazardous waste labeling and storage regulations. To reduce the amount of waste generated and increase compliance, the Chancellor's Office should encourage the campuses to consider migration to microchemistry processes.

Management Response

We concur. The Office of Systemwide Risk Management will issue an advisory memorandum to the campuses regarding the migration to microchemistry processes by November 2001. This memorandum will strongly encourage each campus to audit their hazardous waste use and storage areas to insure that they are in compliance with the hazardous waste labeling and storage regulations. It will also encourage each campus to reduce the amount of waste generate by the migration to microchemistry processes.

Recommendation 7

We recommend that the Chancellor's Office develop an end user computing policy that addresses such issues as: a) system access security, b) information asset protection and retention, c) system documentation requirements, d) application maintenance, and software copyright guidelines.

Management Response

We concur. In partnership with the IT Division, a policy statement which addresses access security, information protection, information retention, documentation requirements, application maintenance and software copyright guidelines will be issued by October 1, 2001. This policy statement will also be posted on the Risk Management web site.

Should you have any questions or need further information, please contact Ms. Charlene Minnick, Director Risk Management at extension 1-4580.

RPW:cmm

cc: Mr. Jim Usher, Ms. Charlene Minnick

THE CALIFORNIA STATE UNIVERSITY
OFFICE OF THE CHANCELLOR

BAKERSFIELD

CHANNEL ISLANDS

July 6, 2001

CHICO

MEMORANDUM

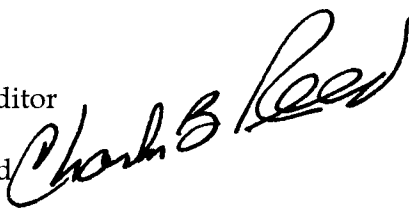
DOMINGUEZ HILLS

FRESNO

TO: Larry Mandel
University Auditor

FULLERTON

FROM: Charles B. Reed



HAYWARD

SUBJECT: Draft Final Report Number 00-13 on *Hazardous Materials Management*,
Systemwide

LONG BEACH

LOS ANGELES

In response to your memorandum of July 6, 2001, I accept the response as submitted with the draft final report on *Hazardous Materials Management*, Systemwide.

MARITIME ACADEMY

MONTREY BAY

NORTHRIDGE

LM:amd

POMONA

Enclosure

SACRAMENTO

cc: Richard P. West
Executive Vice Chancellor and Chief Financial Officer

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSE

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS