

HAZARDOUS MATERIALS MANAGEMENT

**CALIFORNIA STATE UNIVERSITY
FULLERTON**

**Report Number 00-18
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ABBREVIATIONS

ASI	Associated Student Incorporated
CCR	California Code of Regulations
CSU	California State University
CSUF	California State University Fullerton
EH&IS	Environmental Health & Instructional 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)
PCB	Polychlorinated Biphenyls
PI	Principle Investigator
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
SAM	State Administrative Manual
SLC	Science Laboratory Center
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 Fullerton (CSUF), the Department of Environmental Health and Instructional Safety (EH&IS) 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.

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.

OPINION

We visited the CSU Fullerton (CSUF) campus from June 5, 2000, through July 7, 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 CSUF 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 waste transport liability coverage maintained by certain contractors did not meet current CSU requirements. The California State University is protected when hazardous waste transporters maintain adequate liability insurance and agreements are supported by signed contracts.

MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROL [7]

MSDS administrative controls were in need of strengthening. Pre-notification to shipping and receiving of HAZMAT deliveries and employee accessibility to MSDS information improves CSUF's ability to appropriately and expeditiously respond to an emergency or accident.

EH&IS HAZARDOUS MATERIAL COMPLIANCE INSPECTIONS [9]

The Environmental Health and Instructional Safety (EH&IS) Department did not conduct the 1999 Plant Operations hazardous materials (HAZMAT) compliance inspection. Conducting HAZMAT inspections reduces IIPP and state regulatory compliance risk.

HAZARDOUS MATERIALS COMMUNICATION, REPORTING AND TRAINING [10]

HAZARDOUS MATERIAL TRAINING [10]

Controls over employee hazardous materials (HAZMAT) orientation and refresher training were not adequate. Properly trained employees reduce job related injuries and ensure an appropriate response in the event of an emergency.

BUSINESS PLAN CERTIFICATION AND UPDATE [11]

A HAZMAT business plan had not been completed since 1991 and documentation was not on file to certify that the plan and supplemental inventory was 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 [12]

Emergency eyewash and shower equipment were not installed and inspected in compliance with state regulations. Compliance with eyewash and shower regulations increases the likelihood that emergency facilities will operate effectively in the event of an accident.

RISK MANAGEMENT PLAN [13]

The campus had not developed a risk management plan (RMP) or received an exemption as a non-acutely hazardous waste generator. Obtaining the proper determination by the administering agency reduces both the risk of non-compliance with regulations and the campus's liability exposure.

HAZARDOUS WASTE DETERMINATION, STORAGE, TRANSPORTATION AND DISPOSAL [14]

Hazardous waste accumulation sites were not sufficient to handle the amount of waste generated by the campus. Adequate space for waste accumulation and HAZMAT storage reduces the risk of operational mishaps and job-related injuries.

HAZARDOUS MATERIALS SYSTEMS CONTROL [15]

Access to EH&IS's server was not adequately controlled. Adequate systems security ensures that only authorized individuals gain access to EH&IS computerized information.

OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

HAZARDOUS MATERIALS ADMINISTRATION

HAZARDOUS MATERIALS TRANSPORTERS

Hazardous waste removal contractual relationships and waste transport liability coverage maintained by certain contractors did not meet current CSU requirements.

We found that:

- ▶ the relationship between the campus and two of the three hazardous waste transporters was established via purchase order as opposed to the CSU HAZMAT model contract; and
- ▶ insurance liability coverage documentation could not be located for one of the three hazardous waste transporters sampled.

The CSU Policy Manual for Contracting & 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 contract for hazardous material removal, and comply with all State and Federal requirements.

CSU Model Contract 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 EH&IS environmental compliance manager stated that they used the PO process for the two transporters due to the low dollar value of the services provided. The campus procurement officer indicated that they had no other documentation to support insurance coverage for the hazardous waste transporters and would need to perform further follow-up.

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

Recommendation 1

We recommend that the campus:

- a. enter into a contract, rather than use a blanket purchase order, for removal of all hazardous materials; and

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

Campus Response

We concur and have taken the following corrective actions to address these recommendations. As of November 10, 2000, blanket purchase orders are no longer placed for hazardous waste removal operations. All contracts and service orders for hazardous materials now include specifications that require HAZMAT contractors to maintain and document appropriate insurance and liability coverage.

MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROL

MSDS administrative controls were in need of strengthening.

During the course of testing and evaluating MSDS controls, we found that:

- ▶ Chemistry and biology purchase orders were not consistently annotated with a request for a MSDS. Consequently, the shipping and receiving department did not consistently receive advance notification of hazardous materials.
- ▶ Auxiliary and P-Card hazardous material purchases were not consistently annotated with a request for MSDS. Further, the receipt of these purchases was not always delivered to the campus shipping and receiving area.
- ▶ The MSDS central file maintained by EH&IS was not always updated to reflect new chemicals introduced on campus; the MSDSs for 21 of the 30 HAZMAT purchases reviewed were not maintained within the laboratory area.
- ▶ Plant operation MSDSs were maintained in the materials supply office as opposed to the shops where the hazardous material was being stored and used.

CCR Title 8 §5194(g)(1) and (8), respectively, state that employers shall have a MSDS for each hazardous substance, which 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).

CSUF Hazard Communication (HAZCOMM) Program states that purchase orders should include a statement requesting that an MSDS accompany shipments of hazardous materials with a copy sent to EH&IS office noting requesting department's name on the sheet.

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.

CSU Policy Manual for Contract Services and Procurement §303.03, 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 Material Safety Data Sheet for the commodity being purchased.

The buyer, procurement services, stated that the “H” (hazardous material purchase) option should be selected by the requesting departments during the course of inputting the information into the computerized purchase requisition system. By doing so, the purchase order will include a statement requesting the vendor to provide a copy of the MSDS with the purchased materials. According to the chemistry and biology stock room managers and ordering clerks, they were not aware of such an option. The director of EH&IS stated that the hard copy purchase order designed for HAZMAT purchases, previously routed through their office, had not been used in several years.

Failure to alert the Shipping & Receiving Department of impending HAZMAT deliveries and MSDSs not readily accessible to employees could negatively impact the university’s ability to appropriately and expeditiously respond to an emergency or accident.

Recommendation 2

We recommend that the campus:

- a. annotate all hazardous material purchase orders with a request that the vendor provide CSUF a MSDS;
- b. provide Shipping and Receiving a copy of HAZMAT purchase orders from all purchasing sites;
- c. provide copies of MSDSs to EH&IS with the department location noted; and
- d. make MSDSs readily accessible to all employees at their work locations.

Campus Response

We concur with the recommendations. By January 2001, the boilerplate language for all hazardous material purchase orders will contain requests for MSDSs. The CSUF Procurement Office will develop new policies and procedures and instruct buyers to be more diligent in including this additional language. The CSUF Foundation and other campus auxiliary services will also be notified and asked to follow the updated procedures. Purchases of hazardous materials are not permitted on the University P-Card and reminders will be sent out to all buyers.

By May 2001, the Procurement Office will develop policies and procedures to ensure that Shipping and Receiving receives copies of all purchase orders for hazardous materials. The Procurement Office and Facilities Management Office will also develop policies and procedures to ensure that Shipping and Receiving obtains MSDSs with the shipment of hazardous materials, logs and annotates the location of the delivered materials, and forwards copies of the MSDSs to EH&IS.

By May 2001, the EH&IS Office will develop an MSDS database that will be available to all faculty, staff and students on a campus server.

EH&IS HAZARDOUS MATERIAL COMPLIANCE INSPECTIONS

The Environmental Health and Instructional Safety (EH&IS) Department did not conduct the 1999 Plant Operations hazardous materials (HAZMAT) compliance inspection.

The CSUF Injury and Illness Prevention Program (IIPP) requires that EH&IS conduct inspections of all buildings and grounds at least annually. The inspections should include, but not be limited to, quarterly fume hood certifications, eyewash and safety showers, and hazardous waste accumulation sites.

CCR Title 8 §3203 states that the IIPP shall at a minimum include procedures for identifying and evaluating work place hazards including scheduled periodic inspections to identify unsafe conditions and work practices. Inspections shall be made to identify and evaluate hazards.

The EH&IS director indicated that the 1999 inspection was not performed due to lack of resources.

Failure to conduct HAZMAT inspections increases the risk of non-compliance with the campus IIPP policies and state regulations.

Recommendation 3

We recommend that the campus conduct the 2000 EH&IS IIPP inspection of the Plant Operations Department as soon as possible.

Campus Response

We concur. The Physical Plant inspections required by the IIPP have, in the past, been completed on an annual basis. Staff turnover, however, necessitated re-allocation of the personnel resources and resulted in a limited 2000 inspection schedule. We will complete the 2000 inspections by January 2001.

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:

- ▶ HAZMAT orientation training records for 15 Biology, Chemistry and Plant Operations employees hired between 1996 and 2000 disclosed that training records for four of the employees (2 Biology employees; 1 Chemistry employee; and 1 Plant Operations employee) could not be located. Additionally, there were 3 other employees that had their first HAZMAT training from 7 to 12 months after their start date.
- ▶ Training records for 30 Chemistry, Biology and Plant Operations employees revealed that none received HAZMAT refresher training. During the refresher training review, we noted that 17 of the 30 employees had not received the initial HAZMAT orientation training.
- ▶ No documentation was found to support training for student assistants working in the three areas selected for review.
- ▶ The campus was not following the established frequency for HAZMAT refresher training as described in the campus-training guide.

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.

CCR Title 8 §5191(f)(2), *Occupational Exposure to Hazardous Chemicals in Laboratories*, states that the employer shall determine the frequency of refresher information and training.

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

CSUF safety training assessment and schedule state that the frequency of HAZMAT training shall be on an annual basis for campus personnel working in areas as outlined on the schedule.

The HAZCOMM program requires that each department 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.

The EH&IS director stated that a comprehensive training program had not been completely developed and the system of tracking and monitoring had been lacking as a result of not having a trainer.

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

Recommendation 4

We recommend that the campus:

- a. finalize the training program and strengthen the procedures to track, record and monitor employee HAZMAT training; and
- b. monitor adherence with the frequency of refresher training as outlined in the safety training assessment.

Campus Response

We concur. By April 2001, the existing campus compliance training program for hazardous materials will be strengthened to track, record and monitor HAZMAT training. By May 2001, procedures will be established to monitor adherence with the refresher training frequency outlined in the safety training assessment.

BUSINESS PLAN CERTIFICATION AND UPDATE

A HAZMAT business plan had not been completed since 1991 and documentation was not on file to certify that the plan and supplemental inventory was submitted to the administering agency according to the regulatory timetable.

Health & 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 & 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.

The EH&IS environmental compliance manager stated that the administering agency has been in the process of upgrading the Business Plan documentation requirements since the introduction of the

certified unified permitting authority (CUPA) in 1993. The campus was directed by the administering agency to not submit a revised Business Plan until the local requirements were in place. The campus received the updated requirements for submittal in April 2000. He also indicated that past business plan inventories information was problematic during this time due to campus HAZMAT inventory control and paper record keeping deficiencies.

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 5

We recommend that the campus obtain an acknowledgement from the local administering agency when a business plan certification/update or HAZMAT inventory has been submitted, or, at a minimum, maintain internal documentation to evidence compliance with the H&SC.

Campus Response

We concur. Due to the delay in the establishment of guidelines by the administering agency, the Fullerton Fire Department, the campus was given verbal instructions not to submit the updated Business Plan until the format was finalized. The Business Plan was updated and submitted to the local administering agency, the Fullerton Fire Department, which acknowledged receipt of the submittal in November 2000.

EMERGENCY EYEWASH AND SAFETY SHOWER EQUIPMENT

Emergency eyewash and shower equipment were not installed and inspected in compliance with state regulations.

We noted that:

- ▶ emergency eyewash and/or safety shower equipment were not inspected on a monthly basis;
- ▶ the parking lot waste accumulation site was not equipped with an operating eyewash; and
- ▶ the McCarthy Hall and science laboratory center (SLC) safety showers were not equipped with a drainage system; consequently, use of the shower could result in area flooding.

CCR Title 8 §5162(a)(c)(d) states that emergency 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. Water hoses, sink faucets, or showers are not acceptable eyewash facilities. Further, eyewash and showers shall be in accessible locations that

require no more than 10 seconds for the injured person to reach. Eyewash and showers shall be located so that one person can use both at the same time. The eyewash and shower control valve shall be designed so that the water flow remains on without requiring the use of the operator's hands.

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.

The EH&IS director stated that the frequency of equipment inspections was changed to quarterly as a result of resource constraints. The EH&IS environmental compliance manager stated that the portable eyewash located at the parking lot waste accumulation site was not filled because the water was required to be changed too often. The EH&IS environmental compliance manager also stated that the eyewash and safety shower drains were in the original design of the building but were removed by the Chancellor's Office planning and design area.

Non-compliance with eyewash and shower equipment regulations and failure to perform monthly inspections increase the risk that emergency equipment will not operate effectively in the event of an accident.

Recommendation 6

We recommend that the campus:

- a. conduct monthly emergency eyewash and shower equipment inspections; and
- b. install emergency eyewash and shower equipment as required by CCR Title 8 §5162.

Campus Response

We concur. As of October 2000, inspections of emergency eyewash and shower equipment are performed monthly, rather than quarterly, and the portable emergency unit at the parking lot accumulation site has been replaced and is active. We will request that the Chancellor's Office approve and fund the installation of a drainage system for the safety showers in McCarthy Hall and the science laboratory center. During the interim, we have installed emergency equipment for cleaning up the area if the safety showers are used.

RISK MANAGEMENT PLAN

The campus had not developed a risk management plan (RMP) or received an exemption as a non-acutely hazardous waste generator.

H&SC §25534 states that for any stationary source with one or more covered processes, the administering agency shall make a determination as to whether there is a significant likelihood that the

use of regulated substances by a stationary source may pose a regulated substances accident risk ... if found to be true, the stationary source shall be required to prepare and submit an RMP.

The EH&IS environmental compliance manager stated that the campus was not required to submit a risk management plan since they were not an acutely hazardous site. Subsequently, he contacted the local administering agency and found that they were not familiar with this requirement of H&S §25534 since they use other regulatory statutes.

Failure to develop the appropriate risk management plan or to obtain the waivers increases the risk of non-compliance with regulations and increases the campus' liability exposure.

Recommendation 7

We recommend that the campus obtain RMP exemption documentation from the appropriate administering agency.

Campus Response

We concur. A Risk Management Plan exemption document was received from the City of Fullerton in October 2000.

HAZARDOUS WASTE DETERMINATION, STORAGE, TRANSPORTATION AND DISPOSAL

Hazardous waste accumulation sites were not sufficient to handle the amount of waste generated by the campus.

During our review of the facilities we noted the following:

- ▶ Hazardous waste is accumulated (i.e., waste accumulation station) in the same building used to store the chemistry department's hazardous material. We also noted that unwanted materials from the theater arts department was temporarily stored in the waste accumulation station.
- ▶ The hazardous waste transporter prepared lab packs in the driveway outside the waste accumulation station. The lab pack preparation area was not segregated or partitioned; consequently, it would be difficult to contain an accidental spill.
- ▶ The radiation waste accumulation facility was filled to capacity.

CCR 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.

The EH&IS environmental compliance manager stated that the storage facilities were designed at a time when the campus was not producing much hazardous waste, and these facilities are not adequate to handle the hazardous waste accumulation of today's campus research activities.

Failure to provide adequate space for waste accumulation and HAZMAT storage could result in operational mishaps and job-related injuries.

Recommendation 8

We recommend that the campus:

- a. use a more secure and safe area to prepare lab packs;
- b. increase the hazardous and radiation waste accumulation area storage capacity; or
- c. increase the frequency of hazardous waste pick-ups.

Campus Response

We concur. By June 2001, the campus will develop a more secure and safe area to prepare lab packs. By June 2001, the campus will increase the storage capacity of our hazardous waste accumulation area and, if appropriate, increase the frequency of the hazardous waste pick-ups.

HAZARDOUS MATERIALS SYSTEMS CONTROL

Access to the EH&IS server was not adequately controlled.

We found that:

- ▶ system access was not automatically disabled after prolonged system inactivity;
- ▶ users were not forced by the system to periodically change their passwords;
- ▶ system access was not denied after an excessive number of failed attempts to gain access to the server or data files; and
- ▶ users could re-use the same password within a relatively short period of time.

SAM §20003 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 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 that information maintained in a workgroup computing configuration must be subjected to the same degree of management control and verification of accuracy which is provided for information in other automated files.

The EH&IS systems analyst stated that access to the EH&IS server is controlled on a university-wide basis. The campus network manager indicated that a number of these rules were set up for the convenience of the end users.

Inadequate system security could result in unauthorized access to campus systems.

Recommendation 9

We recommend that EH&IS, in consultation with the campus network administrator, strengthen the system and server controls by enabling the available automated system controls. In the meantime, we recommend that EH&IS utilize the screen saver password protection feature.

Campus Response

We concur. The EH&IS mission critical information regarding hazardous materials locations and other pertinent data is stored in a Microsoft Sequel database which uses its own authentication method, one that is local to the EH&IS server and does not involve the campus NT domain. None of this mission critical data is available by network file share points. Therefore information security risks, if any were to exist, would exist only on the EH&IS server using Microsoft Sequel. By February 2001, EH&IS Information Technology specialists will investigate and implement the steps necessary to strengthen the EH&IS server system.

APPENDIX A: PERSONNEL CONTACTED

<u>Name</u>	<u>Title</u>
Dr. Milton Gordon	President
Susan Amdahl	Administrative Assistant, Chemistry
Bill Barrett	Associate Vice President for Administration
Keith Buchness	System Analyst, EH&IS
Pearl Cheng	Foundation
Linda Erickson	Senior Director, Financial Management Services
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
Tony Ragazzo	Associated Student Incorporated (ASI)
Mark Robins	Director, Contracts and Procurement
Teri Sharp	Budget
Tom Shigenaka	Materials Management, Physical Plant
Melinda White	Plant Operations Work Control Center
Tom Whitfield	Director, Environmental Health and Instructional Safety
Colleen Wilkins	Environmental Health and Safety Officer
Allen You	Environmental Health and Safety Officer
Edwin Young	Director of Internal Audit



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NOV 13 2000

MEMORANDUM

The California State
University

TO: Larry Mandel
University Auditor
Office of the University Auditor
The California State University

DATE: November 13, 2000

FROM: Milton A. Gordon
President 

SUBJECT: Campus Response to Recommendations of Audit Report Number 00-18 on Hazardous Materials Management at California State University, Fullerton

We thank you for your audit and for the opportunity to respond to your draft audit report on Hazardous Materials Management at California State University, Fullerton. Your audit provided the campus with valuable management information that we will use to institute changes and improvements in our campus operations. Our detailed responses to each audit recommendation are attached.

Campus management and staff have been working throughout the audit process to address issues as rapidly as possible. We have modified our purchase order procedures, changed our procedures for distributing information on hazardous materials, and strengthened our training program. Monthly inspections of the emergency eyewash and shower equipment have been re-instituted and emergency equipment replaced. The Fullerton Fire Department has received our updated business plan and the City of Fullerton has provided us a risk management plan exemption. We are developing a more secure and safe area for preparing lab packs and plan to expand the storage capacity of the hazardous waste accumulation area. Finally, the information technology specialists are evaluating the steps needed to improve system controls.

We believe that the Office of the University Auditor audit has well-served its intended purpose as it has provided valuable information for the campus to use in fulfilling its responsibilities for managing hazardous materials. Should you need further details, please contact Mr. William Barrett at (714) 278-2115 or at bbarrett@fullerton.edu.

MAG:nm

c: William Barrett, Associate Vice President for Administration
Edwin Young, Director of Internal Audit
Tom Whitfield, Environmental Health & Safety Office
Willem Van der Pol, Director, Physical Plant

RECOMMENDATIONS AND CAMPUS RESPONSES

HAZARDOUS MATERIALS ADMINISTRATION

Recommendation 1: *We recommend that the campus:*

- a. *enter into a contract, rather than use a blanket purchase order, for removal of all hazardous materials;*
- b. *ensure that all HAZMAT contractors maintain the minimum insurance coverage or conduct and document risk identification and evaluation if campus management believes that a contractor's current insurance liability coverage is adequate.*

Campus Response: We concur and have taken the following corrective actions to address these recommendations. As of November 10, 2000, blanket purchase orders are no longer placed for hazardous waste removal operations. All contracts and service orders for hazardous materials now include specifications that require HAZMAT contractors to maintain and document appropriate insurance and liability coverage.

MATERIAL SAFETY DATA SHEET ADMINISTRATIVE CONTROL

Recommendation 2: *We recommend that the campus:*

- a. *annotate all hazardous material purchase orders with a request that the vendor provide CSUF a MSDS;*
- b. *provide Shipping and Receiving a copy of all HAZMAT purchase orders from all purchasing sites;*
- c. *provide copies of MSDSs to EH&IS with the department location note; and*
- d. *make MSDSs readily accessible to all employees at their work locations.*

Campus Response: We concur with the recommendations. By January 2001, the boilerplate language for all hazardous material purchase orders will contain requests for MSDSs. The CSUF Procurement Office will develop new policies and procedures and instruct buyers to be more diligent in including this additional language. The CSUF Foundation and other campus auxiliary services will also be notified and asked to follow the updated procedures. Purchases of hazardous materials are not permitted on the University P-Card and reminders will be sent out to all buyers.

By May 2001, the Procurement Office will develop policies and procedures to ensure that Shipping and Receiving receives copies of all purchase orders for hazardous materials. The Procurement Office and Facilities Management Office will also develop policies and procedures to ensure that Shipping and Receiving obtains MSDSs with the shipment of hazardous materials, logs and annotates the location of the delivered materials, and forwards copies of the MSDSs to EH&IS.

By May 2001, the EH&IS Office will develop an MSDS database that will be available to all faculty, staff and students on a campus server.

EHIS HAZARDOUS MATERIAL COMPLIANCE INSPECTIONS

Recommendation 3: *We recommend that the campus conduct the 2000 EH&IS IIPP inspection of the Plant Operations Department as soon as possible.*

Campus Response: We concur. The Physical Plant inspections required by the IIPP have, in the past, been completed on an annual basis. Staff turnover, however, necessitated re-allocation of the personnel resources and resulted in a limited 2000 inspection schedule. We will complete the 2000 inspections by January 2001.

HAZARDOUS MATERIALS COMMUNICATION, REPORTING & TRAINING

Recommendation 4: *We recommend that the campus:*

- a. finalize the training program and strengthen the procedures to track, record and monitor employee HAZMAT training; and*
- b. monitor adherence with the frequency of refresher training as outlined in the safety training assessment.*

Campus Response: We concur. By April 2001, the existing campus compliance-training program for hazardous materials will be strengthened to track, record and monitor HAZMAT training. By May 2001, procedures will be established to monitor adherence with the refresher training frequency outlined in the safety training assessment.

BUSINESS PLAN CERTIFICATION AND UPDATE

Recommendation 5: *We recommend that the campus obtain an acknowledgement from the local administering agency when a business plan certification/update or HAZMAT inventory has been submitted, or, at a minimum, maintain internal documentation to evidence compliance with the H&SC.*

Campus Response: We concur. Due to the delay in the establishment of guidelines by the administering agency, the Fullerton Fire Department, the campus was given verbal instructions not to submit the updated Business Plan until the format was finalized. The Business Plan was updated and submitted to the local administering agency, the Fullerton Fire Department, which acknowledged receipt of the submittal in November 2000.

EMERGENCY EYEWASH AND SAFETY SHOWER EQUIPMENT

Recommendation 6: *We recommend that the campus:*

- a. conduct monthly emergency eyewash and shower equipment inspections; and*

b. install emergency eyewash and shower equipment as required by CCR Title 8 §5162.

Campus Response: We concur. As of October 2000, inspections of emergency eyewash and shower equipment are performed monthly, rather than quarterly, and the portable emergency unit at the parking lot accumulation site has been replaced and is active. We will request that the Chancellor's Office approve and fund the installation of a drainage system for the safety showers in McCarthy Hall and the science laboratory center. During the interim, we have installed emergency equipment for cleaning up the area if the safety showers are used.

RISK MANAGEMENT PLAN

Recommendation 7: *We recommend campus obtain RMP exemption documentation from the appropriate administering agency.*

Campus Response: We concur. A Risk Management Plan exemption document was received from the City of Fullerton in October 2000.

HAZARDOUS WASTE DETERMINATION, STORAGE, TRANSPORTATION AND DISPOSAL

Recommendation 8: *We recommend that the campus:*

- a. use a more secure and safe area to prepare lab packs;*
- b. increase the hazardous and radiation waste accumulation area storage capacity; or*
- c. increase the frequency of hazardous waste pick-ups.*

Campus Response: We concur. By June 2001, the campus will develop a more secure and safe area to prepare lab packs. By June 2001, the campus will increase the storage capacity of our hazardous waste accumulation area and, if appropriate, increase the frequency of the hazardous waste pick-ups.

HAZARDOUS MATERIAL SYSTEMS CONTROL

Recommendation 9: *We recommend that EH&IS, in consultation with the campus network administrator, strengthen the system and server controls by enabling the available automated system controls. In the meantime, we recommend that EH&IS utilize the screen saver password protection feature.*

Campus Response: We concur. The EH&IS mission critical information regarding hazardous materials locations and other pertinent data is stored in a Microsoft Sequel database which uses its own authentication method, one that is local to the EH&IS server and does not involve the campus NT domain. None of this mission critical data is available by network file share points. Therefore information security risks, if any were

to exist, would exist only on the EH&IS server using Microsoft Sequel. By February 2001, EH&IS Information Technology specialists will investigate and implement the steps necessary to strengthen the EH&IS server system.

THE CALIFORNIA STATE UNIVERSITY
OFFICE OF THE CHANCELLOR

BAKERSFIELD

CHANNEL ISLANDS

December 22, 2000

CHICO

MEMORANDUM

DOMINGUEZ HILLS

FRESNO

TO: Larry Mandel
University Auditor

FULLERTON

HAYWARD

FROM: Charles B. Reed

HUMBOLDT

SUBJECT: Draft Final Report Number 00-18 on *Hazardous Materials Management*,
California State University, Fullerton

LONG BEACH

LOS ANGELES

In response to your memorandum of December 22, 2000, I accept the
response as submitted with the draft final report on Hazardous Materials
Management, California State University, Fullerton.

MARITIME ACADEMY

MONTEREY BAY

NORTHBRIDGE

CBR/dl

POMONA

Enclosure

SACRAMENTO

cc: Dr. Milton A. Gordon, President

SAN BERNARDINO

SAN DIEGO

SAN FRANCISCO

SAN JOSE

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS