HAZARDOUS MATERIALS MANAGEMENT

CALIFORNIA STATE UNIVERSITY,
CHANNEL ISLANDS

Audit Report 13-46
September 10, 2013

Members, Committee on Audit

Lupe C. Garcia, Chair
Steven M. Glazer, Vice Chair
Rebecca D. Eisen  William Hauck
Hugo Morales

Staff

University Auditor: Larry Mandel
Senior Director: Michelle Schlack
Audit Manager: Ann Hough
Senior Auditor: Dane MacDonald

BOARD OF TRUSTEES
THE CALIFORNIA STATE UNIVERSITY
CONTENTS

Executive Summary ...................................................................................................................................... 1

Introduction ................................................................................................................................................... 2
  Background ............................................................................................................................................... 2
  Purpose ...................................................................................................................................................... 4
  Scope and Methodology ............................................................................................................................. 5

OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

General Environment .................................................................................................................................... 6
  Laboratory and Workplace Safety ............................................................................................................ 6
  Hazard Communication Program ............................................................................................................ 7
  Inspections ................................................................................................................................................ 8

Hazardous Waste ........................................................................................................................................ 10

Training ....................................................................................................................................................... 11
APPENDICES

APPENDIX A: Personnel Contacted
APPENDIX B: Campus Response
APPENDIX C: Chancellor’s Acceptance

ABBREVIATIONS

CalOSHA  California Occupational Safety and Health Administration
CCR     California Code of Regulation
CHO     Chemical Hygiene Officer
CHP     Chemical Hygiene Plan
CSU     California State University
CSUCI     California State University Channel Islands
EHS     Environmental Health and Safety
EO      Executive Order
ESRM    Environmental Science and Resource Management
HAZCOMM  Hazard Communication Program
HAZMAT  Hazardous Materials
HMM     Hazardous Materials Management
IIPP    Injury and Illness Prevention Program
MSDS    Material Safety Data Sheets
OPC     Operations, Planning and Construction
OSHA    Occupational Safety and Health Administration
OUA     Office of the University Auditor
RCRA    Federal Resource Conservation and Recovery Act
EXECUTIVE SUMMARY

As a result of a systemwide risk assessment conducted by the Office of the University Auditor (OUA) during the last quarter of 2012, the Board of Trustees, at its January 2013 meeting, directed that Hazardous Materials Management (HMM) be reviewed. The OUA had previously reviewed HMM in 2000, and Occupational Health and Safety in 2007.

We visited the California State University, Channel Islands campus from May 13, 2013, through June 14, 2013, and audited the procedures in effect at that time.

In our opinion, except for the effect of the weaknesses described below, the fiscal, operational, and administrative controls for HMM as of June 14, 2013, taken as a whole, were sufficient to meet the objectives stated in the “Purpose” section of this report. Areas of concern include: general environment, hazardous waste, and training.

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

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

GENERAL ENVIRONMENT [6]

Workplace safety standards were not always followed in campus laboratories and operational work areas containing hazardous materials. Also, hazard communication program provisions were not always being followed. In addition, hazardous materials management inspections were not always performed in a timely manner, and documentation of the inspections was not always maintained.

HAZARDOUS WASTE [10]

Hazardous waste was not always properly labeled, stored and disposed of in a timely manner.

TRAINING [11]

The campus did not always provide training to all employees and students who handled hazardous materials and hazardous waste handling.
INTRODUCTION

BACKGROUND

Regulation over hazardous waste has its roots in the 1976 Federal Resource Conservation and Recovery Act (RCRA), which was enacted to address growing public concern regarding health risks, waste generation, and waste disposal surrounding hazardous materials (HAZMAT). RCRA initiated the “cradle to grave” tracking and management of hazardous waste, and its regulations addressed, but were not limited to, generation of hazardous waste; hazardous waste treatment, transportation, storage, and disposal; federal and state reporting; federal, state, and local permits and registration; and waste minimization.

RCRA states that the federal government can authorize states to develop, implement, and enforce their own HAZMAT and waste management regulations, with the stipulation that the state programs must be as stringent or broader in scope than the federal regulations. In 1992, the Environmental Protection Agency granted California authority to develop its own regulations, most of which are now codified in the Health and Safety Code and in Titles 8 and 22 of the California Code of Regulations (CCR). The California Department of Toxic Substances Control is responsible for enforcing these codes and administrative laws.

All California State University (CSU) campuses purchase HAZMAT for both instructional and research purposes, most prominently in colleges that focus on the sciences, fine arts, and liberal arts. In addition, campus maintenance departments such as custodial services, facilities, and auto shops use materials that are known to have properties that are harmful to humans and the environment and must be monitored to ensure proper and safe utilization. Nearly all of the areas that utilize HAZMAT generate hazardous waste that is subject to strict regulation for safe and proper storage, transport, and disposal.

Sections of Title 8 of the CCR address hazardous materials management (HMM) in several areas, including training, communication, storage, and safety. However, in response to a number of serious accidents in university laboratories in recent years, there has been an increased diligence from the California Occupational Safety and Health Administration (CalOSHA) and other regulatory agencies in enforcing regulations and standards related to laboratory safety. The Occupational Exposure to Hazardous Chemicals in Laboratories standard (8 CCR 5191), commonly referred to as the Laboratory Standard, was created specifically for non-production laboratories and outlines specific requirements for employers to ensure the safety of employees in these labs. The standard requires that the employer designate a chemical hygiene officer and have a written chemical hygiene plan (CHP), which must be routinely verified for effectiveness. The CHP must include provisions for worker training, chemical exposure monitoring where appropriate, medical consultation when exposure occurs, criteria for the use of personal protective equipment and engineering controls, and special precautions for particularly hazardous substances. The CHP must be tailored to reflect the specific chemical hazards present in the laboratory where it is to be used.

Executive Order (EO) 1039, California State University – Occupational Health and Safety Policy, dated January 1, 2009, recognizes that occupational health and safety or environmental health and safety departments are an integral to the CSU system and that injuries and/or illnesses may arise from work-related activities that include exposure to potentially harmful substances. It outlines the responsibilities of the various parties, including the systemwide Office of Risk Management, campus presidents, campus
environmental health and safety departments, and campus departments. It requires campuses to develop, implement, and maintain a campus health and safety program to address all identified campus hazards, including hazardous materials.

EO 1069, Risk Management and Public Safety, dated March 1, 2012, delegates authority and responsibility for systemwide administrative oversight and programmatic responsibility for risk management, environmental health and safety, emergency preparedness, business continuity, and public safety to the assistant vice chancellor for risk management and public safety. This includes responsibility for policies and programs, resource documents, training programs, and production of guidance on the application of risk management techniques and systemwide policies and procedures.

In 2000, the Office of the University Auditor conducted an audit of HMM at nine campuses and issued a systemwide report. The report noted issues related to contractual arrangements and insurance coverage for waste transporters, material safety data sheets (MSDS), and staff HAZMAT orientation and refresher training. Previous to the 2000 review, OUA audited HMM in 1992, with a follow-up review in 1996. The OUA also audited Occupational Health and Safety in 2007 and reviewed activities that also involved HMM.
PURPOSE

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

Within the audit objective, specific goals included determining whether:

- Administration of HMM is well-defined and includes clear lines of organizational authority and responsibility.
- Risks related to HMM have been identified and assessed, and the results are applied to appropriate plans and processes.
- Policies and procedures pursuant to HMM are current and comprehensive, and distribution procedures are effective.
- Appropriate due diligence and oversight controls are in place to ensure that contractors conducting HMM services meet both regulatory and CSU contractual obligations.
- The campus has established the required HAZMAT communication documents.
- The campus has obtained the required registrations and permits and complies with key regulatory reporting requirements.
- Hazardous materials inventories are maintained, and purchasing and receipt processing is conducted in a controlled environment.
- HAZMAT in containers are properly labeled to communicate contents and hazards to users.
- The campus has established effective emergency and contingency plans for HAZMAT spills and exposures.
- Campus laboratories are operating and lab activities are conducted in accordance with 8 CCR 5191, *The Occupational Exposure to Hazardous Chemicals in Laboratories* standard, commonly referred to as the Laboratory Standard.
- Adequate procedures exist to identify hazardous waste.
- Hazardous waste, including biomedical and universal waste, is properly stored and labeled and does not accumulate on-site for longer than the allowable time.
- Hazardous waste transportation and disposal processes are in compliance with regulations.
- Employees and students who handle HAZMAT and/or generate hazardous waste have been adequately trained.
SCOPE AND METHODOLOGY

The proposed scope of the audit as presented in Attachment A, Audit Agenda Item 2 of the January 22 and 23, 2013, meeting of the Committee on Audit stated that Hazardous Materials Management would include, but was not limited to, a review of the systems and procedures for controlling the purchase, generation, storage, use, and disposal of HAZMAT and wastes; employee training; emergency response plans; reporting requirements; and compliance with federal and state regulations.

Our study and evaluation were conducted in accordance with the International Standards for the Professional Practice of Internal Auditing, issued by the Institute of Internal Auditors, and included the audit tests we considered necessary in determining that accounting and administrative controls are in place and operative. This review emphasized, but was not limited to, compliance with state and federal laws, Board of Trustee policies, and Office of the Chancellor policies, letters, and directives. The audit focused on procedures in effect from July 1, 2011, through June 14, 2013.

We focused primarily upon the internal administrative, compliance, and operational controls over HMM activities. Specifically, we reviewed and tested:

▶ Campus administration of HMM, including clear reporting lines and defined responsibilities and current policies and procedures for HAZMAT handling and waste disposal.

▶ Compliance with permit and registration requirements, as well as with required regulatory and CSU reporting requirements.

▶ Contents of HAZMAT safety plans, such as the CHP and Hazard Communication plan, as required by the CCR and CalOSHA.

▶ Hazard communication practices, including the accessibility of MSDS, appropriate hazard signage, and proper labeling of containers stored on site.

▶ Hazardous waste determination, storage, transportation, and disposal practices.

▶ Training for employees and students on HAZMAT handling and hazardous waste disposal.
OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

GENERAL ENVIRONMENT

LABORATORY AND WORKPLACE SAFETY

Workplace safety standards were not always followed in campus laboratories and operational work areas containing hazardous materials.

We reviewed six biology and chemistry research laboratories and two operations, planning, and construction (OPC) work areas containing hazardous materials, and we found that:

- Eyewash stations were obstructed by clutter in two chemistry laboratories.
- A spill kit was obstructed by clutter in the auto shop.
- Doorways were partially obstructed by boxes or equipment in the auto shop and in one chemistry laboratory.
- Chemicals and equipment were not always stored in a proper location in the auto, grounds, and plumbing shops.

Occupational Safety and Health Administration (OSHA) Laboratory Safety Guidance, dated 2011, states that employers should ensure that workers are trained to observe proper housekeeping, including maintaining uncluttered work areas; putting unneeded materials back in storage promptly; and ensuring that aisles, doors, and access to emergency equipment remain unobstructed at all times.

California State University, Channel Islands (CSUCI) Chemical Hygiene Plan (CHP), dated January 2003, states that access to emergency equipment, showers, eyewashes, aisles, and exits should never be blocked by anything, not even temporarily; all work areas, especially laboratory benches, should be kept clean and clear of clutter; all hazardous chemicals should be placed in their assigned storage areas at the end of each workday; and hazardous chemicals must not be left out on benches, desks and shelves.

The director of environmental health, and safety (EHS) stated that the disorganized and cluttered work areas were generally due to a lack of attention and priority to follow regulatory and campus standards, as well as the absence of enforcement activities such as periodic inspections.

Disorganized and cluttered work areas increase the risk of fires, slips, trips, falls, and other possible injuries, including those related to hazardous materials.

Recommendation 1

We recommend that the campus follow workplace safety standards in laboratories and operational work areas containing hazardous materials.
Campus Response

We agree. The campus will establish a system of local (within trade shop or program area) periodic internal inspections for conformance with workplace safety standards in laboratories and operational work areas containing hazardous materials. Inspection frequency will be, at minimum, monthly at trade shops and quarterly within biology and chemistry programs. Further, the EHS office will resume more global periodic (annual) inspections of biology, chemistry, and our operations, planning, and construction (OPC) areas.

Documented evidence of self-inspections in biology and chemistry laboratories and OPC trade shops will be provided by January 1, 2014.

Documented evidence of EHS assessment of compliance with campus workplace safety programs in biology, chemistry, and OPC will be provided by March 1, 2014.

HAZARD COMMUNICATION PROGRAM

Hazard communication program (HAZCOMM) provisions were not always being followed.

We reviewed six biology and chemistry research laboratories and two operations, planning, and construction (OPC) work areas containing hazardous materials, and we found that:

- Three biology laboratories and one environmental science and resource management (ESRM) laboratory did not have hazardous materials inventory listings.
- Two chemistry laboratories and one OPC shop contained receptacles that were not labeled with the identity and health hazards of the contents.
- One biology laboratory and one ESRM laboratory did not maintain material safety data sheets (MSDS) onsite for the hazardous materials present in the lab.

The CSU Channel Islands Hazard Communication Program, dated March 27, 2013, states that all shops, labs, studios, or other areas must each have a list of hazardous materials that are present. It further states that all containers, including stationary and process containers, must be labeled with both the contents and a hazard warning. In addition, the program states that employees must have ready access to the current version of MSDS for every hazardous material with which they work.

CSUCI CHP, dated January 2003, states that chemical containers must be labeled with at least the identity and health hazards of the contents. It further states that with assistance from the laboratory supervisor, the EHS shall define the location of “designated areas” where toxic substances and potential carcinogens will be used, and ensure that the inventory of these substances is properly maintained. The plan also states that when handling carcinogens, reproductive toxins, and substances that have a high degree of acute toxicity, a current chemical inventory shall be maintained. In addition, the plan states that the division/department chemical hygiene officer (CHO) is responsible for gathering and maintaining chemical manufacturers’ MSDS, and that the lab supervisor is responsible for ensuring that MSDS are accessible.
California Code of Regulation (CCR) Title 8 §5194(e)(1) states that employers shall develop, implement, and maintain at the workplace a written HAZCOMM program for their employees. It states that the program will include a list of hazardous substances known to be present in the workplace, the methods the employer will use to inform the employees of the hazards of non-routine tasks, and the hazards associated with substances contained in unlabeled pipes in their work areas. It further states that the written program will describe the proper use of labels for HAZMAT and the location of MSDS, and that the written HAZCOMM program shall be available to employees upon request.

The director of EHS stated that non-compliance with HAZCOMM provisions was generally due to a lack of attention and priority to follow regulatory and campus standards, as well as the absence of enforcement procedures such as periodic inspections.

Non-compliance with HAZCOMM provisions undermines the safety of employees and students in contact with hazardous materials and increases the risk of litigation and regulatory sanctions.

**Recommendation 2**

We recommend that the campus follow all HAZCOMM provisions.

**Campus Response**

We agree. The campus will revise the CHP to include procedures and clarify responsibility for conducting chemical inventory, making safety data sheets available to all employees, and periodically checking laboratories for compliance with all HAZCOMM provisions.

A revised campus CHP including the improved hazard communication provisions discussed above will be provided by November 1, 2013.

**INSPECTIONS**

Hazardous materials management (HMM) inspections were not always performed in a timely manner, and documentation of the inspections was not always maintained.

Specifically, we found that:

- The EHS office and biology department had not performed hazardous materials compliance inspections in more than a year, and the biology department had not developed a program to perform self-inspections.

- There was no documentation of inspections performed by the chemistry department.

Executive Order (EO) 1039, *California State University Occupational Health & Safety Policy*, dated January 1, 2009, states that campuses shall develop procedures for identifying and evaluating workplace hazards, including scheduled and unscheduled inspections.
CCR Title 8 §3203(a) states that every employer shall establish, implement, and maintain an effective injury and illness prevention program (IIPP), which shall provide procedures for identifying and evaluating workplace hazards, including scheduled periodic inspections to identify unsafe conditions and work practices. It further states that the IIPP will include records of scheduled and periodic inspections to identify unsafe conditions and work practices, including persons conducting the inspection, the unsafe conditions and work practices that have been identified, and action taken to correct the conditions.

The CSUCI IIPP, dated September 2012, states that departments must periodically inspect for unsafe conditions and work practices and correct any deficiencies found. It also states that the EHS will conduct periodic inspections for unsafe workplace conditions and practices.

The CSUCI CHP, dated January 2003, states that the EHS office is assigned responsibility to provide periodic formal audits for compliance with the CHP, and that the division or department CHO shall conduct laboratory inspections to ensure compliance with existing laboratory standard operating procedures/CHP.

The director of EHS stated that internal inspections at the laboratories in accordance with IIPP standards had not been performed in the past 18 months due to divisional reorganization and a temporary loss of resources. The biology CHO stated that the biology department did not have a formal program in place to perform self-inspections, and the chemistry CHO stated that documenting inspections was not considered a necessary practice.

Inadequate administration of inspection increases the risk that unsafe conditions will not be identified and increases the potential for accidents and injuries, litigation, and regulatory sanctions.

**Recommendation 3**

We recommend that the campus perform HMM inspections in a timely manner and maintain documentation of the inspections.

**Campus Response**

We agree. In conformance with the campus IIPP, CHP, HAZCOMM, and EO 1039, timely documented HMM inspections will be performed on a regular basis by biology, chemistry, OPC, and the EHS office. In addition, to expedite and document laboratory inspections, a laboratory inspection checklist will be developed and appended to the campus CHP.

A laboratory inspection checklist (appendix to the campus CHP) will be provided by November 1, 2013.

Documented evidence of self-inspections in biology and chemistry laboratories and OPC trade shops will be provided by January 1, 2014.

Documented evidence of EHS assessment of compliance with campus workplace safety programs in biology, chemistry, and OPC will be provided by March 1, 2014.
HAZARDOUS WASTE

Hazardous waste was not always properly labeled, stored, and disposed of in a timely manner.

We inspected 12 rooms in which hazardous waste was stored (five in biology, four in chemistry, and three in other campus areas), and we found that:

- Two chemistry laboratories had waste containers that had been improperly labeled and did not state accumulation start dates. In addition, one of the laboratories had two containers that had accumulated waste beyond the 90-day regulatory maximum. The other lab had a plastic tote that contained multiple hazardous waste items, was not stored in an appropriate area, and did not have a label identifying the generator.

- The custodial shop and a laboratory shared by the biology department and ESRM each had a hazardous waste container that had been improperly labeled and did not state an accumulation start date.

- At the main campus accumulation site, eight containers were improperly labeled and did not state accumulation start dates.

- The campus did not follow up on one hazardous waste manifest that was not returned to the campus from an authorized disposal facility within 35 days.

The CSUCI CHP, dated January 2003, states that all waste containers must be properly labeled with the CSU Channel Islands Hazardous Waste label. It further states that waste generators are responsible for scheduling waste pickups through the department CHO.

CCR Title 22 §66262.34 states that a generator may 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. Further, it states that a hazardous waste generator may accumulate hazardous waste on-site for 90 days or less provided that the waste is placed in containers, on drip pads, and/or are in containment areas that meet regulatory requirements.

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.

CCR Title 22 §66262.42 states that a generator who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated disposal facility within 35 days of the date the waste was accepted by the initial transporter shall contact the transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste. It further states that the generator shall submit an exception report to the department of toxic substance control if the generator has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter.
The director of EHS stated that improperly labeling hazardous waste materials, accumulating hazardous waste beyond regulatory time limits, and improperly storing hazardous waste was due to waste accumulators in the research labs not taking proper responsibility for their waste materials and a lack of periodic inspections being performed at laboratory facilities. He further stated that the past-due hazardous waste manifest was not followed up on due to oversight.

Improper labeling, storage, and disposal of hazardous substances could result in accidents and job-related injuries; and inadequate follow-up on delinquent hazardous waste manifests could result in regulatory noncompliance and potential university liability for the improper disposal of hazardous waste.

Recommendation 4

We recommend that the campus properly label, store, and dispose of hazardous waste in a timely manner.

Campus Response

We agree. The campus will modify the OPC shop safety self-inspection checklist to include provisions for proper identification, storage, labeling, and disposal of hazardous waste. In addition, the campus will create a new laboratory inspection checklist including similar hazardous waste provisions.

These two checklists will be provided by November 1, 2013. Documented evidence of their use will be provided by January 1, 2014.

TRAINING

The campus did not always provide training to all employees and students who handled hazardous materials and hazardous waste handling.

We reviewed training records for chemistry and biology students, as well as hazardous materials orientation and IIPP training records for 15 employees hired in 2012 and 2013 (five each in the biology department, chemistry department, and OPC), and we found that:

- Student health and safety training was not documented for Biology 494 independent research classes.
- New part-time staff and student employees did not receive any hazardous materials-related training.
- Evidence could not be located to document CHP and hazardous waste training for one chemistry employee and HAZCOMM and hazardous waste training for one OPC employee.
- CHP and hazardous waste training was not performed in a timely manner for two biology faculty members.

- Eleven employees did not receive IIPP training, and one employee did not receive the training in a timely manner.

CCR Title 8 §5194(h) states that employers shall provide employees with effective 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. It further states that the training shall include information on the applicable regulations; the operations in the employee’s work area where hazardous substances are present; the location and availability of the HAZCOMM program, including the list of substances and the MSDS; methods and observations used to detect the presence or release of hazardous substances in the work area; the health hazards of the substances in the work area and measures they can take to protect themselves from the hazards; and an explanation of the labeling system and the MSDS and how employees can use this information.

CCR Title 8 §5191(e)(3) states that lab employees shall be trained on the hazards of chemicals present in their work areas at the time of the initial assignment to the work area and prior to assignments involving new exposure situations. It further states that the training should include methods and observations used to detect the presence or release of a hazardous chemical, the physical and health hazards of chemicals in the work area, and the measures employees can take to protect themselves from these hazards, such as appropriate work practices, emergency procedures, and personal protective equipment usage.

CCR Title 8 §3203(a)(7) states that the IIPP will provide for training and instruction to all new employees and to all employees given new job assignments for which training has not previously been received. It further states in §3203(b)(2) that documentation of training shall include the employee name, training dates, type(s) of training, and training providers, and that these records will be maintained for at least one year.

CCR Title 22 §66264.16 states that new employees shall receive introductory training in hazardous waste management procedures relevant to the positions in which they are employed, and that it should occur before they are left unsupervised and annually thereafter. It further states that the facility will maintain records of every employee involved in hazardous waste management, a description of the training provided to these individuals, and records that the training occurred.

EO 1039, California State University OHS Policy, dated January 1, 2009, states that campuses shall develop, implement, and maintain a health and safety program that includes a training program that ensures employees receive adequate safety training for the tasks they are performing and/or that is included in the job description or scope of work.

California Health and Safety Code §25504(c), Review of Business Plan; Modification of Operation and Plan; Periodic Review specifies training for all new employees and annual training, including refresher courses, for all employees in safety procedures in the event of a release or threatened release of a hazardous material, including, but not limited to, familiarity with the plans and procedures.
The CSUCI CHP, dated January 2003, states that the EHS office is responsible for providing employee training on the CHP and also support services and assistance to divisions/departments. The division/department’s designated CHO is responsible for coordinating chemical hygiene and laboratory safety training for laboratory employees within their division/department. Laboratory supervisors are responsible for ensuring that chemical hygiene training has been provided to each employee under their direction and further, that all persons (including students) who use the laboratory are provided with information and training regarding the specific hazards and procedures in the laboratory.

The director of EHS stated that Biology 494 independent research classes were non-standard laboratory classes and that the biologists had not made provisions to document the training performed for these students. He further stated that due to limited resources, EHS hazardous materials training for new biology and chemistry part-time staff and student employees was not performed. He also stated that due to the lack of a comprehensive training program, one chemistry employee and one OPC employee did not receive required new employee training. In addition, he stated that IIPP training was not being performed because the campus had not developed a comprehensive IIPP training program for all employees.

Inadequate administration of required safety training related to hazardous materials and hazardous waste increases the risk of accidents, injuries, and lawsuits.

**Recommendation 5**

We recommend that the campus provide training to all employees with responsibility for hazardous materials and hazardous waste handling.

**Campus Response**

We agree. Academic affairs administration will identify relevant full and part-time employees (student, staff, and faculty), and EHS will provide CHP, chemical procurement, and hazardous waste training for these employees. The campus will put systems in place to provide IIPP training for all employees with hazardous materials and hazardous waste handling responsibilities. In addition, the campus will develop a system to capture independent research (494) students and provide them with appropriate hazardous materials training. Finally, the campus will revise the CHP, assigning lab supervisors the responsibility for research-lab-specific hazard analysis, hazard mitigation, and related documented training.

Documented evidence of the above described EHS training on the CHP, chemical procurement, and hazardous waste will be provided by January 1, 2014.

Documented evidence of the IIPP training will be provided by March 1, 2014.

Documented evidence of student independent research (494) training will be provided by March 1, 2014.
A revised campus CHP including the improved training provisions described above will be provided by November 1, 2013.
# APPENDIX A: PERSONNEL CONTACTED

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard R. Rush</td>
<td>President</td>
</tr>
<tr>
<td>Sean Anderson</td>
<td>Associate Professor, Environmental Science and Resource Management</td>
</tr>
<tr>
<td>Shawn Bochat</td>
<td>Analyst/Programmer, Information Technology</td>
</tr>
<tr>
<td>Caroline Doll</td>
<td>Director, Special Projects for Finance and Administration</td>
</tr>
<tr>
<td>Scott Duffer</td>
<td>Chemistry Lab Technician</td>
</tr>
<tr>
<td>Blake Gillespie</td>
<td>Associate Professor, Chemistry</td>
</tr>
<tr>
<td>Philip Hampton</td>
<td>Professor, Chemistry</td>
</tr>
<tr>
<td>Catherine Hutchinson</td>
<td>Associate Senior Biology Technician, Biology and Natural Sciences</td>
</tr>
<tr>
<td>William Kupfer</td>
<td>Director, Environmental Health and Safety and Risk Management</td>
</tr>
<tr>
<td>Michael Mahoney</td>
<td>Senior Biology Technician, Biology and Natural Sciences</td>
</tr>
<tr>
<td>Derick Nguyen</td>
<td>Safety Coordinator, Operations, Planning and Construction</td>
</tr>
<tr>
<td>Anna Pavin</td>
<td>Associate Vice President, Human Resources</td>
</tr>
<tr>
<td>Valerie Patscheck</td>
<td>Director, Procurement and Contract Services</td>
</tr>
<tr>
<td>Robert Perez</td>
<td>Shipping and Receiving Assistant, Logistical Services</td>
</tr>
<tr>
<td>Manuel Ramos</td>
<td>Manager, Environmental Health and Safety and Risk Management</td>
</tr>
<tr>
<td>John Reid</td>
<td>Director, Public Safety and Chief of Police</td>
</tr>
<tr>
<td>Margaret Tougas</td>
<td>Emergency Manager, Police</td>
</tr>
<tr>
<td>Ysabel Trinidad</td>
<td>Vice President, Finance and Administration</td>
</tr>
<tr>
<td>Cindy Ulisse</td>
<td>Mail Services/Receiving Supervisor, Logistical Services</td>
</tr>
</tbody>
</table>
October 23, 2013

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


Dear Mr. Mandel,

Attached please find CI’s campus amended response to the Hazardous Materials Management Audit 13-46.

Upon acceptance, we will follow up with your office to provide supporting documentation for each of the recommendations by the anticipated completion dates.

Please let me know if you have any questions or would like further information related to the attached response.

Sincerely,

Ysabel Trinidad  
Vice President for Business and Financial Affairs

Enclosure

cc: President Richard Rush
HAZARDOUS MATERIALS MANAGEMENT

CALIFORNIA STATE UNIVERSITY, CHANNEL ISLANDS

Audit Report 13-46

GENERAL ENVIRONMENT

LABORATORY AND WORKPLACE SAFETY

Recommendation 1

We recommend that the campus follow workplace safety standards in laboratories and operational work areas containing hazardous materials.

Campus Response

We agree. The campus will establish a system of local (within trade shop or program area) periodic internal inspections for conformance with workplace safety standards in laboratories and operational work areas containing hazardous materials. Inspection frequency will be, at minimum, monthly at trade shops and quarterly within biology and chemistry programs. Further, the EHS office will resume more global periodic (annual) inspections of biology, chemistry, and our operations, planning, and construction (OPC) areas.

Documented evidence of self-inspections in biology and chemistry laboratories and OPC trade shops will be provided by January 1, 2014.

Documented evidence of EHS assessment of compliance with campus workplace safety programs in biology, chemistry, and OPC will be provided by March 1, 2014.

HAZARD COMMUNICATION PROGRAM

Recommendation 2

We recommend that the campus follow all HAZCOMM provisions.

Campus Response

We agree. The campus will revise the Chemical Hygiene Plan (CHP) to include procedures and clarify responsibility for conducting chemical inventory, making safety data sheets available to all employees, and periodically checking laboratories for compliance with all HAZCOMM provisions.

A revised campus CHP including the improved hazard communication provisions discussed above will be provided by November 1, 2013.
INSPECTIONS

Recommendation 3

We recommend that the campus perform HMM inspections in a timely manner and maintain documentation of the inspections.

Campus Response

We agree. In conformance with the campus injury and illness prevention program (IIIP), CHP, hazard communication program, and EO 1039, timely documented HMM inspections will be performed on a regular basis by biology, chemistry, OPC, and the EHS office. In addition, to expedite and document laboratory inspections, a laboratory inspection checklist will be developed and appended to the campus CHP.

A laboratory inspection checklist (appendix to the campus CHP) will be provided by November 1, 2013.

Documented evidence of self-inspections in biology and chemistry laboratories and OPC trade shops will be provided by January 1, 2014.

Documented evidence of EHS assessment of compliance with campus workplace safety programs in biology, chemistry and OPC will be provided by March 1, 2014.

HAZARDOUS WASTE

Recommendation 4

We recommend that the campus properly label, store, and dispose of hazardous waste in a timely manner.

Campus Response

We agree. The campus will modify the OPC shop safety self-inspection checklist to include provisions for proper identification, storage, labeling, and disposal of hazardous waste. In addition, the campus will create a new laboratory inspection checklist including similar hazardous waste provisions.

These two checklists will be provided by November 1, 2013.

Documented evidence of their use will be provided by January 1, 2014.

TRAINING

Recommendation 5

We recommend that the campus provide training to all employees with responsibility for hazardous materials and hazardous waste handling.
Campus Response

We agree. Academic Affairs administration will identify relevant full and part-time employees (student, staff, and faculty) and EHS will provide CHP, chemical procurement, and hazardous waste training for these employees. The campus will put systems in place to provide IIPP training for all employees with hazardous materials and hazardous waste handling responsibilities. In addition, the campus will develop a system to capture independent research (494) students and provide them with appropriate hazardous materials training. Finally, the campus will revise the CHP, assigning lab supervisors the responsibility for research-lab-specific hazard analysis, hazard mitigation, and related documented training.

Documented evidence of the above described EH&S training on the CHP, chemical procurement, and hazardous waste will be provided by January 1, 2014.

Documented evidence of the IIPP training will be provided by March 1, 2014.

Documented evidence of student independent research (494) training will be provided by March 1, 2014.

A revised campus CHP including the improved training provisions described above will be provided by November 1, 2013.
November 7, 2013

MEMORANDUM

TO: Mr. Larry Mandel
   University Auditor

FROM: Timothy P. White
       Chancellor

SUBJECT: Draft Final Report 13-46 on Hazardous Materials Management, California State University, Channel Islands

In response to your memorandum of November 7, 2013, I accept the response as submitted with the draft final report on Hazardous Materials Management, California State University, Channel Islands.

TPW/amd