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September 25, 2019

Dr. Gayle E. Hutchinson, President
California State University, Chico
400 W. First Street
Chico, CA 95929

Dear Dr. Hutchinson:

Subject: Audit Report 19-05, Health and Safety, California State University, Chico

We have completed an audit of *Health and Safety* as part of our 2019 Audit Plan, and the final report is attached for your reference. The audit was conducted in accordance with the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing*.

I have reviewed the management response and have concluded that it appropriately addresses our recommendations. The management response has been incorporated into the final audit report, which has been posted to Audit and Advisory Services' website. We will follow-up on the implementation of corrective actions outlined in the response and determine whether additional action is required.

Any observations not included in this report were discussed with your staff at the informal exit conference and may be subject to follow-up.

I wish to express my appreciation for the cooperation extended by the campus personnel over the course of this review.

Sincerely,



Larry Mandel
Vice Chancellor and Chief Audit Officer

c: Timothy P. White, Chancellor

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The California State University
Audit and Advisory Services

HEALTH AND SAFETY

California State University, Chico

Audit Report 19-05
August 27, 2019

EXECUTIVE SUMMARY

OBJECTIVE

The objectives of the audit were to ascertain the effectiveness of operational and administrative controls related to health and safety (HS) and to ensure compliance with relevant federal and state regulations; Trustee policy; Office of the Chancellor (CO) directives; and campus procedures.

CONCLUSION

Based upon the results of the work performed within the scope of the audit, except for the weaknesses described below, the operational and administrative controls for HS as of June 20, 2019, taken as a whole, provided reasonable assurance that risks were being managed and objectives were met.

We noted the campus had an established framework for HS in which the department of environmental health and safety (EHS) provided consultation and guidance to colleges and departments and conducted certain monitoring activities. However, we found that the HS employee training program did not ensure that initial and refresher training was assigned and completed as required, and student training records were not consistently retained. We also found that campus HS plans and programs did not always include all required elements and were not consistently reviewed annually for effectiveness. Additionally, the campus did not always perform maintenance and inspection of safety equipment. Also, the campus did not always properly label hazardous materials (HAZMAT), did not consistently maintain chemical inventories, and did not conduct laboratory and workspace self-inspections as required by campus policy. Further, the campus did not have an established laser safety program or designated laser safety officer; needed to develop a written plan to address health facility HS risks; and needed to formalize its medical monitoring program. Moreover, the campus did not have all required radiation signage posted in some locations and did not always submit an annual HS program report to the CO.

Specific observations, recommendations, and management responses are detailed in the remainder of this report.

OBSERVATIONS, RECOMMENDATIONS, AND RESPONSES

1. EMPLOYEE HEALTH AND SAFETY TRAINING

OBSERVATION

The campus employee HS training program needed improvement.

We noted that EHS identified which campus employees were required to complete HS training based on their job codes and developed a training matrix that listed initial and refresher HS training courses and the employees required to take them. However, the campus did not have a monitoring process to ensure that employees were consistently assigned their required initial and refresher training and to ensure that employees completed their assigned training timely. We reviewed the training records for 25 employees and found that 18 had not completed all initial and/or refresher HS training courses required for their job code.

Effective administration of the employee HS training program provides greater assurance of compliance with program provisions, increases safety awareness, and reduces potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Establish an effective process to ensure that employees are consistently assigned their required initial and refresher HS training courses.
- b. Establish a process to identify and follow up on instances of noncompliance with training requirements, including steps to communicate and elevate instances of noncompliance to the appropriate management.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Establish an effective process to ensure that employees are consistently assigned their required initial and refresher HS training courses.
- b. Establish a process to identify and follow up on instances of noncompliance with training requirements, including steps to communicate and elevate instances of noncompliance to the appropriate manager.

Completion date: February 15, 2020

2. STUDENT HEALTH AND SAFETY TRAINING

OBSERVATION

The campus did not always maintain records showing student completion of HS training.

The campus Injury and Illness Prevention Plan (IIPP) assigned responsibility for developing and administering student HS training to deans, directors, and department heads and required training records to be maintained at the departments, with copies provided to EHS. We reviewed training records for 30 students across 15 different courses and found that eight training records were not retained, and as a result, we could not substantiate student completion of HS training. Additionally, training records were not consistently submitted to EHS.

Effective administration of the student HS training program helps to ensure that students are informed of potential hazards and necessary safety practices and procedures to reduce potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Develop an effective process to ensure that students receive required HS training and that training records are appropriately maintained.
- b. Establish a process to verify that all students working in laboratory settings are identified and provided with the required laboratory safety training.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Develop an effective process to ensure that students receive required HS training and that training records are appropriately maintained.
- b. Establish a process to verify that all students working in laboratory settings are identified and provided with the required laboratory safety training.

Completion date: February 15, 2020

3. HEALTH AND SAFETY PLAN ADMINISTRATION

OBSERVATION

Campus HS plans and programs did not always include all required elements and were not consistently reviewed annually for effectiveness.

We reviewed the campus HS plans and found that:

- The campus Chemical Hygiene Plan (CHP) did not assign a chemical hygiene officer, did not address or indicate responsibility for developing standard operating procedures to be followed when laboratory work involved the use of HAZMAT, and did not include circumstances under which a particular lab operation, procedure, or activity required prior approval, as required by California Code of Regulations (CCR) Title 8 §5191, *Occupational Exposures to Hazardous Chemicals in Laboratories*. Additionally, the CHP stated that the Student Health Center was responsible for refilling first-aid kits on campus; however, current practice had campus departments refilling their own first-aid kits.
- The campus Hazard Communication Plan (HCP) did not include a listing of hazardous chemicals known to be present or the location and availability of this listing and did not include the methods the campus would use to inform employees of the hazards of non-routine tasks, as required by 8 CCR §5194, *Hazard Communication*.
- The campus Exposure Control Plan (ECP) did not receive an annual review for effectiveness in 2017, as required by 8 CCR §5193, *Bloodborne Pathogens*.

Current and complete HS plans and programs improve compliance with regulatory requirements and promote a healthy and safe environment for employees and students.

RECOMMENDATION

We recommend that the campus:

- a. Review and update the campus HS plans to ensure compliance with federal and state regulations with regard to the observations noted above.
- b. Communicate and distribute the updated HS plans to appropriate staff and update related training as applicable.
- c. Establish a process to ensure that all HS plans include required elements and are reviewed and updated as required by applicable regulations.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Review and update the campus HS plans to ensure compliance with federal and state regulations with regard to the observations noted above.
- b. Communicate and distribute the updated HS plans to appropriate staff and update related training as applicable.
- c. Establish a process to ensure that all HS plans include required elements and are reviewed and updated as required by applicable regulations.

Completion date: February 15, 2020

4. SAFETY EQUIPMENT MAINTENANCE AND INSPECTION

OBSERVATION

The campus did not always conduct regular maintenance and inspections of the working condition of safety equipment.

We inspected 18 laboratory and non-laboratory locations and found that:

- At five locations, monthly inspections had not been completed for some fire extinguishers. At two other locations, fire extinguishers were not consistently inspected on a monthly basis.
- At three locations, air-handling unit maintenance was not consistently completed on an annual basis.
- At three locations, fume hoods were inspected as required; however, HAZMAT and testing supplies were stored in the hoods when they were not in use.
- At two locations, biosafety cabinets were not inspected annually as required, and one cabinet had corroded HAZMAT and other supplies stored inside when they were not in use.
- At two locations, emergency eyewash and shower stations were not consistently inspected on a monthly basis.
- At three locations, first-aid kits contained items that were prohibited by campus directives.

Regular inspection of safety equipment helps to ensure that the equipment is available and in good working condition and helps to ensure a healthy and safe environment for employees and students.

RECOMMENDATION

We recommend that the campus:

- a. Establish a monitoring process to ensure regular maintenance and inspections are completed on safety equipment as required and provide training to appropriate staff as needed.
- b. Ensure that corroded HAZMAT and excess supplies are not stored in fume hoods or biosafety cabinets.
- c. Ensure that first-aid kits are provisioned with only allowable items.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Establish a monitoring process to ensure regular maintenance and inspections are completed on safety equipment as required and provide training to appropriate staff as needed.
- b. Ensure that corroded HAZMAT and excess supplies are not stored in fume hoods or biosafety cabinets.
- c. Ensure that first-aid kits are provisioned with only allowable items.

Completion date: February 15, 2020

5. HAZARD COMMUNICATION

OBSERVATION

The campus did not always properly label HAZMAT containers, and department HAZMAT inventories were not conducted as required by campus policy.

We inspected 18 laboratory and non-laboratory locations within six departments and found that:

- At six locations, HAZMAT in both original and secondary containers was not labeled in accordance with campus and regulatory requirements.
- One department had not conducted an annual inventory since 2017.
- None of the departments submitted their inventories to EHS as required by campus policy.

Proper labeling of HAZMAT reduces the risk of accidents, injuries, and potential liability to the campus, and current inventories of HAZMAT improve campus oversight and monitoring of HAZMAT activities.

RECOMMENDATION

We recommend that the campus:

- a. Establish a process to ensure that all HAZMAT is labeled in accordance with campus and regulatory requirements and provide training to staff involved in the handling of HAZMAT.
- b. Establish a monitoring process to ensure that all departments conduct an annual inventory and submit their completed inventories to EHS as required by campus policy.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Establish a process to ensure that all HAZMAT is labeled in accordance with campus and regulatory requirements and provide training to staff involved in the handling of HAZMAT.
- b. Establish a monitoring process to ensure that all departments conduct an annual inventory and submit their completed inventories to EHS as required by campus policy.

Completion date: February 15, 2020

6. HEALTH AND SAFETY INSPECTIONS

OBSERVATION

The campus did not consistently perform health and safety inspections as required by campus policy.

The campus IIPP required campus deans, directors, and department heads to conduct regular HS inspections of their departmental areas and retain inspection documentation. The IIPP also required EHS to conduct periodic HS inspections of all campus areas.

In our review of seven departments, we found that:

- Four departments had not completed any HS inspections of their areas. The other three departments had completed, but not documented, inspections.
- Three departments were not inspected by EHS.

Performing regular and systematic inspections helps to ensure compliance with the campus IIPP; increases the likelihood of identifying unsafe conditions; and may reduce potential accidents, injuries, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Develop a monitoring process to ensure that campus departments conduct their own HS inspections as required by campus policy, and train appropriate personnel.
- b. Develop a schedule to ensure that EHS completes inspections of all campus areas as required by campus policy, and train appropriate personnel.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Develop a monitoring process to ensure that campus departments conduct their own HS inspections as required by campus policy, and train appropriate personnel.
- b. Develop a schedule to ensure that EHS completes inspections of all campus areas as required by campus policy, and train appropriate personnel.

Completion date: February 15, 2020

7. LASER SAFETY PROGRAM

OBSERVATION

The campus did not have a written and comprehensive laser safety program.

We reviewed two departments that used Class 3B and/or Class 4 lasers and found that:

- The campus did not have a written laser safety program or consistent policies and procedures to provide guidance on laser safety. The two departments using lasers established their own policies, which were not consistent with each other.
- The campus did not have a designated laser safety officer.
- Laser safety training for employees had not been formally provided or documented, and student training was inconsistently provided and documented.

A written and comprehensive laser safety program, including a designated official and formalized training, reduces the risk of injuries associated with the use of lasers.

RECOMMENDATION

We recommend that the campus:

- a. Develop and implement a campuswide laser safety program, including the designation of a laser safety officer.
- b. Develop and implement a laser safety training program for both employees and students, and train appropriate personnel.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Develop and implement a campuswide laser safety program, including the designation of a laser safety officer.

- b. Develop and implement a laser safety training program for both employees and students, and train appropriate personnel.

Completion date: February 15, 2020

8. HEALTH FACILITY SAFETY AND CLEANLINESS

OBSERVATION

The campus did not have a written plan addressing HS risks associated with health facility operations that included the elements required in Executive Order (EO) 943, Section IX, *Health Facility Safety and Cleanliness*.

Specifically, we found that the campus did not have a written plan that addressed:

- Appropriate consultation with custodial staff to address health facility sanitation and safety issues.
- Assignment of identified and trained custodial personnel to ensure appropriate cleanliness of the health facility.
- The unique conditions that determine the frequency and adequacy of cleaning of specific health facility areas.

A complete and comprehensive plan for health facility operations helps to ensure that employees are knowledgeable and adequately trained regarding the HS risks associated with operating and cleaning a health facility in order to provide a safer environment for employees and patients.

RECOMMENDATION

We recommend that the campus develop and implement a written plan for health facility safety and cleanliness that includes the required elements, and train appropriate personnel.

MANAGEMENT RESPONSE

We concur. The campus will develop and implement a written plan for health facility safety and cleanliness that includes the required elements, and train appropriate personnel.

Completion date: February 15, 2020

9. MEDICAL MONITORING PROGRAM

OBSERVATION

The campus did not have a formalized medical monitoring program as required by EO 1039, *CSU – Occupational Health & Safety Policy*.

We noted that various campus HS plans and programs contained elements of medical monitoring and instances when medical monitoring of employees may be required. However, these plans and programs did not consistently address all of the necessary aspects of a medical monitoring program as specified in EO 1039, including:

- Determining and establishing responsibilities for campus units that have a role in medical monitoring.
- Methods for notifying affected employees and supervisors.
- Documentation and maintenance of medical monitoring activities.

A comprehensive medical monitoring program helps to ensure regulatory compliance and promotes a healthy and safe environment for employees.

RECOMMENDATION

We recommend that the campus develop and implement a centralized and comprehensive medical monitoring program that includes the elements noted above, and communicate the program and its requirements to appropriate staff.

MANAGEMENT RESPONSE

We concur. The campus will develop and implement a centralized and comprehensive medical monitoring program that includes the elements noted above, and communicate the program and its requirements to appropriate staff.

Completion date: February 15, 2020

10. RADIATION CAUTION SIGNAGE

OBSERVATION

The campus did not consistently post all required caution signage in areas that contained radiation materials.

We found that two rooms containing radiation materials did not have the words “CAUTION, RADIATION AREA” and the radiation symbol posted at the door, as required by the campus *Radiation Safety Manual*.

Proper notification regarding radiation hazards decreases the risk of exposure and reduces the risk of potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus post all required signage in areas containing radiation materials.

MANAGEMENT RESPONSE

We concur. The campus will post all required signage in areas containing radiation materials.

Completion date: February 15, 2020

11. ANNUAL REPORTING

OBSERVATION

The campus did not always submit an annual HS program report to the CO.

We found that the campus did not prepare and submit the annual HS program report to the CO Systemwide Office of Risk Management for calendar years 2017 and 2018, as required by EO 1039, *CSU – Occupational Health & Safety Policy*.

Annual HS program reports provide necessary information to the CO to provide systemwide oversight to campuses.

RECOMMENDATION

We recommend that the campus develop a process to ensure that the annual HS report is prepared and submitted timely to the CO.

MANAGEMENT RESPONSE

We concur. The campus will develop a process to ensure that the annual HS report is prepared and submitted timely to the CO.

Completion date: February 15, 2020

GENERAL INFORMATION

BACKGROUND

California state regulations require all employers, including the California State University (CSU), to provide a safe and healthy work environment. Each campus has a designated EHS program administrator that is responsible for developing and maintaining a campus HS program.

All 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 may use materials that are known to have properties that are harmful to humans and the environment. Nearly all of the areas that use HAZMAT generate hazardous waste that is subject to strict regulations for safe and proper storage, transport, and disposal.

California regulations relating to HS are primarily codified in the California *Health and Safety Code* (HSC) and in Titles 8 and 22 of the CCR. California's Division of Occupational Safety and Health (Cal/OSHA) is primarily responsible for the enforcement of the state's occupational HS laws and regulations. Title 8 of the CCR addresses HAZMAT safety, including, but not limited to, training, communication, storage, and safety. Specific to laboratory environments, the *Occupational Exposure to Hazardous Chemicals in Laboratories* standard (8 CCR §5191) requires that the employer designate a chemical hygiene officer and have a written CHP that includes, among other things, provisions for worker training, criteria for the use of personal protective equipment and engineering controls, and standard operating procedures for handling HAZMAT. Title 22 of the CCR addresses HAZMAT waste management.

The primary CSU HS policy is EO 1039, *Occupational Health and Safety*. This policy requires campuses to develop, implement, and maintain a HS program and also addresses student HS training. EO 1069, *Risk Management and Public Safety*, delegates systemwide administration oversight and programmatic responsibility for environmental HS to Systemwide Risk Management.

At California State University, Chico (CSU Chico), EHS is responsible for providing guidance and services to the campus community to promote the integration of health, safety, and environmental stewardship into all university activities. The director of EHS reports to the associate vice president of budget and operations, who reports to the vice president and chief financial officer of the division of business and finance. The EHS staff includes three managers who have programmatic responsibility over assigned HS programs and serve as the primary liaisons between the regulatory agencies that oversee the related program areas and the campus community.

In 2017, due to HS concerns at two CSU campuses, the Joint Legislative Audit Committee directed the California State Auditor (CSA) to review HS compliance at four campuses (Channel Islands, Sacramento, San Diego, and Sonoma), as well as oversight by the CO. The review noted several issues, including observations relating to the annual evaluation of chemical plans; monitoring and documenting of student and employee HS training; and consistent and timely inspections of safety equipment. Based on the nature and trends of the observations noted in the CSA review, Audit and Advisory Services informed the Board of Trustees that it would perform reviews at all CSU campuses in 2019.

SCOPE

We visited the CSU Chico campus from April 15, 2019, through June 20, 2019. Our audit and evaluation included the audit tests we considered necessary in determining whether operational and administrative controls are in place and operative. The audit focused on procedures in effect from January 1, 2016 to June 20, 2019.

Specifically, we reviewed and tested:

- Oversight and administration of the campus HS program, including clearly defined roles and responsibilities; appropriate safety and chemical committees; departmental self-audits and monitoring practices; and current policies and procedures.
- The adequacy and availability of safety equipment, including evaluation of the chemical hygiene plan; provision of personal protective equipment; and regular inspections and monitoring of key safeguards and engineering controls.
- Proper storage and safety of HAZMAT, including procurement; maintenance of accurate inventories; appropriate labeling and storage practices; and access controls.
- Communications and training processes, including evaluation of the hazard communication plan; availability of material safety data sheets; asbestos notifications and signage; and documentation and monitoring of student and employee training.
- Whether appropriate safety programs were in place, when applicable, for radiation sources; laser safety; bloodborne pathogens; respiratory protection; and spill containment.
- Appropriate identification, storage, and monitoring of accumulated hazardous waste.

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.

Our testing and methodology, which was designed to provide a review of key operational and administrative controls, included interviews, walkthroughs, and detailed testing on certain aspects of the HS program. The review was limited to gaining reasonable assurance that essential elements of the HS program were in place and did not examine all aspects of the program.

CRITERIA

Our audit was based upon standards as set forth in federal and state regulations and guidance; Trustee policy; Office of the Chancellor directives; and campus procedures; as well as sound administrative practices and consideration of the potential impact of significant risks.

This audit was conducted in conformance with the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing*.

This review emphasized, but was not limited to, compliance with:

- ANSI Z136.1, *Safe Use of Lasers*
- 10 Code of Federal Regulations (CFR) Part 20, *Standards for Protection Against Radiation*
- 29 CFR Part 1910, *Occupational Safety and Health Standards*
- California HSC Division 20, *Miscellaneous Health and Safety Provisions*
- CCR Title 8, *Industrial Relations*
- CCR Title 17, *Public Health*
- CCR Title 19, *Public Safety*
- CCR Title 22, Division 4.5, *Environmental Health Standards for the Management of Hazardous Waste*
- EO 943 *Policy on University Health Services*
- EO 1031, *Systemwide Records/Information Retention and Disposition Schedules Implementation*
- EO 1039, *California State University - Occupational Health & Safety Policy*
- EO 1069, *Risk Management and Public Safety*
- Collective Bargaining Agreement, Unit 6, Article 28, *Health and Safety*
- CSU Chico *Chemical Hygiene Plan*
- CSU Chico *EHS Training Matrix*
- CSU Chico *Exposure Control Plan (Blood-borne Pathogen Manual)*
- CSU Chico *Fume Hood Testing Protocol*
- CSU Chico *Hazard Communication Program Plan*
- CSU Chico *Injury and Illness Prevention Plan*
- CSU Chico *Procurement Credit Card Procedures*
- CSU Chico *Radiation Safety Manual*
- CSU Chico *Respiratory Protection Program*

AUDIT TEAM

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Senior Auditor: Mayra Villalta