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September 16, 2019

Dr. Ellen J. Neufeldt, President
California State University San Marcos
333 S. Twin Oaks Road
San Marcos, CA 92096

Dear Dr. Neufeldt:

Subject: Audit Report 19-35, *Health and Safety*, California State University San Marcos

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
San Marcos**

Audit Report 19-35
August 13, 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 July 11, 2019, taken as a whole, provided reasonable assurance that risks were being managed and objectives were met.

We noted that the campus had an appropriate framework for HS, with guidance primarily provided by the safety, health, and sustainability department (SH&S). However, we found that the campus employee HS training program needed improvement to ensure that all employees received the required HS training. We also found that the campus did not always follow campus and regulatory policies and procedures, including the performance of annual laboratory inspections; proper labeling of hazardous materials (HAZMAT) and hazardous waste (HAZWASTE); adherence with laser safety procedures; maintenance and inspections of safety equipment; and security of compressed gas cylinders. Additionally, the campuswide personal protective equipment (PPE) program did not include documenting hazard assessments to determine the PPE necessary for employees.

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

Initial and refresher HS training was not always completed by campus employees.

The campus employee HS training program was mostly supported, completed, and recorded through web-based courses within the SH&S Learning Management System (LMS). We reviewed the LMS records from 2016 to 2019, and we found that:

- 50 percent of employees had not completed Injury and Illness Prevention Program (IIPP) training.
- 51 percent of faculty and principal investigators (PI) and 37 percent of staff and non-faculty employees assigned to lab safety training had not completed it.
- 38 percent of assigned employees assigned to radiation safety training had not completed it.
- 42 percent of employees assigned to bloodborne pathogens training had not completed it.
- 29 percent of staff or non-faculty employees assigned to hazard communication (HAZCOM) training had not completed it.
- 37 percent of employees assigned to initial and/or refresher HAZWASTE training had not completed it.
- 100 percent of employees assigned to laser safety and biosafety awareness training had not completed it.

Completion of HS training ensures employees' compliance with program provisions, increases safety awareness, and reduces potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus establish a process to notify employees with overdue or incomplete training, escalate overdue or incomplete training to the employee's supervisor, and report completion rates to appropriate management.

MANAGEMENT RESPONSE

We concur. The campus will establish a process to notify employees with overdue or incomplete training, escalate overdue or incomplete training to the employee's supervisor, and report completion rates to appropriate management.

Estimated completion date: January 31, 2020

2. LABORATORY INSPECTIONS

OBSERVATION

The campus did not consistently perform laboratory and workspace inspections.

We reviewed the annual SH&S inspection records for ten labs with HAZMAT from 2016 to 2018, and we found that inspections were not performed:

- During 2016 due to SH&S staffing deficiencies and training of new staff members.
- For two locations during 2017, and two different locations in 2018.

We also reviewed 18 locations with HAZMAT, and we found that:

- At four locations, several secondary containers were not properly labeled with the name, hazard warning, or contents and information about the hazardous properties.
- At four locations, refrigerators or freezers did not have signage noting the content or intended use in the lab.
- At one location, a spill kit was not available.
- At one location, milk or creamer in the refrigerator was not labeled with “not for human consumption.”
- Two locations were disorganized due to excessive clutter.

Performing regular and systematic laboratory inspections helps to ensure compliance with the campus IIPP; increases the likelihood of identifying unsafe conditions; and reduces the potential for accidents, injuries, and liabilities to the campus. Additionally, proper labeling and storage of HAZMAT, refrigerators, freezers, and consumable products communicate potential danger, and maintaining spill kits helps to ensure the safety of employees and students who come in contact with HAZMAT.

RECOMMENDATION

We recommend that the campus:

- a. Evaluate the current process for annual laboratory inspections and revise the process as necessary to ensure that annual inspections are performed at all locations.
- b. Provide continued training and guidance to all personnel involved in handling HAZMAT of regulatory and campus requirements, including, but not limited to, spill kits and labeling of secondary containers, refrigerators or freezers, and consumable products in refrigerators.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Evaluate the current process for annual laboratory inspections and revise the process as necessary to ensure that annual inspections are performed at all locations.
- b. Provide continued training and guidance to all personnel involved in handling HAZMAT of regulatory and campus requirements, including, but not limited to, spill kits and labeling of secondary containers, refrigerators or freezers, and consumable products in refrigerators.

Estimated completion date: January 31, 2020

3. LASER SAFETY

OBSERVATION

Oversight of laser safety needed improvement.

We reviewed three locations with lasers, and we found that:

- At all locations, Pls did not perform annual safety inspections of their lasers.
- At two locations, laser warning signs were not affixed to the lasers.
- At one location, a laser warning sign was not posted.

Annual inspections and proper warning signage and labeling of lasers reduce the risk of accidents, injuries, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Develop and implement procedures to ensure that annual safety inspections of lasers are performed and monitored.
- b. Affix laser warning signs on the lasers noted above.
- c. Post a laser warning sign at the location noted above.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Develop and implement procedures to ensure that annual safety inspections of lasers are performed and monitored.
- b. Affix laser warning signs on the lasers noted above.

- c. Post a laser warning sign at the location noted above.

Estimated completion date: January 31, 2020

4. SAFETY EQUIPMENT MAINTENANCE AND INSPECTIONS

OBSERVATION

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

We reviewed 19 locations with HAZMAT, and we found that:

- At two locations, monthly eyewash station inspections were not always performed.
- At two locations, dust cap covers did not exist or did not properly cover the eyewash equipment.
- At one location, a plank of wood obstructed the area around the eyewash station.
- At one location, there was no fire extinguisher.
- At one location, access to the fire extinguisher was obstructed by equipment that was attached to a pressurized gas cylinder.

Regular maintenance and inspections of safety equipment help to ensure that equipment is in good working condition and easily accessible, and further ensure a healthy and safe environment for employees and students.

RECOMMENDATION

We recommend that the campus:

- a. Evaluate the current process for regular maintenance and inspections and revise the process, as necessary, to ensure that all safety equipment is subject to routine and comprehensive inspections.
- b. Place dust cap covers properly on the eyewash equipment noted above
- c. Move the obstructions away from the safety equipment noted above to ensure adequate access to the equipment.
- d. Install a fire extinguisher at the location noted above.
- e. Remind FDM employees of the regulatory and campus requirements regarding safety equipment maintenance and inspections, and provide training as needed.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Evaluate the current process for regular maintenance and inspections and revise the process, as necessary, to ensure that all safety equipment is subject to routine and comprehensive inspections.
- b. Place dust cap covers properly on the eyewash equipment noted above.
- c. Move the obstructions away from the safety equipment noted above to ensure adequate access to the equipment.
- d. Install a fire extinguisher at the location noted above.
- e. Remind FDM employees of the regulatory and campus requirements regarding safety equipment maintenance and inspections, and provide training as needed.

Estimated completion date: January 31, 2020

5. COMPRESSED GAS CYLINDERS

OBSERVATION

Compressed gas cylinders in labs were not always properly secured.

We reviewed 12 locations with compressed gas cylinders, and we found that:

- At two locations, compressed gas cylinders were not properly secured with two chains.
- At one location, compressed gas cylinders were secured by non-tip bases, not in a typical manner such as substantial racks or secured to other rigid structures.

Proper security of compressed gas cylinders helps to ensure compliance with regulations and may reduce potential accidents, injuries, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Properly secure compressed gas cylinders with two chains or evaluate the appropriateness of using alternative solutions, and document this evaluation.
- b. Remind all personnel involved in managing the storage of compressed gas cylinders of the security requirements, and provide training as needed.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Properly secure compressed gas cylinders with two chains or evaluate the appropriateness of using alternative solutions, and document this evaluation.
- b. Remind all personnel involved in managing the storage of compressed gas cylinders of the security requirements, and provide training as needed.

Estimated completion date: January 31, 2020

6. HAZARDOUS WASTE

OBSERVATION

Campus departments did not always label HAZWASTE containers in accordance with regulatory and campus requirements.

We reviewed 16 locations with HAZWASTE, and we found that:

- At three locations, HAZWASTE had been accumulating for longer than one year.
- At four locations, several HAZWASTE container labels did not include the accumulation start date, and as such, we could not determine whether the HAZWASTE had been accumulating for more than one year.
- At two locations, several HAZWASTE containers did not have proper labeling that include the contents, accumulation start date, and hazard properties.
- At one location, a HAZWASTE container was not closed inside a fumehood.

Proper labeling, storage, and disposal of HAZWASTE reduces the risk of accidents and injuries from mismanagement of HAZWASTE and potential liability to the campus.

RECOMMENDATION

We recommend that the campus remind the personnel involved in handling HAZWASTE of the proper regulatory and campus requirements for handling HAZWASTE, including, but not limited to, the importance of proper labeling, storage, and timely disposal, and provide training as needed.

MANAGEMENT RESPONSE

We concur. The campus will remind the personnel involved in handling HAZWASTE of the proper regulatory and campus requirements for handling HAZWASTE, including, but not limited to, the importance of proper labeling, storage, and timely disposal, and provide training as needed.

Estimated completion date: January 31, 2020

7. HAZARD ASSESSMENTS

OBSERVATION

The campuswide PPE program did not include documenting hazard assessments to determine the PPE necessary for employees.

We reviewed 18 locations with HAZMAT and found that although hazard assessments may have been performed, these assessments were not documented to determine the necessary PPE for employees.

Performing documented hazard assessments of all campus workplaces can help identify hazards and necessary PPE to reduce the risk of accidents and injuries occurring, and to reduce the potential liability to the campus.

RECOMMENDATION

We recommend that the campus include documenting hazard assessments in its campuswide PPE program, establish a process to document a hazard assessment for all campus workplaces that necessitate the use of PPE, and monitor the completion of these assessments.

MANAGEMENT RESPONSE

We concur. The campus will include documenting hazard assessments in its campuswide PPE program, establish a process to document a hazard assessment for all campus workplaces that necessitate the use of PPE, and monitor the completion of these assessments.

Estimated completion date: January 31, 2020

8. RESPIRATORY PROTECTION PROGRAM

OBSERVATION

The campus RPP did not include all of the required elements.

We found that air-purifying respirators were available and provided for SH&S use; however, the RPP did not include procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators.

A complete respiratory protection program provides information regarding procedures and engineering controls that are based upon sound principles related to respiratory protection.

RECOMMENDATION

We recommend that the campus:

- a. Review and update the campus RPP to address the area above.
- b. Communicate and distribute an updated program to the appropriate SH&S personnel.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Review and update the campus RPP to address the area above.
- b. Communicate and distribute an updated program to the appropriate SH&S personnel.

Estimated completion date: January 31, 2020

9. HEALTH FACILITY OPERATION PROGRAM

OBSERVATION

The MOU between the FDM and the student health and counseling services department did not contain all of the required elements.

Specifically, we found that the MOU did not include a requirement for the orientation, continuing education, and training of custodians regarding the transmission and prevention of infectious diseases.

A comprehensive MOU communicates roles and responsibilities and improves compliance with regulatory and campus requirements.

RECOMMENDATION

We recommend that the campus review and update the MOU as noted above.

MANAGEMENT RESPONSE

We concur. The campus will review and update the MOU between FDM and Student Health and Counseling Services.

Estimated completion date: January 31, 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 environmental health and safety (EH&S) 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 HAZWASTE 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 California Code of Regulations (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 chemical hygiene plan that includes, among other things, provisions for worker training, criteria for the use of PPE 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 Executive Order (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 San Marcos (CSUSM), the responsibility for establishing and maintaining effective policies regarding EH&S resides with the campus president. Oversight and responsibility for EH&S is delegated to the SH&S director, who reports to the associate vice president for administration, who then reports to the vice president for finance and administrative services. The SH&S provides services to university colleges, departments, and programs across the campus that protect the HS of the students, faculty, staff, and visitors and promotes responsible environmental stewardship. The SH&S mission is to contribute to a total learning environment by providing support, guidance, and leadership; promoting safety; and sustaining the human, fiscal, and environmental resources of the campus community. The EH&S program has a SH&S director, an EH&S manager, five safety specialists, and two student assistants.

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 CSUSM campus from May 28, 2019, through July 11, 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, through July 11, 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 PPE; 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 HAZCOM 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 HAZWASTE.

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:

- 10 Code of Federal Regulations (CFR) Part 20, *Standards for Protection Against Radiation*
- 29 CFR Part 1910, *Occupational Safety and Health Standards*
- American National Standards Institute (ANSI) Z136.1, *Safe Use of Lasers*
- 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*
- CCR Title 24, Part 9, *California Fire Code*
- 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*
- CSUSM *Injury and Illness Prevention Program*
- CSUSM *Injury and Illness Prevention Program Policy*
- CSUSM *Chemical Hygiene Program*
- CSUSM *Hazard Communication Plan*
- CSUSM *Chemical Inventory SOP*
- CSUSM *Procurement Policy*
- CSUSM *ProCard Manual*
- CSUSM *Procedure for ProCard Purchases of Hazardous Materials*
- CSUSM *Radiation Safety Manual*
- CSUSM *Employee Medical Monitoring Program*
- CSUSM *Respiratory Protection Program*
- CSUSM *Hazardous Waste Management Plan*
- CSUSM *Bloodborne Pathogens Exposure Control Plan*
- CSUSM *Laboratory Personal Protective Equipment Procedure*
- CSUSM *Laser Safety Program*
- CSUSM *Gift Solicitation Policies*

AUDIT TEAM

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