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July 30, 2019

Mr. Framroze M. Virjee, President
California State University, Fullerton
800 N. State College Boulevard
Fullerton, CA 92834

Dear Mr. Virjee:

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

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,
Fullerton**

Audit Report 19-19
June 28, 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 May 10, 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 Office of Environmental Health and Safety (EHS). However, we found that some campus departments did not have a documented student HS training program, student training records were not always obtained or kept on file, and the campus did not have a process to ensure that all students working in research laboratories completed required lab safety training. In addition, the campus did not have a consistent process to identify employees who required HS training or ensure that required training was assigned or provided and completed and that training records were maintained. Further, required HS inspections were not always conducted, and the campus Injury and Illness Prevention Program (IIPP) needed improvement. We also noted that the campus had not performed written hazard assessments for all campus workplaces that necessitated the use of personal protective equipment (PPE), safety data sheets (SDS) were not always readily accessible, and campus departments did not always properly label hazardous materials (HAZMAT) and hazardous waste (HAZWASTE). Additionally, the campus policies and procedures for the purchase of HAZMAT needed improvement, and the campus had not maintained an updated laser safety program and did not provide 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. STUDENT HEALTH AND SAFETY TRAINING

OBSERVATION

Some campus departments did not have a documented student HS training program, and training records were not always obtained or kept on file. Additionally, the campus did not have a process to ensure that all students working in research laboratories completed required lab safety training.

We reviewed records from 25 academic laboratory classes in three colleges that required the use of PPE because of the potential for exposure to biological, chemical, and/or physical hazards. We verified whether a HS training program existed and whether students received required training as required by Executive Order (EO) 1039, *California State University – Occupational Health & Safety Policy*. We found that:

- For the seven mechanical engineering classes in the College of Engineering and Computer Science, the department had established some elements of a HS training program. However, the program was inconsistent and not fully documented or available. In addition, the department did not maintain records in which students acknowledged having received HS training.
- For the three glass-making classes in the College of the Arts, the department had a documented HS training program; however, records in which students acknowledged having received HS training were not maintained.
- For one metalsmithing class in the College of the Arts, the department did not have a documented student HS training program and did not maintain records in which students acknowledged having received HS training.

We noted that EHS provided specialized HS training upon request for students working in research laboratories. Specifically, college department faculty and staff, such as a student's immediate supervisor or principle investigator (PI), were responsible for notifying EHS of a new student working in a research laboratory and requesting the specialized training. However, this process was dependent on the departments self-reporting these situations, and EHS did not have a process to verify that all students working in research laboratory settings were identified and provided with the required training.

A defined and documented student HS training program helps to ensure that students are informed of potential hazards and that necessary safety practices and procedures will be used to reduce potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Define, document, and communicate to appropriate administrators, faculty, and staff the responsibility for providing student HS training, including the development and

implementation of a student HS training program for all educational activities where there is potential for exposure to biological, chemical, and/or physical hazards and require the use of PPE.

- b. Document all student HS training programs and maintain training records for all students.
- c. Establish a process to verify that all students working in laboratory settings are identified and provided with the required laboratory safety training, and communicate this process to appropriate campus administrators, faculty, and staff.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Define, document, and communicate to key personnel the responsibility for providing student HS training, including the development and implementation of a student HS training program for all educational activities where there is potential for exposure to biological, chemical, and/or physical hazards and require the use of PPE.
- b. Document student HS training programs and maintain training records for all students in the classes noted above.
- c. Establish a process to verify that all students working in laboratory settings are identified and provided with the required laboratory safety training, and communicate this process to key personnel.

The anticipated completion date is December 28, 2019.

2. EMPLOYEE HEALTH AND SAFETY TRAINING

OBSERVATION

The campus did not have a consistent process to identify employees who required HS training or to ensure that required training was assigned and completed, and that necessary training records were maintained.

Required HS training includes, among others, bloodborne pathogens program (BPP) safety, hazard communication (HAZCOM), HAZWASTE, IIPP, laboratory safety, laser safety, PPE, and radiation safety. Certain HS training is required for all campus employees, while other HS training is assigned based on specific conditions, such as the employee’s job category or classification or whether the employee uses certain equipment that poses potential danger. Training can be either assigned and completed in the computer-based training system CSU Learn (previously known as SkillPort) or provided in person as instructor-led training (ILT).

We reviewed training records for specific HS courses, and we found that:

- Not all laboratory faculty and staff or campus research employees who worked in an environment where HAZMAT was present were assigned laboratory safety training or provided with ILT.
- Not all employees required by the campus *Bloodborne Pathogens Program* to complete BPP training were assigned the training or provided with ILT. Job categories or classifications that were excluded were police officers and investigators; athletic trainers (including coaches and students); physical therapists; radiological technicians; clinical laboratory technicians; clinical aids; physicians; first aid and CPR responders; and lifeguards.
- None of the employees in the arts/theater job categories or classifications required by the campus *Safety Training Program* to complete PPE training were assigned the training or provided ILT as required.
- Only one of ten identified users of regulated class 3b and 4 lasers, which pose the greatest potential for serious injury if used improperly, were assigned laser safety training or provided ILT.
- Only six of ten identified campus users of radioactive materials were assigned the radiation safety training or provided ILT.

Effective administration of HS training helps to ensure compliance with program provisions, increases safety awareness, and reduces potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Develop and implement a process that establishes the responsibilities for identifying and providing HS training to all employees who require it, including the courses noted above, monitoring compliance to ensure that all required training is completed, and maintaining records for all completed employee HS training, including computer-based training and ILT.
- b. Communicate the process to appropriate campus administrators, faculty and staff.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Develop and implement a process that establishes the responsibilities for identifying and providing HS training to all employees who require it, including the courses noted above, monitoring compliance to ensure that all required training is completed, and maintaining records for all completed HS training, including computer-based training and ILT.
- b. Communicate the process to key personnel.

The anticipated completion date is December 28, 2019.

3. INJURY AND ILLNESS PREVENTION PROGRAM

OBSERVATION

HS inspections were not conducted in accordance with campus and regulatory requirements, and the campus IIPP needed improvement.

According to the campus IIPP, departments are responsible for performing regular and systematic HS inspections of all work areas under their control. In addition, EHS is required to conduct unannounced HS inspections to verify whether departments are complying with their responsibilities.

However, we found that:

- Campus departments, including laboratories, had not performed workplace inspections at least annually, and EHS had not monitored or enforced the departments' compliance with the IIPP requirement. We noted that campus departments had not been given guidance or assistance in fulfilling their responsibility to perform HS inspections, such as a comprehensive checklist that addressed applicable workplace hazards.

We also noted that the campus was in the process of implementing the inspect module within Risk and Safety Solutions (RSS) that would allow the campus to systematically conduct and document inspections of laboratory areas. However, the RSS inspect module is not intended to support inspections for non-laboratory workplaces.

- EHS staff conducted unannounced annual inspections of campus laboratory locations and unannounced spot inspections of instructional chemical laboratories throughout the semester. However, EHS did not conduct unannounced workplace inspections of non-laboratory locations.
- The campus IIPP was not clear on how non-laboratory locations would be monitored for compliance with required workplace HS inspections or who was responsible for the oversight.

An IIPP with clearly defined roles and responsibilities helps to ensure performance of duties and functions, improve compliance with CSU requirements, increase awareness, and reduce the potential of risk and liability to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Review and update the campus IIPP requirements related to HS workplace inspections to address the issues noted above and communicate the updated campus IIPP to appropriate campus administrators, faculty, and staff.

- b. Develop and implement the necessary processes and guidance to assist campus departments, including laboratories, in fulfilling their responsibility to perform HS inspections and provide training to appropriate campus administrators, faculty, and staff.
- c. Establish and implement procedures to monitor and track compliance with required IIPP inspections, per the updated campus IIPP document.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Review and update the campus IIPP requirements related to HS workplace inspections to address the issues noted above and communicate the updated campus IIPP to key personnel.
- b. Develop and implement the necessary processes and guidance to assist campus departments, including laboratories, in fulfilling their responsibility to perform HS inspections and provide training to key personnel.
- c. Establish and implement procedures to monitor and track compliance with required IIPP inspections, per the updated campus IIPP document.

The anticipated completion date is December 28, 2019.

4. HAZARD ASSESSMENTS

OBSERVATION

The campus had not performed a written hazard assessment for all campus workplaces that necessitated the use of PPE, as required by California Code of Regulations (CCR) Title 8, §3380, *Personal Protective Devices*.

We found that:

- There was a gap in the performance of written hazard assessments for campus laboratory areas because the campus was in the process of converting from the Hazard Assessment Tool (HAT) to the RSS system but had not yet completed implementation.

We noted that neither the HAT nor the RSS system are intended to support hazard assessments for non-laboratory workplaces.

- The campus conducted and documented hazard assessments for only some non-laboratory workplace locations that necessitated the use of PPE, primarily in facilities where individuals in skilled trade positions were employed.

Performing hazard assessments to identify hazards in workplaces that necessitate the use of PPE helps to reduce potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Implement the necessary processes to ensure that hazard assessments are performed and documented for all campus workplaces, including laboratory and non-laboratory areas that necessitate the use of PPE.
- b. Communicate and distribute information on the selected PPE required for each affected employee based on the hazard assessments.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Implement the necessary processes to ensure that hazard assessments are performed and documented for all campus workplaces, including laboratory and non-laboratory areas that necessitate the use of PPE.
- b. Communicate and distribute information on the selected PPE required for each affected employee based on the hazard assessments.

The anticipated completion date is December 28, 2019.

5. HAZMAT PROCUREMENT

OBSERVATION

Campus policies and procedures for the purchase of HAZMAT via procurement cards (P-card) needed improvement, and the campus had not formally established policies and procedures for the procurement of HAZMAT by other methods.

Although the P-Card policy manual prohibits the purchase of HAZMAT, we noted that it did not provide adequate guidance to be effective. For example, the P-Card policy manual did not define HAZMAT or include necessary elements of oversight and approval. As such, the policy is left open to individual interpretation and can result in inconsistent practices.

We also found that the campus had not developed policies and procedures for the procurement of HAZMAT using any other purchase method, such as requisitions.

Established policies and procedures can help to ensure consistent practice over the purchasing and receiving of HAZMAT and reduce the potential liability to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Develop and implement all necessary policies and procedures for the procurement of HAZMAT, including existing policies, that cover all approved procurement methods. At a minimum, include guidelines and processes developed by EHS in conjunction with campus contracts and procurement and consider including elements of purpose and scope, definitions, quantity limits, exemptions and exclusions, oversight responsibilities, review and approval, inventory, and training.
- b. Communicate and distribute the new and revised procurement policies and procedures as noted above to appropriate campus administrators, faculty, and staff.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Develop and implement all necessary policies and procedures for the procurement of HAZMAT that address the procurement methods identified above. At a minimum we will include guidelines and processes developed by EHS in conjunction with campus contracts and procurement and consider including the elements identified above as applicable.
- b. Communicate and distribute the new and revised procurement policies and procedures as noted above to key personnel.

The anticipated completion date is December 28, 2019.

6. HAZARD COMMUNICATION

OBSERVATION

Campus departments did not always properly label HAZMAT containers, and safety data sheets (SDS) were not always readily accessible in accordance with campus and regulatory requirements.

We reviewed 15 locations with HAZMAT, and we found that:

- At three locations, secondary containers containing HAZMAT were not labeled or were not always properly labeled in accordance with campus and regulatory requirements.
- At four locations, SDS binders were not always complete or readily accessible. Additionally, although these locations had a computer with internet access, notices explaining how SDS for chemicals can be found using the campus online SDS database subscription were not posted.

Proper labeling of HAZMAT and accessible chemical SDS reduces the risk of accidents, injuries, and potential liability to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Label all HAZMAT in accordance with campus and regulatory requirements and provide refresher training to appropriate campus administrators, faculty, and staff involved in handling HAZMAT.
- b. Make SDS printouts readily accessible and/or post a notice explaining how an SDS for chemicals can be found using the campus online SDS database subscription.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Label HAZMAT in accordance with campus and regulatory requirements and provide refresher training to key personnel who handle HAZMAT in the areas identified above.
- b. Ensure that the SDS printouts are readily accessible and/or post a notice explaining how an SDS for chemicals can be found using the campus online SDS database subscription.

The anticipated completion date is December 28, 2019.

7. HAZARDOUS WASTE

OBSERVATION

Campus departments did not always properly label HAZWASTE containers.

We reviewed 15 locations with HAZWASTE, and we found that at five locations, HAZWASTE containers were not labeled or were not always properly labeled with the required HAZWASTE constituents and accumulation start date, in accordance with campus and regulatory requirements.

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

RECOMMENDATION

We recommend that the campus:

- a. Label all HAZWASTE in accordance with campus and regulatory requirements.
- b. Remind appropriate campus administrators, faculty, and staff involved in handling HAZWASTE of the importance of proper labeling, and provide refresher training as needed.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Ensure HAZWASTE for the locations identified above is labeled in accordance with campus and regulatory requirements.
- b. Remind key personnel involved in handling HAZWASTE of the importance of proper labeling, and provide refresher training as needed.

The anticipated completion date is December 28, 2019.

8. LASER SAFETY PROGRAM

OBSERVATION

The campus had not maintained an updated laser safety program.

At the time of the audit, we noted that the campus was substantially updating its Laser Safety Program, which had not been reviewed since 2011, and adding a newly developed Laser Safety Operating Procedure template. Additionally, the campus was obtaining updated Laser Use Authorization (LUA) forms from all campus users of regulated class 3b and 4 lasers, as these types of lasers pose the greatest potential for serious injury if used improperly.

Effective administration of the campus Laser Safety Program reduces the risk of potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Finalize and communicate the Laser Safety Program to all applicable campus laser users.
- b. Obtain required LUA forms for all campus users of regulated class 3b and 4 lasers.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Finalize and communicate the Laser Safety Program to all applicable campus laser users.
- b. Obtain required LUA forms for all campus users of regulated class 3b and 4 lasers.

The anticipated completion date is December 28, 2019.

9. ANNUAL REPORTING

OBSERVATION

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

We found that the campus did not prepare and submit the required annual HS program reports to the CO Systemwide Office of Risk Management and campus president for fiscal

years 2016/17 and 2017/18, as required by EO 1039, *California State University – Occupational Health & Safety Policy*.

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

RECOMMENDATION

We recommend that the campus annually prepare and submit a HS program report to the CO and the campus president.

MANAGEMENT RESPONSE

We concur. The campus will annually prepare and submit a HS program report to the CO and the campus president.

The anticipated completion date is December 28, 2019.

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 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 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 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, Fullerton (CSUF), EHS is responsible for providing guidance, programs, training, and direction to the campus community, including students, faculty, staff, and visitors. Programs relate to personal safety and well-being, HAZMAT and HAZWASTE, environmental stewardship, risk aversion, and laboratory safety on campus. EHS operates under capital programs and facilities management within the division of administration and finance.

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 CSUF campus from April 2, 2019, through May 10, 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 May 10, 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 hazard communication plan; availability of material SDS; 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*
- 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 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*
- CSUF *Bloodborne Pathogen Program*
- CSUF *Chemical Hygiene Plan*
- CSUF *Hazard Communication*
- CSUF *Hazardous Waste & Materials Procedures*
- CSUF *Injury and Illness Prevention Plan*
- CSUF *Laser Safety Program*
- CSUF *Procurement Card Program Policy Manual*
- CSUF *EHS Safety Training Program*

AUDIT TEAM

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