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May 28, 2019

Dr. Leslie E. Wong, President
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132

Dear Dr. Wong:

Subject: Audit Report 19-31, Health and Safety, San Francisco State University

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

San Francisco State University

Audit Report 19-31
April 19, 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

We found the control environment for the areas reviewed to be in need of major improvement.

Based upon the results of the work performed within the scope of the audit, the operational and administrative controls for HS as of February 22, 2019, were unlikely to provide reasonable assurance that risks were being managed and objectives were met.

Overall, the campus was in the process of making improvements to certain HS areas, with guidance provided primarily by environmental health and safety (EHS). However, we found that there were repeat observations from the prior hazardous materials management audit in the areas of health and safety training, inspections, Injury and Illness Prevention Program (IIPP), and hazardous waste (HAZWASTE). Specifically, the campus employee HS training program needed improvement and the campus did not ensure that all students working in laboratories completed lab safety training. Also, the campus did not always consistently perform and monitor laboratory and safety and building ventilation equipment inspections. We also noted that the campus IIPP, Chemical Hygiene Plan (CHP), and Hazard Communication (HAZCOM) program needed improvement as they did not always implement or include all elements required by regulations and were not always evaluated annually. Also, the campus did not always properly label hazardous materials (HAZMAT) and HAZWASTE and properly notify employees of locations that contained asbestos and radiation. Further, the campus did not have campus-specific policies related to the purchasing and receiving of hazardous chemicals, and procurement cards (P-cards) were used for chemical purchases even though the purchases were prohibited by the campus policy. In addition, the campus did not provide an annual HS program report to the Office of the Chancellor (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 the campus IIPP and CHP required the colleges and campus departments to develop and implement a training program to instruct employees and students about HS, with EHS providing employee training on a consultative basis. However, we found that although EHS recently completed a training assessment in 2018 to identify the HS training needs for various colleges and departments and provided online training courses to the campus, there was no process in place to identify training courses and all employees in the colleges and departments that required the training, monitor compliance with initial and refresher HS training, and document and maintain training records.

This is a repeat observation from the prior hazardous materials management audit.

Adequate administration of HS training programs increases awareness of hazards and reduces potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Continue to assess the HS training needs for campus employees and develop, document, and implement a training program for employees that identifies training courses and all employees who are required to take initial and refresher HS training, including specialized training, tracks and notifies employees with overdue or incomplete training, and documents and maintains training records.
- b. Update the campus IIPP and CHP as necessary.

MANAGEMENT RESPONSE

We concur.

- a. The campus will continue to assess the HS training needs for campus employees and develop, document, and implement a training program for employees that identifies training courses and all employees who are required to take initial and refresher HS training, including specialized training, tracks and notifies employees with overdue or incomplete training, and documents and maintains training records.
- b. The campus will update IIPP and CHP as necessary.

Expected completion date: October 19, 2019

2. STUDENT LAB SAFETY TRAINING

OBSERVATION

The campus did not ensure that all students working in laboratories completed lab safety training.

We found that the campus only required Laboratory Rules and Safety Agreements for students to sign and did not have a documented training program to identify training requirements, track and notify students who did not take training, and document and maintain proper records showing completion of training.

An effective student lab safety training program increases awareness of hazards and reduces potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus establish a documented training program for students that identifies training requirements; tracks and notifies students with overdue or incomplete training; and documents and maintains training records.

MANAGEMENT RESPONSE

We concur. The campus will establish a documented training program for students that identifies training requirements; tracks and notifies students with overdue or incomplete training; and documents and maintains training records.

Expected completion date: October 19, 2019

3. LABORATORY INSPECTIONS

OBSERVATION

The campus did not consistently perform and monitor laboratory inspections.

We found that the campus IIPP required building coordinators (BC) to perform laboratory inspections, with EHS monitoring those inspections. However, this requirement was not in the job description for BC.

We also found that, laboratory inspections were not always performed or monitored. Specifically, we reviewed five quarterly inspection records for five COSE labs, for a total of 25 quarters from 2016 to 2018, and we found that evidence of these inspections was not provided for 14 quarters.

Additionally, compressed gas cylinders were not always inspected to ensure that they were properly secured. Specifically, we reviewed three labs with compressed gas cylinders and found that at one lab, two of the five pressurized gas cylinders were not properly secured.

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. Evaluate the current designation of responsibility for inspections and determine the most appropriate campus personnel to perform laboratory inspections.
- b. Develop and implement a written process to perform and monitor regular laboratory inspections that includes, but is not limited to, clear roles and responsibilities and escalation of noncompliance to appropriate campus management as necessary.

MANAGEMENT RESPONSE

We concur.

- a. The campus will evaluate the current designation of responsibility and determine the most appropriate campus personnel to perform laboratory inspections.
- b. The campus will implement a written process to perform and monitor regular laboratory inspections that includes, but is not limited to, clear roles and responsibilities and escalation of noncompliance to appropriate campus management as necessary.

Expected completion date: October 19, 2019

4. SAFETY AND BUILDING VENTILATION EQUIPMENT MAINTENANCE AND INSPECTIONS

OBSERVATION

The facilities department did not always conduct regular maintenance and inspections of the working condition of safety and building ventilation equipment.

In 2018, EHS performed an audit of 80 percent of the eyewash and safety shower stations and reviewed 63 of the fire extinguishers on campus to verify the facilities department’s completion of monthly inspections. EHS found that on average, 54 percent of the eyewash and safety shower stations inspections had not been performed over the previous six months and 83 percent of fire extinguisher inspections had not been performed over the previous five months. We reviewed eyewash and safety shower stations and fire extinguisher inspections at nine locations, and our results were consistent with EHS’s findings.

We found that:

- At two locations, the fire extinguishers were not inspected for one of the previous three months and two of the previous three months, respectively.

- At one location, a fire extinguisher was not present in the room.
- At one location, none of the fire extinguishers had been inspected by an outside vendor since December 2017.
- At one location, the suppression tank was not inspected annually by an outside vendor since 2016.
- At one location, the fire extinguisher was not inspected annually by an outside vendor since 2016 and was not inspected monthly.

This is a repeat observation from the prior hazardous materials management audit.

Additionally, we found that there was no process in place to monitor completion of air-handling unit maintenance and inspections. Specifically, we reviewed maintenance and inspection records for six air-handling units in the COSE buildings and found that there were no records of maintenance and inspections performed by the facilities department.

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

RECOMMENDATION

We recommend that the campus conduct regular maintenance and inspections of the working condition of safety and building ventilation equipment.

MANAGEMENT RESPONSE

We concur. The campus will conduct regular maintenance and inspections of the working condition of safety and building ventilation equipment.

Expected completion date: October 19, 2019

5. INJURY AND ILLNESS PREVENTION PROGRAM

OBSERVATION

The campus did not implement certain elements in the campus IIPP, and the IIPP was not evaluated annually for effectiveness and updated as needed.

We found that although the IIPP included the key elements required by California Code Regulations (CCR) Title 8 §3203, *IIPP*, the following elements were not implemented:

- The EHS department did not always provide campus executives with an annual report on IIPP performance and critical trends.

- College or organizational-unit-specific IPPs were not always developed. This is a repeat observation from the prior hazardous materials management audit.

An annually evaluated IIPP with the implementation of all elements within the IIPP improves compliance with regulatory requirements and helps to maintain an effective IIPP that ensures a healthy and safe environment for employees and students.

RECOMMENDATION

We recommend that the campus:

- a. Develop and implement written processes to provide campus executives with an annual report on IIPP performance and critical trends.
- b. Annually evaluate and update the IIPP.

MANAGEMENT RESPONSE

We concur.

- a. The campus will develop and implement written processes to provide campus executives with an annual report on IIPP performance and critical trends.
- b. The campus will evaluate and update the IIPP annually.

Expected completion date: October 19, 2019

6. CHEMICAL HYGIENE PLAN

OBSERVATION

The campus CHP needed improvement.

We found that:

- The CHP did not include a clear designation of the university and college chemical hygiene officers (CHO).
- The CHP was not evaluated annually for effectiveness and updated as needed, as required by CCR Title 8 §5191, *Occupational Exposure to Hazardous Chemicals in Laboratories*.
- The procurement section of the CHP was not currently practiced. Specifically, the CHP stated that the college's CHO will submit the request to the dean and the university CHO along with a recommendation for the approval or rejection of the use of the requested chemical or substance. The university CHO, in consultation with the appropriate dean will make a final decision regarding the requested chemical or substance.

A complete and annually evaluated CHP with a clear designation of CHOs improves compliance with regulatory requirements and increases protection of employees and students working in laboratories from the health hazards of certain chemicals.

RECOMMENDATION

We recommend that the campus:

- a. Designate the university and college CHOs in the CHP.
- b. Develop and implement a written process to annually evaluate and update the CHP.
- c. Evaluate the procurement section of the CHP and make necessary updates.

MANAGEMENT RESPONSE

We concur.

- a. The campus will designate the university and college CHOs in the CHP.
- b. The campus will implement a written process to annually evaluate and update the CHP.
- c. The campus will evaluate the procurement section of the CHP and make necessary updates.

Expected completion date: October 19, 2019

7. HAZARDOUS CHEMICALS PROCUREMENT AND RECEIVING

OBSERVATION

The campus did not formally document or implement campus-specific policies and procedures for purchasing and receiving hazardous chemicals, including storage and distribution of hazardous chemicals, and hazardous chemicals were purchased using P-cards, which was prohibited by campus policy.

Additionally, in discussions with the EHS director and several laboratory principal investigators, we found that campus staff and faculty were able to purchase hazardous chemicals using P-cards, which was prohibited by the campus *Procurement Card Handbook*. We reviewed 15 P-card purchases of chemicals and noted that EHS was not involved in the purchasing process for any of these transactions.

Campus-specific procurement and receiving policies and procedures help to ensure consistent practice over the purchasing and receiving of hazardous chemicals and reduce the potential liability to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Develop written campus-specific policies and procedures to ensure proper hazardous chemical purchasing and receiving, including storage and distribution controls.

- b. Evaluate whether departments should be able to purchase hazardous chemicals with P-cards, and if so, determine whether EHS should provide advance approval, and update the campus P-card policy accordingly.
- c. Communicate and distribute the new policies and procedures to appropriate campus administrators, staff, and employees.

MANAGEMENT RESPONSE

We concur.

- a. The campus will develop written campus-specific policies and procedures to ensure proper hazardous chemical purchasing and receiving, including storage and distribution controls.
- b. The campus will evaluate whether departments should be able to purchase hazardous chemicals with P-cards, and if so, determine whether EHS should provide advance approval, and update the campus P-card policy accordingly.
- c. The campus will communicate and distribute the new policies and procedures to appropriate campus administrators, staff, and employees.

Expected completion date: October 19, 2019

8. HAZARD COMMUNICATION PROGRAM

OBSERVATION

The campus HAZCOM program needed improvement.

The HAZCOM regulations describe standards for labeling, safety data sheets (SDS), and employee information and training.

We found that the campus HAZCOM program did not include the following elements required by CCR Title 8 §5194, *Hazard Communication*:

- A listing of hazardous chemicals known to be present or an explanation of the chemical inventory system.
- Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area such as monitoring conducted by the employer, continuous monitoring devices, and the visual appearance or odor of hazardous chemicals when being released.

Additionally, we reviewed nine locations with HAZMAT and found that:

- At three locations, several container labels did not include a written or graphic hazard warning.

- At two locations, HAZMAT labels on several containers were torn or illegible.
- At four locations, specific chemical SDS were not always included in SDS binders.
- At one location, the SDS binder was not located in the lab.

This is a repeat observation from the prior hazardous materials management audit.

A complete HAZCOM program improves compliance with regulatory requirements and promotes a healthy and safe environment for employees and students. Additionally, proper labeling and storage of HAZMAT communicates potential danger, and maintaining current SDS printouts or access to the online SDS database helps to ensure the safety of employees and students who encounter HAZMAT.

RECOMMENDATION

We recommend that the campus:

- a. Review and update the HAZCOM program to include the elements noted above.
- b. Communicate and distribute the updated HAZCOM program to the appropriate campus administrators, staff, and faculty.
- c. Remind the appropriate campus administrators, staff, and faculty on proper labeling and storing of HAZMAT and maintenance of current SDS printouts and binders in accordance with regulatory and campus requirements.

MANAGEMENT RESPONSE

We concur.

- a. The campus will review and update the HAZCOM program to include the elements noted above.
- b. The campus will communicate and distribute the updated HAZCOM program to the appropriate campus administrators, staff, and faculty.
- c. Appropriate campus administrators, staff, and faculty will be reminded on proper labeling and storing of HAZMAT and maintenance of current SDS printouts and binders in accordance with regulatory and campus requirements.

Expected completion date: October 19, 2019

9. HAZARDOUS WASTE

OBSERVATION

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

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

- At two locations, waste containers were not always properly labeled with an accumulation start date. As such, we were unable to determine how long the waste had been in the location.
- At two locations, none of the waste containers were properly labeled with identifiable contents such as generator name, address, hazard properties, and accumulation start date.

This is a repeat observation from the prior HAZMAT audit.

Proper labeling 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 on proper labeling in accordance with regulatory and campus requirements.

MANAGEMENT RESPONSE

We concur. The campus will remind the personnel involved in handling HAZWASTE on proper labeling in accordance with regulatory and campus requirements.

Expected completion date: October 19, 2019

10. HEALTH AND SAFETY NOTIFICATIONS

OBSERVATION

The campus did not properly notify employees of locations that contained asbestos and radiation.

We found that the campus did not provide a written annual asbestos notification to each employee, as required by Health and Safety Code (HSC) 25915.2 (a), and instead, posted the notification on the EHS website.

Additionally, the campus did not post radiation notifications in the appropriate locations on campus. Specifically, we reviewed five locations where radioactive materials were stored or handled, and we found that:

- None of the radioactive materials locations had posted a current copy of applicable licenses for radioactive materials or a copy of the operating and emergency procedures applicable to working with sources of radiation. Additionally, none of these locations had posted a notice describing these documents or stating where they may be examined.
- Three radioactive materials locations had not posted a current copy of the department form RH-2364, *Notice to Employees*.

Proper notification of asbestos and radiation decreases the risk that employees will be exposed to asbestos and radiation and decreases the risk of potential injuries, accidents, and liabilities to the campus.

RECOMMENDATION

We recommend that the campus provide employees with an annual written asbestos notification and establish and implement a written process to ensure that the appropriate radiation signage is posted in all required locations on campus.

MANAGEMENT RESPONSE

We concur. The campus will provide employees with an annual written asbestos notification and establish and implement a written process to ensure that the appropriate radiation signage is posted in all required locations on campus.

Expected completion date: October 19, 2019

11. 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 for fiscal years 2016/17 and 2017/18, as required by Executive Order (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.

MANAGEMENT RESPONSE

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

| Expected completion date: October 19, 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 who 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 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 CHO 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 an 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 San Francisco State University (SFSU), the responsibility for establishing and maintaining effective policies regarding EHS resides with the campus president. Oversight and responsibility for the EHS office are delegated to the EHS director, who reports directly to the vice president of administration and finance and chief financial officer. The EHS office oversees the EHS program on campus and at the Romberg Tiburon Center; works to promote environmental stewardship and protects the HS of SFSU faculty, staff, and students; and provides technical expertise and support through the development of EHS programs, training, and consultation.

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 SFSU campus from January 14, 2019, through February 22, 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 December 31, 2018.

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 CHP; 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 HCP; 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*
- SFSU *Injury and Illness Prevention Program*
- SFSU *Chemical Hygiene Program*
- SFSU *Hazard Communication Plan*
- SFSU *Procurement Card Handbook*
- SFSU *Gift Acceptance Policy*
- SFSU *Gift-in-Kind Policy and Procedure*
- SFSU *Required Attire for Entry into Laboratories Where Hazardous Materials are Used or Stored*
- SFSU *Laser Safety Program Manual*
- SFSU *Radiation Safety Manual*
- SFSU *Employee Medical Monitoring Program*
- SFSU *Respiratory Protection Program*
- SFSU *Hazardous Waste Management Procedure*
- SFSU *Bloodborne Pathogens Program*
- SFSU *Safety Orientation for New Employees*

AUDIT TEAM

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