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October 15, 2019

Dr. Lynnette Zelezny, President
California State University, Bakersfield
9001 Stockdale Highway
Bakersfield, CA 93311

Dear Dr. Zelezny:

Subject: Audit Report 19-20, *Health and Safety*, California State University, Bakersfield

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,
Bakersfield**

Audit Report 19-20
September 5, 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 25, 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, risk and sustainability (SRS) department. However, the campus could not provide certain employee training records for 2018 due to system issues, and as such, we could not verify that employees received required HS training. We also found that the campus did not have a process for identifying and providing employees with appropriate HS training, monitoring compliance, and notifying employees of incomplete or overdue training. In addition, the campus did not always follow CO and regulatory policies and procedures, including performance of workplace hazard assessments and inspections and safety equipment inspections, and proper labeling and storing of hazardous materials (HAZMAT) and hazardous waste (HAZWASTE). Further, campus departments were not consistently maintaining records of HAZMAT inventories and required student HS training. Also, HS policies and procedures, plans, and programs needed improvement to reflect current processes, and the campus did not post proper signage at locations that contained radiation-producing equipment.

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 did not have a process for identifying and providing employees with the appropriate HS training, monitoring compliance, and maintaining records of completed training.

We noted that employee training was 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). HS training included, among others, Injury Illness Prevention Program (IIPP), Hazard Communication, Laboratory Safety, Hazardous Waste, Personal Protective Equipment, and Bloodborne Pathogens.

We requested training records for 25 new employees hired during calendar year 2018 to verify that HS training was assigned and completed. However, the campus was unable to provide all of the requested records and indicated that technical difficulties occurred in 2018 when training records were transferred from SkillPort to CSU Learn. In addition, we could not verify whether the campus monitored training to ensure that employees with incomplete or overdue training were properly notified.

Effective administration of the HS training program 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 all employees with the appropriate HS training, 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

The campus has developed a process to identify training needs based upon job descriptions. The campus has worked with information technology services to resolve its recordkeeping for the newly implemented California State University (CSU) computer-based training (CSU Learn). The individuals identified as needing training have been scheduled for training. The campus will implement this process, communicate it to the appropriate campus administrators, faculty, and staff, and regularly monitor to ensure all required training is completed. Anticipated implementation date is January 31, 2020.

2. HAZARD ASSESSMENTS

OBSERVATION

Campus departments did not consistently perform and maintain records of hazard assessments to determine the work areas that necessitated the use of personal protective equipment (PPE), as required by California Code of Regulations (CCR) Title 8 §3380, *Personal Protective Devices*.

We reviewed records of completed hazard assessments for specified semesters from selected labs and workshops in four schools and departments, and we found that:

- Two schools did not provide any supporting documentation of activities related to hazard assessments performed in their workplaces.
- One department provided several job safety analyses (JSA) that were used to identify job-specific hazards, but these records did not show evidence that employees acknowledged or completed a JSA before performing the job or task.

Also, at the time of review, the campus was in the early stages of implementing RSS software and intended to use the assess module to systematically conduct and document hazard assessments and communicate PPE requirements. However, we noted that RSS was intended to support hazard assessments for laboratory workplaces only, and any plans for supporting hazard assessments for non-laboratory workplaces had not yet been developed.

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. Establish a process to improve compliance with performance of required hazard assessments, particularly in departments and schools as noted above.
- b. Remind all appropriate college administrators, staff, and faculty of the importance of performing and documenting HS hazard assessments.
- c. Maintain records of completed HS hazard assessments.

MANAGEMENT RESPONSE

- a. The campus will develop department-specific chemical hazard tools for all noted departments. In addition, the campus will implement Risk and Safety Solutions (RSS), a software program for chemical hazard management and assessment tool. The campus will complete the development and documentation of the hazard assessment for each department.

- b. The director of safety and risk and the safety data specialist provided RSS training to the provost, deans, faculty, and staff involved in HS hazard waste assessments. Job safety analyses (JSA) were provided to the technicians and faculty. In addition, JSA templates are available to each school, and continuous training will be provided to develop the safety culture on campus. The EHS manager will follow through on the JSA process monthly. The campuswide risk and safety committee, as well as the science safety committee, and the appropriate sub-committees will review all findings in this document.
- c. RSS will be used to maintain records of completed HS hazard assessments.

Anticipated completion date is January 31, 2020.

3. HEALTH AND SAFETY WORKPLACE INSPECTIONS

OBSERVATION

Campus departments did not consistently perform or maintain records of HS workplace inspections.

The campus IIPP requires each department to ensure that a regular and systematic inspection process is scheduled and performed for all areas. The campus IIPP also requires that departments conduct inspections whenever new substances, processes, procedures, or equipment that represent a new occupational safety and health hazard are introduced.

We found that SRS performed annual fire and safety inspections for all areas of the campus. However, selected campus departments and schools were not consistently performing additional periodic workplace inspections or maintaining records to document completion of these inspections.

We reviewed records of completed HS workplace inspections for specified semesters from selected labs and workshops in four schools and departments, and we found that:

- One department provided copies of their safety handbook and other related HS procedures, along with written testimony indicating that they follow safety guidelines. However, these materials did not sufficiently document that HS workplace inspections were performed or completed.
- One school did not provide any supporting documentation of activities related to HS workplace inspections performed in their workplaces, nor did it provide documentation of the completion of workplace inspections.
- One school was working on formalizing HS workplace inspection sheets. At the time of review, it inspected tools and equipment as needed before and after each use.

Also, at the time of review, the campus was in the early stages of implementing RSS software and intended to use the inspect module to systematically conduct and document HS workplace inspections.

Proper administration of HS workplace inspections helps to reduce unsafe conditions and the potential for injuries, accidents, litigation, and regulatory sanctions.

RECOMMENDATION

We recommend that the campus:

- a. Establish a process to improve department compliance with performance of required HS workplace inspections.
- b. Remind all appropriate college administrators, staff, and faculty of the importance of performing and documenting HS workplace inspections as required by the campus IIPP.
- c. Maintain records of completed HS workplace inspections.

MANAGEMENT RESPONSE

The campus will implement the RSS system to improve departmental compliance with performing workplace inspections and standardize inspection lists for use by departments. The campus will communicate the new process to all appropriate college administrators, staff, and faculty, including the importance of performing and documenting HS workplace inspections, and will maintain records of complete HS workplace inspections. Anticipated implementation date is January 31, 2020.

The campus will implement the three main components of the RSS (assessments, inspections, and chemical inventory) by March 5, 2020.

4. SAFETY EQUIPMENT MANAGEMENT AND INSPECTIONS

OBSERVATION

Safety equipment was not always available and regularly inspected.

We inspected 20 laboratory and non-laboratory locations within three schools and one department, and we found that:

- At one school, there was no eyewash station available at four locations where HAZMAT is present.
- At six locations, some fire extinguishers were not inspected monthly.
- At two locations, snorkel-type fume hoods and bench-top exhausts were not inspected annually. The snorkel-type fume hoods did not have a sticker or tag documenting inspection, and the last tag we found on the bench-top exhausts was dated 2011.

Availability and regular inspection of safety equipment ensure a healthy and safe environment for employees and students.

RECOMMENDATION

We recommend that the campus:

- a. Install eyewash stations in areas where HAZMAT is present.
- b. Remind applicable personnel of the proper regulatory and campus requirements to regularly inspect safety equipment, including fire extinguishers, fume hoods, and bench-top exhausts, and provide training as needed.

MANAGEMENT RESPONSE

Safety equipment is inspected on a regular basis. The campus will provide training as needed. Anticipated implementation date is January 31, 2020.

5. HAZARDOUS WASTE

OBSERVATION

HAZWASTE was not always labeled and stored in accordance with regulatory and campus requirements.

We reviewed 20 laboratory and non-laboratory locations within three schools and one department, and we found that:

- At one location, HAZWASTE and universal waste bins were not properly labeled. Specifically, the campus HAZWASTE label was not used to document the type of waste and the accumulation start date.
- At one location, two containers of HAZWASTE were labeled, but the label did not indicate the accumulation date.
- At one location, one container of HAZWASTE was labeled, but the label did not indicate the content.

We noted that this was a repeat observation from a prior Hazardous Materials Management audit.

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

RECOMMENDATION

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

MANAGEMENT RESPONSE

The campus will remind all personnel involved in handling HAZWASTE by providing training of the proper regulatory and campus requirements for handling HAZWASTE, including labeling and storage, and will provide training as needed. Anticipated implementation date is January 31, 2020.

6. HAZARDOUS MATERIAL

OBSERVATION

HAZMAT was not always labeled and stored in accordance with regulatory and campus requirements.

We reviewed 20 laboratory and non-laboratory locations within three schools and one department, and we found that:

- At one location, the label for at least one secondary container storing HAZMAT did not include the written or graphic hazard warning, but instead listed the chemical's formula.
- At one location, there was chemical build up around the lid of at least one chemical container.
- At one location, a spill kit was not available.
- At one location, one refrigerator was not labeled with signage identifying its use (e.g., "chemical storage only – no food allowed"). We noted that there was no food or drink for human consumption stored inside the refrigerator at the time of inspection.

Proper labeling and storage of HAZMAT communicates potential danger and helps to ensure the safety of employees and students who encounter HAZMAT.

RECOMMENDATION

We recommend that the campus remind all personnel involved in handling HAZMAT of proper regulatory and campus requirements regarding the handling of HAZMAT, including, but not limited to, labeling, signage, and storing, and provide training as needed.

MANAGEMENT RESPONSE

The campus will remind all personnel involved in handling HAZMAT by providing training of the proper regulatory and campus requirements for handling HAZMAT, including labeling, signage, and storage, and will provide training as needed. Anticipated implementation date is January 31, 2020.

7. INVENTORY

OBSERVATION

Campus departments were not consistently maintaining HAZMAT inventories.

We reviewed the HAZMAT/chemical inventories of selected labs and workshops in four schools and departments, and we found that:

- Two schools did not provide records to indicate that a complete HAZMAT inventory was maintained.
- In one department, two locations provided HAZMAT inventories for 2019, but none for prior years. Additionally, at another location, a listing of chemicals currently purchased through a third-party vendor account was provided. However, this list did not serve as a complete inventory, as it lacked actual quantities on hand.

Also, at the time of review, the campus was in the early stages of implementing RSS software and intended to use the chemicals module to track and monitor HAZMAT on campus.

A complete inventory improves campus oversight of HAZMAT onsite and allows emergency responders to identify and remediate specific hazards when responding to emergency situations.

RECOMMENDATION

We recommend that the campus:

- a. Monitor department compliance with inventory maintenance, and develop a process for centralizing the HAZMAT inventory database and the responsibility for tracking and monitoring all HAZMAT inventory.
- b. Develop and implement a written procedure for performing and monitoring periodic HAZMAT inventories, and communicate the procedure to key personnel.

MANAGEMENT RESPONSE

The campus will develop a process to monitor and record departmental inventory amounts. The campus will develop and implement a written procedure for performing and monitoring periodic HAZMAT inventories, and communicate the procedures to key personnel. Anticipated implementation date is January 31, 2020.

8. STUDENT HEALTH AND SAFETY TRAINING

OBSERVATION

Some campus departments were not consistently maintaining records showing student completion of HS training, as required by Executive Order 1039, *California State University – Occupational Health & Safety Policy*.

We reviewed ten laboratory courses in three schools that required the use of PPE because of the potential for exposure to biological, chemical, and/or physical hazards to verify whether a student HS training program was implemented and whether students received appropriate laboratory safety training and PPE information.

We found that training records for one school were provided, but the records were not easily reconciled. Specifically, we were provided all graded HS quizzes taken by students assigned to laboratory courses from fall 2016 to spring 2019, but the course name was not indicated on some of the quizzes.

For this same school, we compared the student roster to the graded quizzes for four laboratory courses for spring 2019. We found that:

- For one course, graded HS quizzes were missing for two of 21 students.
- For one course, graded HS quizzes were missing for all 15 students.
- For one course, graded HS quizzes were missing for all 24 students.
- For one course, graded HS quizzes were missing for all 18 students.

Effective administration of the student HS training program helps to ensure that students are informed of potential hazards and 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. Establish and implement a process to consistently document HS training provided to students.
- b. Maintain all records showing that student HS training has been completed.
- c. Remind all appropriate college administrators, staff, and faculty of the importance of performing and documenting HS training.

MANAGEMENT RESPONSE

The campus will incorporate and use the new CSU Bridge system to assign and document the completion of student HS training. The campus will communicate the new process to all appropriate college administrators, staff, and faculty, including the importance of performing and documenting HS training. Anticipated implementation date is March 5, 2020.

9. POLICIES AND PROCEDURES

OBSERVATION

Certain written policies and procedures, plans, and programs did not reflect current processes.

We found that:

- The campus *Procurement Policy – Chemical Purchases Using CSUB ProCard* referenced a list of staff positions with authority to purchase chemicals and the chemicals allowed to be purchased using a procurement card. However, these listings were outdated, as they were approved by the previous dean of the School of Natural Sciences, Mathematics and Engineering (NSME).
- Some sections of the *Chemical Hygiene Plan (CHP)* did not reflect the responsibility of the chemical hygiene officer to review all purchases, requisitions, grants, and contracts involving the use of hazardous chemicals. Also, there was conflicting information regarding the frequency of fume hood inspections.
- The campus IIPP referenced quarterly meetings of the NSME Science Committee, but documentation showed that meetings were held every semester instead.

Current HS policies and procedures, 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 policies and procedures, plans, and programs noted above.
- b. Communicate and distribute updated policies and procedures, plans, and programs to appropriate campus administrators, staff, and faculty.

MANAGEMENT RESPONSE

We will review and update the policies and procedures, plans, and programs noted in the observation. The campus will communicate and distribute the updated policies and procedures, plans, and programs to appropriate campus administrators, staff, and faculty. Anticipated implementation date is October 31, 2019.

10. RADIATION SIGNAGE

OBSERVATION

The campus did not post the required signage at locations where radiation-producing equipment were stored and/or handled.

We reviewed five locations where radiation-producing equipment were stored and/or handled, and we did not find a posting referencing 17 CCR §30255, *Notices, Instructions, and Reports to Personnel*, in any of them.

However, in all five locations, we found a radiation caution sign on the laboratory door, and Form RH-2364, *Notice to Employees*, was visible inside the laboratory room.

The policy states that campuses must conspicuously post a current copy of the regulation, a copy of applicable licenses for radioactive material, and a copy of operating and emergency procedures applicable to work with sources of radiation. If posting the specified documents is not practical, the campus may post a notice that describes the document and states where it may be examined.

Proper signage and notice of 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 required signage at all locations where radiation-producing equipment is stored and/or handled.

MANAGEMENT RESPONSE

The campus concurs with the finding. The regulations were released in January and understanding of the new posting requirements were not clear. The campus will post all the required signage in all rooms that contain radiation equipment. Anticipated implementation date is October 31, 2019.

GENERAL INFORMATION

BACKGROUND

California state regulations require all employers, including the 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 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 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, Bakersfield (CSUB), the SRS is committed to providing a healthy and safe environment for the campus community, including students, faculty, staff, and visitors. SRS is responsible for developing campus HS programs and providing the guidance, tools, and training to encourage regulatory compliance. The director of SRS reports to the assistant vice president of human resources and administrative services, who then reports to the vice president of business and administration services.

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 CSUB campus from May 20, 2019, through July 25, 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 25, 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 CHP; 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 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*
- 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*
- CSUB *Bloodborne Pathogen Exposure Control Plan*
- CSUB *Chemical Hygiene Plan*
- CSUB *Hazard Communication Program*
- CSUB *Hazardous Materials Emergency Response Plan*
- CSUB *Hazardous Waste Management Program*
- CSUB *Injury and Illness Prevention Program*
- CSUB *Occupational Medical Monitoring Program*
- CSUB *Procurement Policy – Chemical Purchases Using CSUB ProCard*
- CSUB *Radiation Safety Program*
- CSUB *Respiratory Protection Program*

AUDIT TEAM

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