

Audit and Advisory Services
401 Golden Shore, 4th Floor
Long Beach, CA 90802-4210

562-951-4430
562-951-4955 (Fax)
lmandel@calstate.edu

July 16, 2019

Dr. Dianne F. Harrison, President
California State University, Northridge
18111 Nordhoff Street
Northridge, CA 91330

Dear Dr. Harrison:

Subject: Audit Report 19-34, *Health and Safety*, California State University, Northridge

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,
Northridge**

Audit Report 19-34
June 10, 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 9, 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 Environmental Health and Safety (EH&S). However, we found that the campus employee HS training program needed improvement to ensure that all employees received required HS training. We also found that the campus did not always follow campus and regulatory policies and procedures, including proper labeling of hazardous materials (HAZMAT); labeling, storing, and disposal of hazardous waste (HAZWASTE); departmental safety and safety equipment inspections; and EH&S assessments. Additionally, some of the roles and responsibilities in the Injury and Illness Prevention Program (IIPP) and Chemical Hygiene Program (CHP) were performed by individuals who were not assigned to these roles and responsibilities, campus-specific policies and procedures for purchasing HAZMAT were not documented and implemented, and the Hazard Communication Plan (HAZCOM) program did not include all of the required elements. Further, the campus did not have an institutional biosafety committee (IBC) and did not always submit an annual HS program report to the CO.

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

OBSERVATIONS, RECOMMENDATIONS, AND RESPONSES

1. EMPLOYEE HEALTH AND SAFETY TRAINING

OBSERVATION

The campus employee HS training program needed improvement.

We found that an HS training matrix was developed to identify and assign training requirements for campus employees but had not been updated since 2011. In addition, the campus did not have a process to monitor compliance with initial and refresher HS training.

Specifically, we reviewed the initial training records for 13 employees, and we found that:

- There was no evidence that nine employees completed all of their required initial training.
- Three employees did not complete all of their required initial training in the year they were hired. However, the training was completed in subsequent years.

Additionally, there was no evidence that the employees we reviewed completed their required refresher training.

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

RECOMMENDATION

We recommend that the campus:

- a. Update the HS training matrix to identify current training requirements for campus employees and assign training to employees accordingly.
- b. Develop and implement a process to track and notify employees with overdue or incomplete training, and document and maintain training records.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Update the HS training matrix to identify current training requirements for campus employees and assign training to employees accordingly.
- b. Develop and implement a process to track and notify employees with overdue or incomplete training, and document and maintain training records.

Anticipated completion date: December 12, 2019

2. DEPARTMENTAL SAFETY INSPECTIONS

OBSERVATION

The campus did not always perform, monitor, and maintain records of departmental safety inspections or comply with campus and regulatory requirements.

According to the IIPP, departments are required to conduct safety inspections once per semester. Additionally, EH&S is responsible for completing assessments every one to four years, depending on the level of hazardous activity in the department. These assessments are to include, but not be limited to, monitoring the departmental inspections and follow-up actions and reviewing departmental PPE evaluations.

We reviewed 11 locations with HAZMAT and found that departmental safety inspections were not performed or documented at eight locations, and EH&S had not assessed campus departments since 2016. Also, PPE evaluations had not been documented for any of the colleges or departments, except for the department of biology, which was last evaluated in 2015.

Additionally, we reviewed 11 locations and found that:

- At five locations, workspaces were disorganized.
- At three locations, spill kits were not available.
- At two locations, chemicals and/or equipment were stored in a fume hood, but the fume hood was not on.
- At one location, some chemical containers contained corrosion and the flammable cabinet was overloaded with flammable and/or combustible liquids. Also, the freezer had excessive frost buildup, and the chemicals inside were not labeled properly. Additionally, there was an unattended active experiment, but there was no notification posted in the room or on the door explaining the operation.
- At one location, one container of chemicals was inappropriately stored on the floor outside the fume hood.
- At two locations, several pressurized gas cylinders were not properly secured with two chains.
- At four locations, some pressurized gas cylinders were not marked with their contents.
- At one location, caps were not placed on pressurized gas cylinders when work was not being conducted, and the tubing connected to the cylinder was torn.

Regular and systematic safety inspections and compliance with campus and regulatory requirements help to ensure compliance with the campus IIPP; increase 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 process for departmental safety inspections and EH&S assessments and revise the process as necessary to ensure regular inspections and assessments.
- b. Provide training and guidance to all personnel involved in handling HAZMAT of proper regulatory and campus requirements, including, but not limited to, the documentation of PPE evaluations, workplace organization, spill kits, storage and labeling of chemicals and pressurized gas cylinders, and notifications of active experiments.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Evaluate the current process for departmental safety inspections and EH&S assessments and revise the process as necessary to ensure regular inspections and assessments.
- b. Provide training and guidance to all employees involved in handling HAZMAT of proper regulatory and campus requirements, including, but not limited to, the documentation of PPE evaluations, workplace organization, spill kits, storage and labeling of chemicals and pressurized gas cylinders, and notifications of active experiments.

Anticipated completion date: December 12, 2019

3. SAFETY EQUIPMENT INSPECTIONS

OBSERVATION

Campus departments did not consistently document regular inspections of certain safety equipment.

We reviewed 13 locations with HAZMAT and HAZWASTE, and we found that:

- At ten locations, monthly fire extinguisher inspections were not consistently documented. At three other locations, monthly fire extinguisher inspections were not consistently documented and dated.
- At five locations, access to the eyewash and safety shower stations was obstructed.
- At five locations, monthly eyewash and/or safety shower station inspections were not consistently documented or were not documented at all.
- At one location, the safety shower station was inspected monthly; however, the eyewash station was unlabeled, and there was no documented record of monthly inspections.

Regular inspection of safety equipment helps to ensure that equipment is in good working condition and easily accessible and further ensures a healthy and safe environment for employees and students.

RECOMMENDATION

We recommend that the campus:

- a. Evaluate the current process for regular inspections of safety equipment and revise the process as necessary to ensure that all safety equipment is subject to routine and comprehensive inspections.
- b. Remind appropriate college administrators, staff, and faculty of the regulatory and campus requirements regarding safety equipment accessibility and inspections, and provide training as needed.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Evaluate the current process for regular inspections of safety equipment and revise the process as necessary to ensure that all safety equipment is subject to routine and comprehensive inspections.
- b. Remind appropriate college administrators, staff, and faculty of the regulatory and campus requirements regarding safety equipment accessibility and inspections, and provide training as needed.

Anticipated completion date: October 4, 2019

4. ROLES AND RESPONSIBILITIES

OBSERVATION

Campus personnel were not always performing the roles and responsibilities assigned to them in the IIPP and CHP.

Specifically, we found that:

- The IIPP designated specific HS responsibilities to deans and department chairs; however, deans and department chairs had delegated their HS responsibilities to department safety coordinators (DSC).
- The campus did not have a current listing of designated college/department chemical hygiene officers (CHO) in accordance with the CHP. The DSCs were assigned to be the college/department CHOs, but this role was not clearly designated in the CHP.
- The CHP did not include a clear designation of the university CHO.

Clearly defined, documented, and communicated roles and responsibilities helps to ensure that duties are performed to maintain a healthy and safe environment for employees and students and improve compliance with regulatory requirements.

RECOMMENDATION

We recommend that the campus:

- a. Evaluate and update the roles and responsibilities of the deans and department chairs in the IIPP, and update the IIPP accordingly.
- b. Evaluate the current roles and responsibilities of the DSCs and either designate the university and college/department CHOs or update the CHP accordingly.
- c. Designate and document the university CHO in the CHP.
- d. Communicate these roles and responsibilities to the appropriate individuals.

MANAGEMENT RESPONSE

We concur. The campus will:

- a. Evaluate and update the roles and responsibilities of the deans and department chairs in the IIPP, and update the IIPP accordingly.
- b. Evaluate the current roles and responsibilities of the DSCs and either designate the university and college/department CHOs or update the CHP accordingly.
- c. Designate and document the university CHO in the CHP.
- d. Communicate these roles and responsibilities to the appropriate individuals.

Anticipated completion date: September 20, 2019

5. HAZARDOUS MATERIALS PROCUREMENT

OBSERVATION

The campus had not formally documented or implemented campus-specific policies and procedures for purchasing HAZMAT, and HAZMAT was purchased using procurement cards (P-cards), which was prohibited by the campus *P-Card Program Manual*.

Specifically, we reviewed 15 P-card chemical purchases and found that four transactions were related to the purchase of HAZMAT, and the purchasing department issued a waiver for these purchases. However, the campus *P-Card Program Manual* states that waivers are only allowed for restricted purchases, not for prohibited purchases.

Campus-specific procurement policies and procedures help to ensure consistent HAZMAT purchasing practices and reduces the potential liability to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Document and implement campus-specific policies and procedures to ensure proper HAZMAT purchasing.
- b. Evaluate whether departments should be able to purchase HAZMAT using P-cards, and if so, 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. The campus will:

- a. Document and implement campus-specific policies and procedures to ensure proper HAZMAT purchasing.
- b. Evaluate whether departments should be able to purchase HAZMAT using P-cards, and if so, update the campus P-card policy accordingly.
- c. Communicate and distribute the new policies and procedures to appropriate campus administrators, staff, and employees.

Anticipated completion date: December 12, 2019

6. HAZARD COMMUNICATION PROGRAM

OBSERVATION

The campus HAZCOM program needed improvement.

We found that the HAZCOM regulations described standards for labeling, safety data sheets (SDS), and employee information and training. However, the following elements, as required by California Code of Regulations (CCR), Title 8, §5194, *Hazard Communications*, were not included in the HAZCOM program:

- A reference to the existing chemical inventory system.
- Guidance or procedures for employees or supervisors to use when labeling secondary containers.

- 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, or the visual appearance or odor of hazardous chemicals when being released.

Additionally, we reviewed 11 locations with HAZMAT, and we found that:

- At seven locations, several container labels did not include a written or graphic hazard warning.
- At six locations, several container labels were unclear, illegible, or torn. Additionally, the labels did not include the name of the substance or chemicals.

A complete HAZCOM program improves compliance with regulatory requirements and promotes a healthy and safe environment for employees and students, and proper labeling of HAZMAT communicates potential danger and 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. Provide training and guidance to the appropriate campus administrators, staff, and faculty on proper labeling of HAZMAT in accordance with regulatory and campus requirements.

MANAGEMENT RESPONSE

We concur. The campus will:

- 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. Provide training and guidance to the appropriate campus administrators, staff, and faculty on proper labeling of HAZMAT in accordance with regulatory and campus requirements.

Anticipated completion date: October 4, 2019

7. HAZARDOUS WASTE

OBSERVATION

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

We reviewed 12 locations with HAZWASTE, and we found that:

- At six locations, not all HAZWASTE containers were labeled, and some labels were unclear or incomplete; therefore, we could not determine whether waste had been accumulating beyond the appropriate time period.
- At two locations, HAZWASTE containers had been accumulating beyond the appropriate time period.
- At one location, there was corrosion and chemical spills near the HAZWASTE containers, and HAZWASTE was stored in the same secondary container as HAZMAT.
- At one location, HAZWASTE included broken glass, but the container was not labeled.
- At one location, HAZWASTE and HAZMAT were stored in the same fume hood without distinction between the two. Additionally, a medical waste sharps container was propped open but was not being used or accessed by a student or the principal investigator in the lab.
- At one location, one HAZWASTE container had corrosion from a chemical spill in the fume hood.
- At one location, a large chemical spill in the HAZWASTE storage area that had occurred years ago had not been cleaned. Additionally, several of the HAZWASTE containers in the storage area were covered in layers of dust, indicating that they had been accumulating for some time. Further, there was a large, unlabeled box of carbon fiber stored outside of the storage area in an open yard that could be accessed by anyone in the yard.

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

RECOMMENDATION

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

MANAGEMENT RESPONSE

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

| Anticipated completion date: September 20, 2019

8. INSTITUTIONAL BIOSAFETY COMMITTEE

OBSERVATION

The campus did not have an IBC or equivalent review body.

We found that the campus performed National Institutes of Health (NIH) research relating to recombinant or synthetic nucleic acid molecules but did not have an IBC. The NIH requires that institutions that receive NIH support to perform research relating to recombinant or synthetic nucleic acid to have an IBC.

IBCs can help improve compliance with NIH requirements and help principal investigators review research involving recombinant or synthetic nucleic acid molecules.

RECOMMENDATION

We recommend that the campus establish an IBC or an equivalent review body based on the structure recommended by the NIH.

MANAGEMENT RESPONSE

We concur. The campus will establish an IBC or an equivalent review body based on the structure recommended by the NIH.

Anticipated completion date: August 16, 2019

9. LASER SAFETY PROGRAM

OBSERVATION

The campus-specific laser safety program had not been fully implemented.

We found that five laboratories on campus used lasers to perform experiments, but the campus did not have a documented laser safety program before December 2018. The campus was using the laser safety program from another CSU campus while it was working on implementing a campus-specific program.

A written and comprehensive laser safety program reduces the risk of injuries associated with the use of lasers.

RECOMMENDATION

We recommend that the campus fully implement a campus-specific laser safety program and communicate the program to all applicable campus laser users.

MANAGEMENT RESPONSE

We concur. The campus will fully implement a campus-specific laser safety program and communicate the program to all applicable campus laser users.

Anticipated completion date: September 20, 2019

10. PLAN REVIEW

OBSERVATION

There was no evidence that the Bloodborne Pathogens (BBP) Exposure Control Plan (ECP) and CHP were consistently reviewed annually for effectiveness or updated as needed.

Specifically, we found that:

- There was no evidence that the BBP ECP had been reviewed annually for effectiveness, and it had not been revised since January 2014.
- There was no evidence that the CHP was reviewed for effectiveness in 2016 or 2017; however, it was reviewed in 2018.

Performing an annual review of the BBP ECP and CHP improves compliance with regulatory requirements and helps to maintain an effective BBP ECP and CHP, which helps to ensure a healthy and safe environment.

RECOMMENDATION

We recommend that the campus document the annual review of the BBP ECP and CHP and update the plans as necessary.

MANAGEMENT RESPONSE

We concur. The campus will document the annual review of the BBP ECP and CHP and update the plans as necessary.

Anticipated completion date: December 12, 2019

11. ANNUAL REPORTING

OBSERVATION

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

We found that the campus submitted the annual HS report for fiscal year (FY) 2014/15 and FY 2015/16; however, it was not submitted for FY 2016/17 and FY 2017/18, as required by Executive Order (EO) 1039, *Occupational Health & Safety Policy*.

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

RECOMMENDATION

We recommend that the campus annually prepare and submit an HS report to the CO.

MANAGEMENT RESPONSE

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

Anticipated completion date: December 12, 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 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 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 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, Northridge (CSUN), the responsibility for establishing and maintaining effective policies regarding EH&S resides with the campus president. Oversight and responsibility of the EH&S office is delegated to the EH&S director, who reports to the associate vice president of facilities development and operations, who then reports to the vice president of administration and finance and chief financial officer. The EH&S office oversees the EH&S programs on campus; works to promote environmental stewardship and protects the HS of CSUN faculty, staff, and students; and provides technical expertise and support through the development of EH&S 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 CSUN campus from March 25, 2019, through May 9, 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 PPE; and regular inspections and monitoring of key safeguards and engineering controls.
- Proper storage and safety of HAZMAT, including procurement; maintenance of accurate inventories; appropriate labeling and storage practices; and access controls.
- Communications and training processes, including evaluation of the HAZCOM plan; availability of material 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; BBP ECP; 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*
- CSUN *Injury and Illness Prevention Program*
- CSUN *Chemical Hygiene Program*
- CSUN *Hazard Communication Plan*
- CSUN *Hazardous Materials Storage and Use Policy*
- CSUN *Chemical Storage Guidelines*
- CSUN *Purchase P-card Manual*
- CSUN *Radiation Safety Manual*
- CSUN *Medical Monitoring Requirements*
- CSUN *Respiratory Protection Program*
- CSUN *Hazardous Waste Management Procedure*
- CSUN *Occupational Exposure to Bloodborne Pathogens Program*
- CSUN *Spill Prevention, Control, and Countermeasure Plan*
- CSUN *Asbestos Management Policy*
- CSUN *Personal Protective Equipment Program*

AUDIT TEAM

Audit Manager: Caroline Lee
Senior Auditor: Christina Fennell