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December 6, 2017

Dr. Joseph I. Castro, President
California State University, Fresno
5241 N. Maple Avenue
Fresno, CA 93740

Dear Dr. Castro:

Subject: Audit Report 17-26, Hazardous Materials Management, California State University, Fresno

We have completed an audit of *Hazardous Materials Management* as part of our 2017 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 the Office of 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



HAZARDOUS MATERIALS MANAGEMENT

**California State University,
Fresno**

Audit Report 17-26
October 25, 2017

EXECUTIVE SUMMARY

OBJECTIVE

The objectives of the audit were to ascertain the effectiveness of operational, administrative, and financial controls related to hazardous materials management (HMM) and to ensure compliance with relevant governmental regulations, Trustee policy, Office of the Chancellor directives, and campus procedures.

CONCLUSION

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

Based upon the results of the work performed within the scope of the audit, except for the weaknesses described below, the operational, administrative, and financial controls for HMM as of September 22, 2017, 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 HMM, with guidance primarily provided by the office of environmental health and safety (EHS). However, we found that the campus did not ensure that all employees who handled hazardous materials (HAZMAT) and hazardous waste (HAZWASTE) completed required training, and some agreements with HAZWASTE transporters were not established via the California State University (CSU) model contract. We also found that EHS did not always properly and timely inspect safety equipment or ensure that required CSU and regulatory reports were filed or filed timely. Further, campus departments did not always follow campus and regulatory policies and procedures, including conducting periodic workplace inspections and proper labeling and storage of HAZMAT and HAZWASTE.

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

OBSERVATIONS, RECOMMENDATIONS, AND RESPONSES

1. TRAINING

OBSERVATION

The campus did not ensure that all employees who handled HAZMAT and HAZWASTE completed required training.

We reviewed training records for 33 employees who handled HAZMAT, including 12 from the College of Science and Mathematics, eight from plant operations, seven from the College of Arts and Humanities, and six from the Jordan College of Agricultural Sciences and Technology, to evaluate whether new employees completed initial training for the injury and illness prevention program (IIPP) and the hazard communication (HAZCOMM) program. We found that 24 did not complete IIPP initial training and 15 did not complete HAZCOMM initial training.

Of the same 33 employees selected above, we also reviewed the training records of 17 who work at sites that generate HAZWASTE to determine whether they completed initial and refresher HAZWASTE training. The employees included eight from the College of Science and Mathematics, six from the College of Arts and Humanities, and three from the Jordan College of Agricultural Sciences and Technology. We found that 13 did not complete the initial HAZWASTE training and 17 did not complete the refresher HAZWASTE training.

In addition, the campus did not have a process to ensure that employees with overdue or incomplete HAZMAT and HAZWASTE trainings were notified.

Effective administration of safety training helps to ensure compliance with required program provisions; increases awareness of HAZMAT, HAZWASTE, and injuries and accidents; and reduces the potential of risk and liability to the campus.

RECOMMENDATION

We recommend that the campus:

- a. Ensure that all employees who handle HAZMAT and HAZWASTE complete required initial and refresher training.
- b. Notify employees with overdue or incomplete HAZMAT and HAZWASTE trainings and ensure that this training is completed.

MANAGEMENT RESPONSE

We concur. The campus will identify and ensure that all employees who work with HAZMAT and HAZWASTE complete required initial and refresher training and will establish and implement procedures to monitor and track compliance and ensure that this training is completed by April 25, 2018.

2. INJURY AND ILLNESS PREVENTION PROGRAM

OBSERVATION

The campus IIPP did not reflect current campus practices related to workplace inspections.

According to the campus IIPP, each department must ensure that regular and systematic workplace inspections are scheduled for all departmental areas and that department safety coordinators are assigned to conduct these inspections. In addition, EHS recommends the frequency of inspection based on the level of hazard: High-hazard areas should be inspected weekly, warehouse and retail areas should be inspected monthly, large offices should be inspected semi-annually, and small offices should be inspected annually. EHS also recommends that department offices maintain records of inspections for review by EHS.

We found that campus departments were not conducting these periodic workplace inspections or maintaining records to document compliance. We noted that annual inspections were conducted by EHS instead.

Performing regular and systematic workplace inspections helps to ensure compliance with the campus IIPP, increases the likelihood of identifying unsafe conditions, and reduces potential risk due to accidents and injuries, including litigation and regulatory fines and penalties.

RECOMMENDATION

We recommend that the campus ensure that departments perform regular and systematic workplace safety inspections in accordance with the campus IIPP.

MANAGEMENT RESPONSE

We concur. The campus will review and update the campus IIPP to ensure that the inspection requirements meet Cal-OSHA requirements and Executive Order 1039; communicate and distribute the updated inspection requirements to the appropriate university administrators, faculty, and staff; and establish and implement procedures to monitor and track compliance with required IIPP inspections by April 25, 2018.

3. HAZARDOUS WASTE

OBSERVATION

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

We inspected 22 locations, including eight locations at the College of Agricultural Sciences and Technology, seven locations at the College of Science and Mathematics, five locations at the College of Arts and Humanities, the campus main waste accumulation site, and the campus shipping and receiving location. We evaluated whether HAZWASTE was properly labeled and stored in accordance with *California Code of Regulations* and the California State University, Fresno (Fresno State) *Hazardous Waste Program Policy Manual*.

We found that:

- At two locations, HAZWASTE was not always properly stored. At one department of chemistry stockroom, HAZWASTE was stored in a glass container without a lid. At the department of theater arts costume shop, empty aerosol cans were on the floor and not properly accumulated in a labeled bin.
- At three locations, HAZWASTE containers were not labeled with the type of waste and date that accumulation began. The locations included the agricultural operations vehicle repair shop, the department of viticulture and enology faculty research laboratory, and the Jordan agricultural research center laboratory. As such, we were unable to verify what type of HAZWASTE was being stored and how long it had been there.
- At one department of chemistry stockroom, the HAZWASTE container was labeled, but the label did not indicate the accumulation start date. As such, we were not able to verify how long waste was accumulated.
- At the department of art and design print shop, a HAZWASTE container had an incorrect accumulation start date on the label, although it appeared that it was emptied weekly.
- At one department of chemistry faculty research laboratory, HAZWASTE had been accumulating beyond the one-year waste disposal requirement for satellite locations.
- HAZWASTE accumulated by various campus departments was not timely transferred to the campus main waste accumulation site, and we noted that some HAZWASTE had been accumulating for more than a year.
- At two locations, a universal waste container was not properly labeled. As such, we were unable to verify how long the waste had been accumulating. Specifically, at the department of biology stockroom, a container of used batteries was not labeled. Also, at two department of chemistry stockrooms, the department of physics faculty laboratory, and the agricultural operations farm machinery storage, containers of used batteries were labeled but did not indicate the accumulation start date.

Proper labeling, storage, and timely disposal of HAZWASTE reduces the likelihood of accidents and injuries, as well as potential risk and liability to the campus.

RECOMMENDATION

We recommend that the campus properly label and store and timely dispose of HAZWASTE in accordance with campus and regulatory requirements.

MANAGEMENT RESPONSE

We concur. The campus will ensure that the departments properly label and store and timely dispose of HAZWASTE in accordance with campus and regulatory requirements by April 25, 2018.

4. HAZARDOUS MATERIALS

OBSERVATION

Campus departments did not always label and store HAZMAT in accordance with campus and regulatory requirements.

We inspected 22 locations, including eight locations at the College of Agricultural Sciences and Technology, seven locations at the College of Science and Mathematics, five locations at the College of Arts and Humanities, the campus main waste accumulation site, and the campus shipping and receiving location, to evaluate whether HAZMAT was properly labeled and stored. We found that:

- HAZMAT stored in a secondary container was not properly labeled in various departments, including eight locations at the College of Agricultural Sciences and Technology, seven locations at the College of Science and Mathematics, and five locations at the College of Arts and Humanities.
- A refrigerator used for storing HAZMAT contained food or drink used for human consumption. At one department of chemistry stockroom, we found milk and orange juice that were being used for research but were not properly labeled “for research purposes only.” Additionally, at the department of arts and design darkroom, a lunch bag was found in a refrigerator with substances that appeared to be hazardous.

Proper labeling and storage of HAZMAT communicates potential danger and helps to ensure the safety of employees and students who come in contact with HAZMAT.

RECOMMENDATION

We recommend that campus departments properly label and store HAZMAT.

MANAGEMENT RESPONSE

We concur. The campus will ensure that departments properly label and store HAZMAT in accordance with regulatory requirements by April 25, 2018.

5. SAFETY EQUIPMENT INSPECTIONS

OBSERVATION

EHS did not always properly and timely inspect safety equipment.

We inspected 22 locations, including eight locations at the College of Agricultural Sciences and Technology, seven locations at the College of Science and Mathematics, five locations at the College of Arts and Humanities, the campus main waste accumulation site, and the campus shipping and receiving location, to evaluate whether required safety equipment inspections were performed.

We found that:

- At three locations, fire extinguishers were not inspected monthly, including the department of art and design print shop, department of theater arts costume shop, and agricultural operations vehicle repair shop.
- At two locations, including a laboratory in the Jordan agricultural research center and the department of art and design offsite graduate art studio and gallery, the eyewash station did not have a label indicating that a monthly inspection had been performed. As such, we could not verify whether an inspection occurred and if so, when it occurred.

Proper and timely inspection of safety equipment helps to ensure that safety equipment is in good working condition and reduces the potential risk due to accidents and injuries.

RECOMMENDATION

We recommend that EHS ensure that safety equipment inspections are completed properly and timely.

MANAGEMENT RESPONSE

We concur. EHS/RM will ensure that safety equipment inspections are completed properly and timely by April 25, 2018.

6. HAZWASTE TRANSPORTER CONTRACTS

OBSERVATION

The campus did not always use the CSU model contract to execute written contracts with HAZWASTE transporters.

We reviewed five third-party agreements with contractors that transport HAZWASTE and found that three were established with purchase orders rather than with the CSU model contract, as required by Integrated California State University Administrative Manual (ICSUAM) §5412.00, Section 700, *Hazardous Materials Removal Services Contracts*.

Agreements that follow the CSU model contract include required risk management provisions and reduce risk and liability exposure.

RECOMMENDATION

We recommend that the campus use the CSU model agreement to execute written contracts with HAZWASTE transporters.

MANAGEMENT RESPONSE

We concur. The campus will use the CSU model agreement to execute written contracts with HAZWASTE transporters by February 28, 2018.

7. REGULATORY REPORTING

OBSERVATION

The campus did not always submit an annual health and safety program report to the chancellor's office, and the biennial report to the California Department of Toxic Substances Control (DTSC) was not filed timely.

We found that:

- The campus did not submit the required annual health and safety program report to the systemwide Office of Risk Management for fiscal years 2014/15 and 2015/16.
- The campus 2015 biennial report was not filed timely with the California DTSC. The DTSC requires submission by March 1 of each even-numbered year. However, the campus report was filed on June 6, 2016, instead. The information collected from the biennial report is used to provide the California DTSC and U.S. Environmental Protection Agency with data about the generation, transportation, and final disposition of HAZWASTE in the state. A summary report of this information is provided to the public through publication of the National Biennial Resource Conservation and Recovery Act Hazardous Waste Report.

Timely submission of required reports helps to ensure compliance with regulatory provisions and reduces the likelihood of fines, citations, and additional regulatory oversight.

RECOMMENDATION

We recommend that EHS:

- a. Prepare and submit the annual health and safety program report to the campus president and the systemwide Office of Risk Management.
- b. File the California DTSC biennial report timely.

MANAGEMENT RESPONSE

We concur.

- a. EHS/RM will prepare and submit an annual health and safety program report to the campus president and the systemwide Office of Risk Management by March 31, 2018, and annually thereafter.
- b. EHS/RM will ensure that the California DTSC biennial report is filed timely. The next filing date is March 1, 2018.

GENERAL INFORMATION

BACKGROUND

The Environmental Protection Agency (EPA) works with the state of California to enforce the Resource Conservation and Recovery Act (RCRA), which was enacted in 1976 to address growing public concern regarding health risks, waste generation, and waste disposal surrounding HAZMAT. According to the RCRA, the federal government can authorize states to develop, implement, and enforce their own HAZMAT and waste management regulations so long as the regulations are as stringent or broader in scope than federal regulations. In 1992, the EPA granted California the authority to develop its own regulations, most of which are codified in the California *Health and Safety Code* and in Titles 8 and 22 of the California Code of Regulations (CCR). Title 8 of the CCR addresses HAZMAT safety, including labeling, safety data sheets and training, and the requirement to establish a written *Hazard Communication Program* and an *Injury and Illness Prevention Program*. Title 22 of the CCR addresses HAZWASTE management with regard to accumulation, on-site storage limits, transport and disposal.

Two California State University Executive Orders (EO) provide additional guidance regarding campus HMM. EO 1039, *Occupational Health and Safety*, requires campuses to develop, implement, and maintain a health and safety program to address identified hazards; and EO 1069, *Risk Management and Public Safety*, mandates that campuses delegate systemwide administrative oversight and programmatic responsibility.

Fresno State purchases HAZMAT for both instructional and research purposes, most prominently in colleges that focus on sciences, agriculture, and engineering. In addition, campus maintenance departments such as custodial services, facilities, and auto shops use materials that are known to have properties that are harmful to humans and the environment and must be monitored to ensure proper and safe utilization. Nearly all of the areas that use HAZMAT generate HAZWASTE that is subject to strict regulation for safe and proper storage, transport, and disposal.

The responsibility for establishing and maintaining effective policies regarding environmental health and safety issues at Fresno State rests with the campus president. EHS oversees HMM, including HAZWASTE on campus; serves as the liaison with campus and regulatory agencies for issues related to environmental compliance and occupational safety; and provides assistance to faculty, staff, students, and visitors in protecting their health and safety.

SCOPE

We visited the Fresno State campus from August 22, 2017, to September 22, 2017. Our audit and evaluation included the audit tests we considered necessary in determining whether administrative and operational controls are in place and operative. The audit focused on procedures in effect from July 1, 2015, through September 22, 2017.

Specifically, we reviewed and tested:

- The general control environment over campus HAZMAT, including clear lines of organizational authority and responsibility, HAZMAT risk assessment, and current written policies and procedures.
- HMM, including systems and procedures for controlling the purchase, generation, storage, use, and disposal of HAZMAT; compliance with labeling to communicate contents and hazards; and regulatory registration and permits.
- HAZWASTE activities related to proper identification, storage, and monitoring to ensure that accumulated HAZWASTE does not remain on campus longer than allowable; and evaluation of contract services for the transport and disposal of HAZWASTE.
- Compliance with federal and state regulations, including the Hazard Communication Program and the Injury and Illness Prevention Plan, along with processes for scheduled safety inspections and corrective action; and an effective emergency and contingency plan in place for HAZMAT and/or HAZWASTE spills and exposures.
- Required training for employees, including staff and faculty, who handle or may encounter HAZMAT and/or HAZWASTE. These trainings include initial and refresher HAZCOM (Fresno State – Hazard Communication Cal-OSHA), CSU Injury and Illness Prevention Program and HAZWASTE (Department of Toxic Substances Control: California Hazardous Waste Classification).

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 administrative and operational controls, included interviews, walkthroughs, and detailed testing on certain aspects of the campus HMM program. Our review was limited to gaining reasonable assurance that essential elements of campus HMM were in place and did not examine all aspects of the program. Specifically, our review did not include the components of HMM related to laboratory safety, such as the Chemical Hygiene Plan.

CRITERIA

Our audit was based upon standards as set forth in federal and state regulations and guidance; California State University Board of Trustee policies; Office of the Chancellor policies, letters, and directives; campus procedures; and other sound administrative practices. 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:

- United States EPA, *Resource Conservation and Recovery Act*
- California Health and Safety Code (HSC) Division 10, *Uniform Controlled Substances Act*

- California HSC Division 20, *Miscellaneous Health and Safety Provisions*
- CCR Title 8, *Industrial Relations*
- CCR Title 22, Division 4.5, *Environmental Health Standards for the Management of Hazardous Waste*
- EO 1039, *California State University - Occupational Health & Safety Policy*
- EO 1069, *Risk Management and Public Safety*
- ICSUAM §5000, *Contracts and Procurement*
- Fresno State *Hazard Communication Program*
- Fresno State *Hazardous Waste Program Policy Manual*
- Fresno State *Injury and Illness Prevention Plan*

AUDIT TEAM

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