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June 27, 2017

Dr. Jeffrey D. Armstrong, President  
California Polytechnic State University, San Luis Obispo  
One Grand Avenue  
San Luis Obispo, CA 93407

Dear Dr. Armstrong:

**Subject: Audit Report 17-20, Hazardous Materials Management,  
California Polytechnic State University, San Luis Obispo**

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

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# **HAZARDOUS MATERIALS MANAGEMENT**

**California Polytechnic State University,  
San Luis Obispo**

Audit Report 17-20  
May 25, 2017

## EXECUTIVE SUMMARY

### OBJECTIVE

The objectives of the audit were to ascertain the effectiveness of operational and administrative 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

Based upon the results of the work performed within the scope of the audit, a few specific control weaknesses were noted; generally, however, controls were adequate, appropriate, and effective to provide 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 hazard communication (HAZCOMM) program and injury and illness prevention program (IIPP) did not reflect current practices, and the IIPP was last updated in 2014. Our observations related to noncompliance with provisions of these programs, including hazardous materials and hazardous waste training and health and safety inspections, were the result of the lack of clear oversight roles and responsibilities, and our observation related to the procurement of controlled substances and precursor chemicals stemmed from the lack of written policies and procedures. In addition, HAZCOMM provisions, the labeling of hazardous waste, and regulatory reporting needed improvement.

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

## OBSERVATIONS, RECOMMENDATIONS, AND RESPONSES

### 1. HAZARD COMMUNICATION PROGRAM

#### OBSERVATION

The campus HAZCOMM program did not reflect current campus processes or clarify oversight responsibilities.

We noted that the HAZCOMM program created a decentralized organizational structure and gave significant responsibility over key components to the departments. For example, the departments were responsible for developing and implementing an education and training program designed to instruct employees and students in HAZCOMM, with EHS providing employee training on a consultative basis.

However, we found that the departments did not develop and implement the required education and training program because they believed that EHS would provide and monitor this training; instead, the departments provided informal training regarding general safety and related topics to department faculty and staff. In addition, the HAZCOMM program did not indicate how departments would be monitored for compliance with required training provisions or who was responsible for oversight.

A current HAZCOMM program with clearly defined roles and responsibilities helps to ensure performance of duties and functions, improves compliance with California State University (CSU) requirements, increases awareness, and reduces the potential of risk and liability to the campus.

#### RECOMMENDATION

We recommend that the campus:

- a. Review and update the components of the HAZCOMM program described above, including, but not limited to, clear definitions of the appropriate roles and responsibilities for key processes, development and implementation of the required education and training program, and a process to monitor departments for compliance.
- b. Communicate and distribute the updated HAZCOMM program to the appropriate college administrators, staff, and faculty.

#### MANAGEMENT RESPONSE

We concur. EHS will review and update the components of the HAZCOMM program as described in Recommendation A above, and communicate and distribute the updated HAZCOMM program to the appropriate college administrators, staff, and faculty by October 31, 2017.

## 2. TRAINING

### OBSERVATION

The campus did not always identify employees who handled hazardous materials (HAZMAT) and/or hazardous waste (HAZWASTE) for the provision of safety training and did not always ensure that required training was assigned and completed.

We noted that the campus assigns safety training to employees in the computer-based training system, SkillPort. All campus employees are required to complete the CSU IIPP course, while those employees identified by their manager as having job duties that involve the handling or use of HAZMAT are required to complete the HAZCOMM (Hazard Communication: An Employee's Right to Know) course.

We found that:

- The campus had not consistently identified all employees requiring HAZCOMM initial and refresher training nor assigned the required courses in SkillPort. We found that the HAZCOMM course was primarily assigned to employees in facilities who were identified by their manager, and EHS had not identified all campus employees who performed work around HAZMAT.
- EHS had developed a HAZWASTE course but did not assign the course to anyone in the campus community. Although HAZWASTE training was presented to a small group of EHS employees or when specifically requested by college departments or academic areas, this training did not include all employees who were required to take the course.
- Employees, including faculty and staff, who were assigned a safety course in SkillPort did not always complete the training, and there was no process to monitor compliance or follow-up with the employee. We reviewed SkillPort reports, and we found that the completion rate was 55 percent for HAZCOMM training and 75 percent for IIPP training. In addition, the campus did not use available data from SkillPort to report the completion rate of assigned safety training to appropriate management.

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

### RECOMMENDATION

We recommend that the campus:

- a. Identify all employees who work with HAZMAT and/or HAZWASTE and provide initial and refresher HAZCOMM and HAZWASTE training.
- b. Establish and implement procedures to monitor and track compliance with required training and report the completion rate to appropriate management.

**MANAGEMENT RESPONSE**

We concur. EHS will identify all employees who work with HAZMAT and/or HAZWASTE and provide initial and refresher HAZCOMM and HAZWASTE training and will establish and implement procedures to monitor and track compliance with required training and report the completion rate to appropriate management by October 31, 2017.

**3. INJURY AND ILLNESS PREVENTION PROGRAM**

**OBSERVATION**

The campus IIPP did not reflect current campus processes or clarify oversight responsibilities, and IIPP health and safety inspections were not conducted in accordance with campus and regulatory requirements.

We noted that the campus IIPP, which had not been updated since 2014, created a decentralized organizational structure giving departments significant responsibility over key components. For example, the IIPP stated that each department must ensure that a regular and systematic health and safety inspection process is scheduled and performed for all departmental areas, with EHS in a consulting role.

We inspected 20 locations where the campus accumulated and stored HAZWASTE and found that:

- Departments were not performing regular and systematic workplace inspections. Instead, they performed inspections on an ad-hoc basis and indicated that they thought EHS was responsible for inspections.
- EHS performed inspections only on an as-needed or consultative basis, such as when requested by a department for accreditation, and follow-up was not performed to ensure that corrective actions were taken.
- The campus IIPP did not indicate how departments would be monitored for compliance with required inspections or who was responsible for the oversight.

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

**RECOMMENDATION**

We recommend that the campus:

- a. Review and update IIPP safety inspection policies related to HMM, and communicate and distribute the updated policies to the appropriate college administrators, staff, and faculty.

- b. Establish and implement procedures to monitor and track compliance with required IIPP inspections.

**MANAGEMENT RESPONSE**

We concur. EHS will review and update IIPP safety inspection policies related to HMM; communicate and distribute the updated policies to the appropriate college administrators, staff, and faculty; and establish and implement procedures to monitor and track compliance with required IIPP inspections by November 15, 2017.

**4. HAZARDOUS WASTE**

**OBSERVATION**

The campus did not properly label or timely dispose of HAZWASTE in accordance with campus and regulatory requirements.

We reviewed 20 locations where the campus accumulated and stored HAZWASTE and found:

- At two of the main accumulation sites on campus, HAZWASTE receptacle labels did not indicate the dates that accumulation started, or a HAZWASTE label was not present, in three instances. In addition, a drum at one of the main accumulation sites had accumulated waste beyond the 90-day regulatory maximum.
- At two other locations, we found that a HAZWASTE receptacle label did not indicate the date that accumulation started, or a HAZWASTE label was not present.

Proper labeling, storage, and 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 timely dispose of HAZWASTE in accordance with campus and regulatory requirements.

**MANAGEMENT RESPONSE**

We concur. EHS will ensure that the campus properly labels and timely disposes of HAZWASTE in accordance with campus and regulatory requirements by October 31, 2017.

**5. HAZCOMM PROVISIONS**

**OBSERVATION**

The campus did not always comply with HAZCOMM provisions related to proper HAZMAT labeling and eyewash and shower equipment inspections.

We reviewed 20 locations where the campus accumulated and stored HAZWASTE and found that:

- At three locations, standard refrigerators used to store chemicals did not have proper labels to communicate their purpose, such as “Danger: No Flammable Materials Storage” or “No Food, Beverage, or Ice for Human Consumption.”
- At one location, hazardous substances that were stored in secondary containers were not properly labeled.
- At two locations, the eyewash and shower equipment were last inspected in August 2014 and October 2016, respectively.
- At six locations, eyewash and shower equipment had no record of monthly inspections.

Compliance with HAZCOMM provisions promote the safety of employees and students in contact with HAZMAT.

#### **RECOMMENDATION**

We recommend that the campus comply with HAZCOMM provisions regarding proper HAZMAT labeling and eyewash and shower equipment inspection.

#### **MANAGEMENT RESPONSE**

We concur. EHS will take the necessary actions to ensure the campus complies with HAZCOMM provisions regarding proper HAZMAT labeling and eyewash and shower equipment inspections by November 15, 2017.

## **6. PROCUREMENT CONTROLS**

#### **OBSERVATION**

Campus policies and procedures did not provide adequate guidance for the procurement of HAZMAT.

We found that the campus did not:

- Require that departments purchasing HAZMAT with a procurement card obtain the advance approval of EHS, unless the materials were radioactive.
- Have written policies and procedures for accepting gifts or donations of HAZMAT.
- Have written policies or procedures for procuring controlled substances and precursor chemicals (also known as controlled substances).

Established policies and procedures can help to ensure consistent practice over HMM, including the purchase and acceptance of gifts of HAZMAT.

**RECOMMENDATION**

We recommend that the campus:

- a. Determine whether departments purchasing HAZMAT with a procurement card should obtain the advance approval of EHS, and if so, update the procurement manual.
- b. Develop written policies and procedures for accepting gifts or donations of HAZMAT and for procuring controlled substances and precursor chemicals.
- c. Communicate and distribute the updated policies or procedures to appropriate college administrators, staff, and employees.

**MANAGEMENT RESPONSE**

We concur. EHS will determine whether departments purchasing HAZMAT with a procurement card should obtain the advance approval of EHS, and if so, update the procurement manual; develop written policies and procedures for accepting gifts or donations of HAZMAT and for procuring controlled substances and precursor chemicals; and communicate and distribute the updated policies or procedures to appropriate college administrators, staff, and employees by November 15, 2017.

**7. REGULATORY REPORTING**

**OBSERVATION**

Administration of the campus Hazardous Materials Business Plan (HMBP) and Annual Health and Safety Program report needed improvement.

The HMBP provides, among other information, inventory of HAZMAT at the campus and emergency response plans and procedures to be followed in the event of a reportable release or threatened release of HAZMAT.

We found that:

- The campus did not timely submit the HMBP to the county of San Luis Obispo, as required by the California Health and Safety Code.
- The 2016 HMBP contained outdated and incomplete information, including an aged Emergency Response Plan, dated October 2014, and an Employee Training Program dated September 2011.

In addition, the campus did not prepare and submit the required Annual Health and Safety Program report to the campus president and the systemwide Office of Risk Management as required by Executive Order (EO) 1039, *California State University - Occupational Health & Safety Policy*.

Timely and accurate submission of required plans and reports can help to ensure compliance with regulatory provisions and reduce the likelihood of fines, citations, and additional regulatory oversight.

**RECOMMENDATION**

We recommend that the campus:

- a. File accurate regulatory reports timely.
- b. Prepare and submit the Annual Health and Safety Program report to the campus president and the systemwide Office of Risk Management.

**MANAGEMENT RESPONSE**

We concur. All regulatory reports will be filed accurately and on time. Speaking specifically about the two Hazardous Materials Business Plan (HMBP) observations: The HMBP yearly update was completed and accepted by EHS on May 11, 2017. In addition, the HMBP was updated with current plans and program information. To avoid late filing of report(s), calendar reminders have been set one month prior to the due date. Action on this item has been completed.

EHS will prepare and submit the Annual Health and Safety Program report to the campus president and the systemwide Office of Risk Management by November 15, 2017.

## 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 hazardous waste management with regard to accumulation, on-site storage limits, transport and disposal.

Two California State University EOs 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.

California Polytechnic State University, San Luis Obispo (Cal Poly San Luis Obispo) 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 utilize 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 Cal Poly San Luis Obispo rests with the campus president. The campus EHS office 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 Cal Poly San Luis Obispo campus from February 27, 2017, to April 14, 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 April 14, 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.
- Hazardous waste activities related to proper identification, storage, and monitoring to ensure that accumulated hazardous waste does not remain on campus longer than allowable; and evaluation of contract services for the transport and disposal of hazardous waste.
- 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 hazardous waste spills and exposures.
- Required training for employees, including staff and faculty, who handle or may encounter HAZMAT and/or hazardous waste. These trainings include initial and refresher HAZCOMM (Hazard Communication: An Employee's Right to Know [CalOSHA]), CSU IIPP, and HAZWASTE (Hazardous Waste at Cal Poly).

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*
- Integrated California State University Administrative Manual §5000, *Contracts and Procurement*
- Cal Poly San Luis Obispo *Hazard Communication Program*
- Cal Poly San Luis Obispo *Injury and Illness Prevention Program*
- Cal Poly San Luis Obispo *Hazardous Waste & Materials Procedures*
- Cal Poly San Luis Obispo *Procurement Card (ProCard) Policy Manual*

## AUDIT TEAM

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