PROJECT SUMMARY

Overview

Environmental health, safety, and security processes at the Texas A&M Health Science Center (HSC) require improvement in several areas to better ensure that a safe environment exists and that the HSC is in compliance with relevant laws, policies, regulations, and rules. Significant improvements are needed in regard to compliance with various federal Clery Act requirements. Opportunities for improvement were also noted in the areas of HSC rules and procedures; safety inspections; chemical inventory and storage; safety training; performance measures; and required spill prevention, control and countermeasure plans.

The HSC is in the early stages of a major centralization effort in its environmental health, safety, and security program. This effort will further standardize and automate safety and security processes at the HSC’s multiple locations with central office personnel assigned to oversee and administer this function. Development of rules and standard operating procedures and preparation of a formal risk assessment to identify and analyze safety and security risks at each HSC location including the staffing levels needed would help ensure this centralization initiative is successful.

The HSC has multiple locations including facilities in Bryan/College Station, Corpus Christi, Dallas, Houston, Round Rock, Temple, Kingsville, and McAllen. The Environmental Health and Safety (EHS) and Security Operations Management (SOM) divisions have 36 full-time employees to oversee safety and security operations at all HSC locations.

Summary of Significant Results

Clery Act Reporting and Compliance

Various instances of non-compliance with federal Clery Act requirements were noted at both HSC locations tested in the areas of crime statistics, campus security authorities, daily crime logs, emergency response and evacuation procedures, timely
warnings, and annual security reports. Issues were also noted related to inaccurate or incomplete Clery Act information reported to staff, students and visitors and non-functional links on the HSC website. Additional resources need to be devoted to Clery Act reporting and compliance by the HSC given the number of its locations that must maintain compliance with these requirements in order to avoid the possibility of incurring significant fines and penalties due to noncompliance.

Summary of Management’s Response

We concur.

It is the intent of the HSC to take aggressive action to fully implement the recommendations of the audit report. The HSC will continue to develop, implement, and review written EHS and SOM procedures and guidelines. As recommended, the HSC has taken action to hire the requisite level of EHS personnel to address the findings of the audit. The HSC will continue and complete EHS and SOM centralization with effective rules and procedures that promote the goal of a safe and secure campus environment for faculty, staff, students, and visitors. The HSC will leverage technology to provide accurate, timely, and consistent information that is critical to continuous improvement.

Scope

The review of environmental health, safety and security at the Texas A&M Health Science Center focused primarily on the areas of laboratory and fire/life safety inspections, chemical inventory and storage, student and employee safety training, Clery Act reporting, and safety guidelines and procedures. The audit covered the period of September 1, 2010 to November 30, 2011. Fieldwork was conducted from November 2011 to January 2012.
OBSERVATIONS, RECOMMENDATIONS, AND RESPONSES

1. Clery Act Reporting and Compliance

Observation

Various instances of non-compliance with Clery Act requirements were noted at two HSC locations tested (Baylor College of Dentistry and Temple) in the areas of crime statistics, campus security authorities, daily crime logs, emergency response and evacuation procedures, timely warnings, and annual security reports. Specific instances of non-compliance noted include:

- No identification of all campus security authorities for Baylor College of Dentistry (BCD) and Temple, and the corresponding requirements related to these individuals.

- No daily crime log was located on-site at the Temple campus. In addition, monthly online crime logs for Temple and BCD did not have the Clery Act-required elements and were not current. Additionally, the format for the on-site BCD crime log could be enhanced to make it easier to view all required Clery Act information and should include the disposition of each crime.

- No summary of required emergency response and evacuation procedures were included in the annual security report for either BCD or Temple. This includes 13 separate elements such as statements related to emergency notification, emergency and evacuation procedures, individuals responsible for carrying out actions, disseminating emergency information, and annual testing of emergency response and evacuation procedures.

- Various other missing policies and statements that are required to be in the HSC annual security reports.

The federal Clery Act requires that institutions of higher education publish crime statistics and other required security information in an annual security report. Due to its multiple locations, HSC is required to prepare eight separate annual security reports as well as comply with various other Clery Act requirements for each location.
In addition, issues were noted related to inaccurate or incomplete Clery Act information reported to staff, students and visitors and non-functional links on the HSC website as follows:

- The HSC website and Twitter account have non-Clery complaint warnings which display general news and announcements combined with Clery-required crime information; thus, making it confusing to readers.

- No crime or police reports were found for crimes that occurred during September and October, 2011 at BCD.

- The 2010 crime statistics for BCD were found to contain one incorrect calculation in that the liquor law arrest row displayed public property as having one instance of a crime; however, the total for this row was shown as zero.


The annual security report template used by HSC does not fully address current Clery Act requirements including required hate crime categories. The Director of Security Operations and Management (SOM) has a number of job duties, including compilation of the eight annual security reports required by the Clery Act with no other assistance. In addition, there is no HSC Clery Act compliance committee or other mechanism to review the annual security reports for completeness and accuracy before their submission or to assist in the identification and review of new Clery Act requirements. There is also no designated individual or office responsible for issuing timely warnings for the Temple campus. Non-compliance with Clery Act requirements could result in significant fines and penalties.

**Recommendation**

Address the issues noted above in the areas of crime statistics, campus security authorities, daily crime logs, emergency response and evacuation procedures, timely warnings, and annual security reports to comply with corresponding Clery Act requirements in these areas. Also, resolve the issues related to the completeness and accuracy of crime data collected and reported and non-functional links on the HSC website.

Update the current HSC annual security report template to incorporate requirements in the 2011 Handbook for Campus Safety and Security Reporting including use of Clery Act-required hate...
1. Clery Act Reporting and Compliance (cont.)

crime categories for crime statistics. Develop a HSC Clery Act compliance committee or other mechanism to review the annual security reports before their submission and assist in the identification and review of new Clery Act requirements. Designate an individual or office responsible for issuing timely warnings for the Temple campus.

Management’s Response

All noted items in the audit report have been addressed and the annual security report template will be updated to address current Clery Act requirements. The HSC has assigned an individual whose primary duties and responsibilities are to ensure constant and consistent oversight of Clery Act reporting and compliance. An individual has also been assigned responsibility for issuing timely warnings for the Temple campus. The HSC will conduct monthly on-site inspections at each HSC campus using a prescribed checklist. The results of each inspection are to be documented and corrective action, if necessary, to be immediately implemented. In addition, the HSC has created two Clery Act committees: (1) a policy and procedures committee that reviews processes, protocols, and new rules and regulations; and (2) an implementation committee that is responsible for ensuring all Clery Act information is appropriately disseminated and implemented on each HSC campus. The HSC will begin a Clery Act audit of campuses effective March 30, 2012.

2. HSC Rules and Procedures

Observation

Safety guidelines have been developed to address Texas A&M System Supplemental Risk Management Standards; however, no HSC-level rules have been developed to serve as the basis for these guidelines and ensure they are effectively implemented. In addition, the EHS and SOM divisions lack a comprehensive set of standard operating procedures to support safety and security processes related to safety inspections, chemical inventory and security, student and employee safety training, and Clery Act reporting and compliance. Without HSC rules and detailed internal operating procedures for the EHS and SOM divisions, safety and security processes may not be effectively implemented which could lead to increased risk of student/employee injury, facility damage, and penalties resulting from non-compliance with associated federal and state regulations.
2. HSC Rules and Procedures (cont.)

The Treadway Commission’s Committee of Sponsoring Organization’s “Internal Control - Integrated Framework” states that control activities involve a policy establishing what should be done by management which serves as a basis for corresponding procedures to affect the policy. Development of rules, guidelines, and standard operating procedures is part of the HSC’s current safety and security centralization effort. Although guidelines have been developed there has been insufficient time to prepare corresponding rules and detailed operating procedures for safety and security processes performed by the EHS and SOM divisions.

**Recommendation**

Complete the development of formal HSC rules as needed to better ensure safety and security guidelines and procedures are effectively implemented.

Develop and implement comprehensive standard operating procedures for the HSC EHS and SOM divisions in the above areas.

Ensure these procedures are easily accessible and applied consistently.

Provide training opportunities as needed to personnel to ensure the understanding of these procedures and to efficiently and effectively perform their responsibilities.

**Management’s Response**

The HSC will continue to develop comprehensive rules and procedures. The HSC recognizes that development and implementation of EHS and SOM rules and procedures is an ongoing and continuous process that requires constant review to ensure efficiency. All new processes and procedures are to be online with appropriate notification to targeted personnel by August 31, 2012.

3. Safety and Security Risk Assessment

**Observation**

A formal risk assessment has not been performed to identify, analyze, and address safety and security risks at all HSC locations.

Completion of a formal risk assessment and analysis is needed to identify and analyze the safety and security risks at all HSC locations. A formal risk assessment will provide management with the means to determine if adequate controls and resources are in place to address the identified risks especially given the number of locations and the diversity of operations within the HSC. For
instance, there are currently five EHS staff members to provide oversight and support for safety processes at the eight HSC locations.

A recent report prepared by the A&M System Environmental Health and Safety Division indicated that the HSC needs a minimum of nine full-time equivalent safety staff as calculated using a well accepted industry environmental health and safety staffing model. This model factors in square footage of lab and non-lab space as well as the type of institution and the existence of any Bio-Security Level 3 or 4 facilities. The model does not consider other non-safety personnel that assist with safety processes or portions of safety and security processes. The lack of available staff time and effort resulted in several of the issues identified in this report including timely inspection reporting, performance of follow-up inspections, improper chemical inventory and storage, Clery Act reporting non-compliance, and development of standard operating procedures.

The Treadway Commission’s Committee of Sponsoring Organization’s “Internal Control - Integrated Framework” states that the process of identifying and analyzing risk is an ongoing iterative process and is a critical component of an effective internal control system. Along with assessing risks, management should identify and put into effect actions needed to address the risks including control activities to help ensure that the actions are carried out properly and in a timely manner. In addition, the “Environmental Management Guide for Colleges and Universities” published by the Environmental Protection Agency recommends a systematic approach to providing a healthy and environmentally sustainable campus. This approach includes identification of risk factors and compliance requirements as part of the planning process.

Recommendation

Prepare a formal risk assessment to identify and analyze safety and security risks at all HSC locations and the corresponding controls needed to address these risks.

Complete the institution’s current centralization initiative and reassess the number of personnel required to effectively oversee and administer the HSC’s safety and security controls and operations. As the HSC grows and expands, it will be important to closely monitor the number of personnel needed to maintain these operations.
Management’s Response

3. Safety and Security Risk Assessment (cont.)

The HSC concurs with the audit finding that a formal risk assessment process is necessary to ensure a safe and healthy work environment. Through current centralization processes, portions of a formal risk assessment have been implemented including the hiring of additional EHS personnel. The additional staff position will facilitate the time and effort necessary to address the current and near-future growth of the HSC. The annual safety inspections and generated reports will provide information and data that can identify trends and operational risks. The HSC expects to have a safety and security risk assessment process completed by August 31, 2012.

4. Safety Inspections

Observation

Safety monitoring processes need improvement to better ensure facilities and laboratories remain safe.

Safety inspection processes need to be monitored more closely to ensure facilities and laboratories remain safe. A detailed safety inspection of all HSC facilities and labs was performed in fiscal year 2011 to provide a baseline for the institution’s current centralization effort. Significant deficiencies noted were primarily addressed at the time of inspection; however, a large number of minor safety deficiencies were to be reported and tracked as part of the inspection follow-up process. Various factors have resulted in delays in submitting inspection reports and performing follow-up inspections. As of the audit fieldwork, no follow-up inspections had been performed by EHS.

The following additional safety inspection issues were noted:

- Inspections are performed annually for all locations, rather than according to an assessment of associated safety risks, with higher safety risk facilities requiring more frequent inspections.

- Inspection reports for two locations tested were issued from six weeks to more than three months after the inspection was performed.

- Specific deficiencies noted during an inspection were not separately rated based on the severity of the deficiency to determine the required response time; rather all generally had a period of 90 days to be corrected.
4. Safety Inspections (cont.)

- Principal investigators and Facilities' personnel did not consistently update the deficiencies noted on their inspection reports with "comments" and "date corrected" and return these forms to EHS. Of the 90 total deficiencies tested, 40 (44%) did not indicate the updated status with comments or a date corrected.

- Testing of 45 laboratory and 45 fire/life safety deficiencies identified at two locations during fiscal year 2011 determined that 14 laboratory safety deficiencies (31%) and 13 fire/life safety deficiencies (29%) had not been corrected or were not in the process of being corrected. These uncorrected safety deficiencies were generally minor in nature and many were corrected at the time of the auditor's inspection or shortly thereafter.

Although laboratory and fire/life safety inspections are conducted on an annual basis and the results of these inspections are documented and reported, the above areas of improvement are needed to better ensure a safe environment exists for students, faculty, staff and visitors. Texas A&M System Supplemental Risk Management Standards require implementation of a laboratory safety program to reduce occupational exposure to health and safety hazards. This includes developing a program to monitor and evaluate harmful exposures, in accordance with nationally recognized practices and protocols. In addition, these standards require that fire/life safety deficiencies be identified and addressed through inspections of facilities and grounds.

**Recommendation**

Management should direct personnel to address all safety deficiencies noted during inspections in a timely manner.

Enhance the current safety inspection process by preparing a risk-based safety inspection schedule of the various laboratories and related facilities to determine the inspection frequency necessary to ensure a safe teaching and working environment. Also assess and rate the associated risk of each safety deficiency identified during inspections and set the required correction date based on the corresponding risk.

Continue current efforts to automate the inspection reporting process to ensure safety inspection reports are prepared and submitted in a timely manner.

Further develop and implement the current follow-up inspection process to include formal tracking of all safety deficiencies identified...
4. Safety Inspections (cont.)

including regular status updates of corrective actions taken and scheduled follow-up visits based on the stated implementation dates to ensure appropriate corrective actions have been taken.

Management’s Response

Safety deficiencies noted during the audit will be addressed. The EHS will continue to evaluate and implement the inspection schedule to ensure appropriate oversight and controls are in place based on assessed risk. This includes preparing a risk-based safety inspection schedule, assessing the associated risk of each safety deficiency identified during inspections and setting appropriate implementation dates, and formally tracking and following up on safety deficiencies identified based on the stated implementation dates. The automated inspection tools used by the HSC will enhance the inspection process and facilitate feedback that allows EHS personnel to address matters of concern in an effective and timely manner. The process should be completed by August 31, 2012.

5. Chemical Inventory and Storage

Observation

Improvements are needed in controls over the HSC’s chemical inventory records and storage. Testing of chemical inventory listings and storage at two locations noted the following:

- Differences were found between chemical inventory records and chemicals stored on-site for 14 of 90 (15%) chemicals tested.

- Instances were noted in which chemicals were being stored above eye-level, over sinks, on shelves with no lip, and with the large bottles in front of small bottles, etc. in non-compliance with HSC chemical storage safety requirements.

- Although access to the facilities was adequately restricted at some locations, instances were noted in which access to chemical storage areas within the facilities was not adequately restricted. Access included open or unlocked lab doors where chemicals were stored in unlocked storage cabinets or on open shelving.

Chemical inventory listings are submitted annually to EHS by the locations storing hazardous chemicals. The current chemical inventory process is manual and standard operating procedures for
5. Chemical Inventory and Storage (cont.)

Performing chemical inventories and securing chemicals have not been developed. A new chemical inventory system, which is being implemented, should significantly increase the standardization of inventory information and facilitate more real-time monitoring of chemical inventories. Texas A&M System Supplemental Risk Management Standards involving health and safety require implementation of a chemical safety program to protect students, employees, and the environment. This includes addressing areas such as proper storage, handling, and monitoring of chemicals.

**Recommendation**

Complete the implementation of the new chemical inventory system to increase standardization of inventory information and facilitate more real-time monitoring of chemical inventories.

Further develop the follow-up safety inspection process which includes ensuring proper storage of hazardous chemicals according to HSC chemical safety guidelines and adequate security of stored chemicals such as by locking lab doors when not in use and/or locking chemicals within the labs.

**Management’s Response**

The HSC will complete implementation of the new chemical inventory system. The new system will standardize and facilitate real-time monitoring of chemical inventories. The chemical inventory system will be implemented by August 31, 2012. Storage and security of hazardous chemicals will be reviewed as part of the safety inspection follow-up process noted above.

6. Safety Training

**Observation**

Limited standardized guidelines and monitoring processes are in place to ensure that all necessary safety training is completed in a timely manner. The following conditions were noted in regards to safety training:

- While students attending teaching labs appear to be receiving laboratory safety training, there are no standard guidelines for student laboratory safety training including documentation and records retention requirements. As a result, there were no minimum standard training requirements and documentation of training was not readily available for testing at the two HSC locations tested.
6. Safety Training (cont.)

- A training report for employee hazardous communication (HazCom) and bloodborne pathogen (BBP) training for one HSC location indicated that 41% of employees had either not started or were past due in taking required HazCom training and 36% had not started or were past due in taking required BBP training.

- While there is evidence that employees are receiving HazCom and BBP training at another HSC location, the training documentation provided lacked key information such as a list of employees required to take the training, hire dates, due dates, completion dates, etc. which limited the ability to determine the extent and timeliness of HazCom and BBP training of employees.

The responsibility for the student laboratory and employee safety training lies primarily with each HSC location and comprehensive procedures have not been developed to provide guidance in these areas. A training-needs assessment is currently being developed by EHS for all existing employees to identify and document required safety training and will be reevaluated annually during employee evaluations. HSC is also in the process of migrating all employee safety training to the Texas A&M University System’s TrainTraq training system which will provide detailed tracking and reporting of training for increased monitoring and compliance.

Texas A&M System Supplemental Risk Management Standards involving health and safety require that standard operating procedures be developed and published and corresponding training be provided and documented on identified health and safety hazards to affected faculty, staff, students, and visitors. In addition, Texas Administrative Code, Title 25 Health Services, Rule 295.7 requires that employers develop a hazard communication program to provide training for new or newly assigned employees.

**Recommendation**

Develop standardized guidelines for student laboratory safety training including documentation and records retention requirements. Ensure training documentation facilitates monitoring by including the student's signature and printed name, course name and number, date, and instructor's name as needed. Monitor to ensure that laboratory safety training is performed for all relevant students in a timely manner and that these records are organized and complete.

Ensure that all employees with the potential exposure to hazardous chemicals and bloodborne pathogens receive safety training prior to
6. Safety Training (cont.)

Initial exposure to these materials/pathogens. Complete current efforts to prepare a training needs assessment for each employee and migrate employee safety training into the TrainTraq system. Utilize the automated features within the TrainTraq system to monitor and track employee safety training for timely completion.

Management's Response

The HSC will complete standardized guidelines for laboratory safety training for students, faculty, and staff. EHS is currently conducting and developing this training. Training documentation will be enhanced to include additional information needed and monitoring will be performed to ensure this training is completed in a timely manner. The HSC currently has a Hazard Communication Program and Bloodborne Pathogens Exposure Control Plan in place to facilitate the identification and training of those employees with potential exposure to hazardous chemicals and bloodborne pathogens. This program will be further enhanced through the implementation of the new employee training needs assessment procedures and the use of the A&M System's TrainTraq system. The process and procedures will be completed by August 31, 2012.

7. Performance Measures

Observation

Performance measures have not been developed for EHS and SOM.

Although fiscal year 2012 goals and objectives have been developed for EHS and SOM, corresponding performance measurement systems have not been prepared to determine whether these objectives are achieved. In addition, there are no feedback mechanisms to ensure these functions are meeting customer needs. EHS and SOM have focused on developing the HSC safety and security program and planned to add these performance mechanisms as the program matured.

Recommendation

Establish performance measures including customer feedback mechanisms to evaluate the achievement of goals and objectives for EHS and SOM and determine whether customer needs are being met. Monitor performance on a routine basis and effectively communicate results to management and customers.
Management’s Response

7. Performance Measures (cont.)

The Office of Environmental Health and Safety will develop and implement performance measures to evaluate the achievement of goals and objectives for EHS and SOM including a survey to obtain customer feedback. The survey will be sent to faculty and staff of the Texas A&M Health Science Center to assess if customer needs and goals are being met. The process and procedures will be completed by August 31, 2012.

8. Spill Prevention, Control and Countermeasure Plans

Observation

Spill prevention, control and countermeasure plans have not been completed for all applicable HSC locations. EHS has identified three HSC locations that require development and implementation of a spill prevention, control and countermeasure (SPCC) plan to ensure compliance with federal regulations dealing with oil spill prevention applicable to fuel station facilities. The locations requiring SPCC plans include Temple, Round Rock, and Bryan. The SPCC plan for Temple is provided by Scott & White. EHS is currently putting together the SPCC plans for Round Rock and Bryan, which are the two newest campuses.

According to the United States Environmental Protection Agency (EPA) Spill Prevention, Control, and Countermeasure Plan Rule, an SPCC plan is required for a facility that stores, transfers, uses or consumes oil or oil products; stores more than 1,320 US gallons in total of all above ground containers or more than 42,000 gallons in completely buried containers; and could reasonably be expected to discharge oil to navigable waters of the US or adjoining shorelines, such as lakes, rivers and streams.

Recommendation

Complete the current development and implementation of spill prevention, control and countermeasure plans for the Bryan and Round Rock locations to ensure compliance with federal EPA regulations.

Management’s Response

The HSC will complete the SPCC plans for the Round Rock and Bryan locations by August 31, 2012.
BASIS OF REVIEW

Objective

Review the processes and controls over environmental health, safety and security to determine if resources are used efficiently and effectively to provide reasonable assurance that a safe environment exists for students, faculty, staff and visitors. Determine compliance with laws, policies, regulations and rules relevant to environmental health, safety and security.

Criteria

Our audit was based upon standards as set forth in the System Policy and Regulation Manual of the Texas A&M University System, Texas A&M Health Science Center Safety Guidelines; the Treadway Commission’s Committee of Sponsoring Organization’s Internal Control – Integrated Framework (COSO); the Environmental Protection Agency’s “Environmental Management Guide for Colleges and Universities” and “Spill Prevention, Control, and Countermeasure Plan Rule”; Texas Administrative Code, Title 25, Part 1, Chapter 295, Subchapter A, Rule 295 "Hazardous Communication"; federal and state laws; 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.”

Additionally, we conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The Texas A&M Health Science Center is committed to a campus environment that protects the safety and the environment of the students, employees, and visitors. The Environmental Health and Safety (EHS) and Security Operations and Management (SOM) divisions within the Facilities and Construction, Utilities, Safety and Security department at HSC comprise the two most significant elements of the safety and security functions at HSC. Both functions employ personnel who help carry out the safety and
security mission statement of this department, which is to maintain, 
operate and repair the physical infrastructure of the Health Science 
Center campuses across the State of Texas in a pro-active and 
cost-efficient manner that serves the mission of the HSC by 
ensuring the safety of its students, faculty, staff, and stakeholders. 
This includes programs of information and education, review and 
monitoring, technical consultation and ensuring compliance with 
A&M System, local, state, and federal regulations. The safety and 
security function encompasses several operations, including safety 
(biological, laboratory, fire/life, and chemical), emergency 
preparedness, crisis management planning, security of personnel 
and property, Clery Act reporting, and keys/access cards.

The safety and security functions have approximately thirty-six staff 
including five in EHS and thirty-one in SOM. In fiscal year 2011, the 
annual operating budget was approximately $1.9 million of which 
$800,000 was for EHS and $1.1 million for SOM.
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