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An Audit Report on

Performance Measures at the Board of Plumbing Examiners

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Performance Measures at the Board of Plumbing Examiners

Overall Conclusion

The Board of Plumbing Examiners (Board) reported reliable results for 2 (50 percent) of 4 key performance measures tested for fiscal year 2011 and the first quarter of fiscal year 2012. A result is considered reliable if it is certified or certified with qualification.

The following key performance measures were certified with qualification for fiscal year 2011 and the first quarter of fiscal year 2012 because of internal control weaknesses in the Board's processes for collecting, calculating, and reporting performance measure information and other issues:

- Number of New Licenses Issued to Individuals.
- Number of Licenses Renewed (Individuals).¹

Factors prevented certification of the reported results for the following key performance measures for fiscal year 2011 and the first quarter of fiscal year 2012 because the Board was not able to provide sufficient documentation to support the numbers it reported:

- Percentage of Complaints Resolved Resulting in Disciplinary Action.²
- Number of Field Investigations Conducted.

Table 1 on the next page summarizes the certification results for the key performance measures tested.

Background Information

The Board of Plumbing Examiners' (Board) goal is to help protect public health through safe plumbing. Specifically, the Board:

- Examines and licenses plumbers and plumbing inspectors.
- Receives and investigates complaints.
- Checks compliance with plumbing practices and plumber and plumbing inspector licenses at job sites.
- Issues reprimands, revocations, or suspensions of licenses, and issues administrative penalties or citations to individuals who allegedly violate the Plumbing License Law or the Board's rules and regulations.

The Board's total appropriations were \$2,127,659 for fiscal year 2011 and \$2,205,535 for fiscal year 2012.

Sources: The Board's Web site and the General Appropriations Acts (81st and 82nd Legislatures).

¹ The Board did not classify this performance measure as a key performance measure until fiscal year 2012; therefore, auditors did not test this performance measure for fiscal year 2011.

² The Board reported this performance measure in the Automated Budget and Evaluation System of Texas (ABEST) on an annual basis; therefore, auditors did not test this performance measure for the first quarter of fiscal year 2012.

Table 1

Board of Plumbing Examiners (Agency No. 456)				
Related Objective or Strategy, Classification	Description of Performance Measure	Fiscal Year	Results Reported in the Automated Budget and Evaluation System of Texas (ABEST)	Certification Results ^a
A.1.1, Output	Number of New Licenses Issued to Individuals	2011	896	Certified with Qualification
		2012 - First Quarter	271	Certified with Qualification
A.1.1, Output	Number of Licenses Renewed (Individuals) ^b	2012 - First Quarter	5,733	Certified with Qualification
A, Outcome	Percentage of Complaints Resolved Resulting in Disciplinary Action ^c	2011	33.9%	Factors Prevented Certification
A.1.3, Output	Number of Field Investigations Conducted	2011	873	Factors Prevented Certification
		2012 - First Quarter	183	Factors Prevented Certification

^a A performance measure is **certified** if reported performance is accurate within plus or minus 5 percent of actual performance and if it appears that controls to ensure accuracy are in place for collecting and reporting performance data. A performance measure is **certified with qualification** when reported performance appears accurate but the controls over data collection and reporting are not adequate to ensure continued accuracy. A measure is also certified with qualification when controls are strong but source documentation is unavailable for testing. A measure is also certified with qualification if agency calculation of performance deviated from the measure definition but caused less than a 5 percent difference between the number reported to ABEST and the correct performance measure result. A performance measure is **inaccurate** when the actual performance is not within 5 percent of reported performance, or when there is more than a 5 percent error rate in the sample of documentation tested. A measure is also inaccurate if the agency's calculation deviated from the measure definition and caused more than a 5 percent difference between the number reported to ABEST and the correct performance measure result. A **factors prevented certification** designation is used if documentation is unavailable and controls are not adequate to ensure accuracy. This designation also will be used when there is a deviation from the performance measure definition and the auditor cannot determine the correct performance measure result.

^b The Board did not classify this performance measure as a key performance measure until fiscal year 2012; therefore, auditors did not test this performance measure for fiscal year 2011.

^c The Board reported this performance measure on an annual basis; therefore, auditors did not test this performance measure for the first quarter of fiscal year 2012.

Auditors identified some areas of internal controls that the Board should improve to help ensure the accuracy of reported performance measure results. In addition to the four key performance measures tested, the identified internal control weaknesses may apply to other key performance measures that auditors did not test. Specifically, to improve its internal controls over its performance measure processes, the Board should:

- Improve its processes to verify that data used to calculate its performance measures is complete and accurate. (See Chapter 1-A for more information.)
- Document all of its processes for entering, calculating, reviewing, and reporting its performance measure data and results in the Automated Budget and Evaluation System of Texas (ABEST). (See Chapter 1-B for more information.)

- Require staff to document their reviews of performance measure information reported in ABEST. (See Chapter 1-B for more information.)
- Ensure that its documented procedures are updated to reflect changes made to its processes as a result of implementing a new information system in May 2011. (See Chapter 1-B for more information.)
- Periodically review its performance measure definitions to verify that they accurately describe the Board's processes. (See Chapter 1-C for more information.)

Summary of Management's Response

Board management generally agreed with the recommendations in this report. The Board's detailed management responses are presented immediately following each set of recommendations in the Detailed Results section of this report. The Board's statement of overall response is presented in Appendix 2.

Summary of Information Technology Review

Auditors assessed the information technology (IT) controls over the Board's licensing and enforcement system and the automated processes the Board used to collect, calculate, and report performance measure data. Auditors evaluated general IT controls, including logical access controls, program change management, and physical security processes. Auditors also reviewed application controls, including input controls, process controls, and output controls.

The Board's general and application controls over its licensing and enforcement system contain weaknesses that should be addressed. While physical controls provided adequate security and protection against fire and water damage and the licensing and enforcement system had generally effective input controls, the Board should improve certain controls over logical access and program change management. The Board implemented a new licensing and enforcement system at the end of the third quarter of fiscal year 2011, and the Board cannot ensure that data in its new system was migrated completely and accurately from its former system. Additionally, auditors could not assess the control structure that had been in place for the former system.

Auditors determined that the data in the information system the Board used in its performance measure calculations was sufficiently reliable for the purposes of this audit for the Number of New Licenses Issued to Individuals and the Number of Licenses Renewed (Individuals) performance measures. However, auditors could not rely on the data for the Percentage of Complaints Resolved Resulting in Disciplinary Action and the Number of Field Investigations Conducted performance measures. Auditors made those assessments by testing key access and application controls, reviewing data provided for completeness, interviewing personnel

knowledgeable about the system, and reviewing original source documentation for performance measure data when possible.

Summary of Objectives, Scope, and Methodology

The objectives of the audit were to determine whether the Board:

- Is accurately reporting its performance measures to ABEST.
- Has adequate controls in place over the collection, calculation, and reporting of its performance measures.

The audit scope included four key performance measures the Board reported for fiscal year 2011 and the first quarter of fiscal year 2012. Auditors reviewed the controls over submission of the data used in reporting the performance measures and traced performance measure information to the original source documents when possible.

The audit methodology consisted of auditing reported results for accuracy and adherence to performance measure definitions, evaluating controls over the Board's performance measure calculation processes and related information systems, and testing of original source documentation. As discussed above, auditors also assessed the reliability of data obtained from the Board's information system to support performance measure results.

Auditors also communicated other, less significant issues related to the Board's performance measure methodologies and controls over its information technology separately to Board management in writing.

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Detailed Results

Chapter 1

The Board Should Improve Certain Controls That Affect All Performance Measures Tested

Auditors reviewed four of the Board of Plumbing Examiners' (Board) key performance measures and identified some areas of internal controls that should be improved to help ensure the accuracy of reported performance measure results. Those weaknesses also may apply to other key performance measures that auditors did not review.

Chapter 1-A

The Board Lacks Sufficient Processes to Verify That Data Used to Calculate Its Performance Measures Is Complete and Accurate

Auditors identified several weaknesses in the controls over the reliability of the data the Board used to calculate performance measures. Those weaknesses were related to the automated reports the Board used, the migration of data into a new licensing and enforcement system, and verification of data processed through external systems.

While the Board asserted it performed some procedures to review the programming for the automated reports it used to calculate its performance measure results, it did not document those procedures or adequately document whether the reports were programmed to work as intended.

The Board used automated reports to calculate the performance results reported in the Automated Budget and Evaluation System of Texas (ABEST) for the four performance measures tested. The Board has an agreement with the Department of Information Resources and the Health Professions Council to host and manage its information system and data. Third-party contractors, including the Health Professions Council, programmed the automated reports using structured query language to help mitigate the risk of calculation errors. The Board did not have a documented process for periodically verifying that the automated reports were programmed to capture the data and perform the calculations in accordance with the performance measure definitions. The Board asserted that it performed some procedures to verify the accuracy of the programming of the automated reports from Versa. However, those procedures were not documented and it did not adequately document its review. As a result, auditors could not determine whether the Board verified that the reports were correctly programmed to work as intended.

If the Board does not have a documented process to periodically verify that automated reports are working as intended and maintain sufficient documentation of its verification, there is an increased risk that those reports

may not completely and accurately extract the correct data, resulting in the Board reporting incorrect performance measure results.

The Board cannot ensure that data in its new licensing and enforcement system was migrated completely and accurately from its former system.

In May 2011, the Board began using a new information system, Versa Regulation (Versa), as its primary licensing and enforcement system and to generate performance measure data. When it migrated the data from its old information system (the Regulatory Administration Enforcement System, or RAES) to Versa, the Board did not retain documentation to show that it reconciled control totals of data in the two systems. Without this documentation, there is no assurance that the data migrated correctly.

In addition, the Department of Information Resources decommissioned the servers for RAES; consequently, auditors could not assess the control environment that was in place over performance measure data for the first three quarters of fiscal year 2011. Auditors performed additional testing and determined that the data for two performance measures audited was migrated correctly; the Board asserted that the data for one performance measure audited—Percentage of Complaints Resolved Resulting in Disciplinary Action—was not migrated correctly.³ Without verifying that all of the data was migrated correctly, the Board cannot ensure that it is using complete and accurate data to calculate its performance measures.

The Board did not have a documented process for reviewing payments processed through its lockbox at the Office of the Comptroller of Public Accounts (Comptroller's Office).

The Board allows licensees to submit renewal requests and payments through a lockbox maintained by the Comptroller's Office. The Board had a process for reviewing payments processed through its lockbox to verify that those payments were correctly uploaded into the Board's licensing and enforcement system. However, the Board did not document that process or adequately document any of its reviews it conducted during fiscal year 2011 and the first quarter of fiscal year 2012.

Because the Board used the data processed through the Comptroller's Office to calculate the Number of Licenses Renewed (Individuals) performance measure, it is important that the Board document its process and reviews to verify that the data is complete and accurate.

For the first three quarters of fiscal year 2011, license applicants could submit their applications and payments for new licenses and renewals through Texas.gov. The Board did not have a documented process for verifying that

³ Auditors did not verify whether the data related to the Number of Licenses Renewed (Individuals) was migrated correctly because it was not a key performance measure in fiscal year 2011. Auditors tested that performance measure only for the first quarter of fiscal year 2012, for which the Board did not rely on data from the previous system to calculate the results.

those payments were correctly uploaded into the Board's licensing and enforcement system. However, when it implemented Versa in May 2011, it no longer permitted license applicants to submit transactions through Texas.gov.

Recommendations

The Board should:

- Document and implement its process for periodically verifying that the programmed reports it uses to collect and calculate performance measure data capture the correct data and perform calculations in accordance with the methodology described in ABEST for each performance measure. This process should include documentation of all reviews.
- Work with the Health Professions Council to take steps necessary to ensure that data in Versa is complete and reliable to support the calculations for performance measure results reported in ABEST.
- Document its process and reviews of the data processed through its lockbox at the Comptroller's Office to verify that the data is accurately and completely uploaded into its licensing and enforcement system.

Management's Response

1. *Document and implement its process for periodically verifying that the programmed reports it uses to collect and calculate performance measure data capture the correct data and perform calculations in accordance with the methodology described in ABEST for each performance measure. This process should include documentation of all reviews.*

TSBPE Response: The Executive Director agrees and is working with staff to establish additional procedures to be performed to verify the accuracy and document the procedures within its control. In addition, procedures will include periodically verifying that programmed reports used to collect and calculate performance measure data are accurate and the correct data is captured. Management plans to have a new policy for verification of measures in place and documented by FY2013. Testing and development of the verification documents will begin with closing of FY2012.

2. *Work with the Health Professions Council to take steps necessary to ensure that data in Versa is complete and reliable to support the calculations for performance measure results reported in ABEST.*

TSBPE Response: Management agrees and the Executive Director and staff have met with HPC during the audit process and will continue until all automated reports are completed and our requests have been fulfilled. Staff will continue to work with HPC to ensure that data in Versa is accurate and can be collected. Management wants to express that while auditors noted that some verification of the procedures to determine the accuracy of the automated reports was available, the Board has requested and worked closely with HPC and will continue to do so to develop many more reports and retain backup wherever possible. HPC expects to have some of our customizations completed by the 2nd quarter of 2013.

3. *Document its process and reviews of the data processed through its lockbox at the Comptroller's Office to verify that the data is accurately and completely uploaded into its licensing and enforcement system.*

TSBPE Response: Management agrees and plans to have a complete process in place by September 1, 2012 to verify that the data is accurately collected from lockbox transaction reports and to ensure the transactions have completely uploaded into the Versa system.

Chapter 1-B

The Board Should Ensure That Its Performance Measure Processes and Reviews Are Documented and Up to Date

The Board had processes for entering, calculating, reviewing, and reporting its performance measure data and results in ABEST. However, it had not documented all of those processes and it did not require staff to document their reviews of the data and results in ABEST. Specifically:

- The Board had a process for reviewing performance measure data and results entered into ABEST. That process was sufficient, except that it did not require reviews to be documented. In addition, the Board had not documented its review process. The *Guide to Performance Measure Management* (State Auditor's Office Report No. 06-329, August 2006⁴) recommended that agencies perform and document reviews of all performance measure data entered into ABEST before submission is complete to help mitigate the risk of reporting inaccurate performance measure results.
- The Board had sufficient, step-by-step procedures for entering information, calculating results, and entering those results reported in ABEST for the Number of New Licenses Issued to Individuals and the

⁴ That edition has been superseded by the *Guide to Performance Measure Management* (State Auditor's Office Report No. 12-333, March 2012). The 2012 edition also recommends that agencies perform documented reviews of all performance measure data entered into ABEST before submission is complete.

Number of Licenses Renewed (Individuals) performance measures. However, it had not documented those procedures. It is important that the Board document its policies and procedures because it processes a large amount of information, which increases the risk that Board employees could calculate and report performance measure results for ABEST in an incorrect or inconsistent manner.

- The Board had documented procedures for entering complaint information and for calculating performance measure results reported in ABEST using its previous information system. As discussed above, the Board implemented a new information system in May 2011. While the Board had updated its documented procedures for entering complaint information, it had not updated its documented procedures for closing complaints and calculating complaint information using the new system as of March 2012. Without up-to-date performance measure policies and procedures, there is an increased risk that Board employees would not be aware of changes and could report inconsistent or inaccurate performance measure results in the future.

Recommendations

The Board should:

- Document all of its processes for entering, calculating, reviewing, and reporting its performance measure data and results in ABEST.
- Document its reviews of data and results entered into ABEST.
- Review and update its procedures to reflect its current processes for closing complaint information.

Management's Response

1. *Document all of its processes for entering, calculating, reviewing, and reporting its performance measure data and results in ABEST.*

TSBPE Response: All departments are documenting existing step-by-step procedures for entering information, calculating results, and reviewing data and results entered into ABEST for all TSBPE performance measures to ensure that performance measure results continue to be reported in ABEST in a correct and consistent manner. The updated verification procedures will be documented and in place and will be used beginning with the closing of FY2012.

2. *Document its reviews of data and results entered into ABEST.*

TSBPE Response: The Director of Financial Operations has begun to document the agency's existing step-by-step procedures for entering information, calculating results, and reviewing data and results entered into ABEST for all TSBPE performance measures to ensure that performance measure results continue to be reported in ABEST in a correct and consistent manner. The updated verification procedures will be documented and in place and will be used beginning with the closing of FY2012.

3. *Review and update its procedures to reflect its current processes for closing complaint information.*

TSBPE Response: Management agrees with the recommendation to review and update existing procedures to more clearly reflect the current processes for closing complaints and calculating enforcement performance measures in Versa Regulation. The new procedures are currently in place.

Chapter 1-C

The Board Did Not Periodically Review Its Performance Measure Definitions to Verify That They Accurately Describe the Board's Processes

The Board's performance measure definitions did not always reflect the data source or methodology used in the Board's processes for collecting, calculating, and reporting performance measure results. Auditors identified several errors and inconsistencies. Specifically:

- The definitions for 3 (75 percent) of the 4 performance measures tested incorrectly referred to an application that the Board replaced in the fourth quarter of fiscal year 2011 as the data source.
- The definition for the Number of New Licenses Issued to Individuals performance measure did not identify the information system from which data should be used to calculate the results.
- One part of the definition for the Number of Licenses Renewed (Individuals) performance measure indicated that the Board should report the number of individuals who renewed their licenses during the reporting period. Another part of the definition indicated that the Board should report the number of licenses renewed during the reporting period. Not clearly identifying what should be reported increases the risk that the Board could report misleading results because it issues multiple types of licenses and an individual may be issued more than one type of license.

Testing confirmed the Board counted the number of licenses renewed, which agrees with the title of the performance measure. For the first quarter of fiscal year 2012, the Board accurately reported 60 (98 percent) of 61 license renewals tested.

Citing inaccurate data sources and having incomplete or incorrect information in its performance measure definitions increases the risk that the Board could report incorrect or misleading performance measure results in the future.

Recommendation

The Board should develop and implement a process to periodically review its performance measure definitions and work with the Legislative Budget Board and the Governor's Office of Budget, Planning, and Policy as needed to ensure that the definitions are consistent and align with the Board's processes.

Management's Response

1. *The Board should develop and implement a process to periodically review its performance measure definitions and work with the Legislative Budget Board and the Governor's Office of Budget, Planning and Policy as needed to ensure that the definitions are consistent and align with the Board's processes.*

TSBPE Response: Management agrees and has implemented a plan for the periodic review of performance measures to refine and/or adjust measures as well as monitor the collection of data for accuracy. However, it should be noted that prior to notice of this audit, Management had begun the task of updating performance measure definitions to reflect the changes within the new Versa Regulation system. Agencies are given a limited window of opportunity to make changes to their performance measure definitions. This opportunity only occurs every other year just before preparation of the strategic plan. The Executive Director and Director of Financial Operations plan to have the new detailed policy and review procedure documented by January 2013.

The Board Reported Reliable Results for Two of Four Key Performance Measures Tested

The Board reported reliable results for 2 (50 percent) of 4 key performance measures tested for fiscal year 2011 and the first quarter of fiscal year 2012. A result is considered reliable if it is certified or certified with qualification.

Key Measures

Results: Certified with Qualification

A measure is Certified with Qualification when reported performance appears accurate but the controls over data collection and reporting are not adequate to ensure continued accuracy. A measure is also certified with qualification if the agency's calculation of performance deviated from the measure definition but caused less than a 5 percent difference between the number reported to ABEST and the correct performance measure result.

Number of New Licenses Issued to Individuals (for fiscal year 2011 and the first quarter of fiscal year 2012)

Number of Licenses Renewed (Individuals) (for the first quarter of fiscal year 2012)⁵

Those two performance measures were certified with qualification for fiscal year 2011 and the first quarter of fiscal year 2012. Although the Board reported results that were within 5 percent of the actual results for both time periods, the overall control weaknesses discussed in Chapter 1 create a risk that the Board could report inaccurate results in the future. To help ensure continued accuracy, the Board should implement the recommendations in Chapter 1.

Results: Factors Prevented Certification

A Factors Prevented Certification designation is used if documentation is unavailable and controls are not adequate to ensure accuracy. This designation also will be used when there is a deviation from the measure definition and the auditor cannot determine the correct performance measure result.

Percentage of Complaints Resolved Resulting in Disciplinary Action (for fiscal year 2011)

Factors prevented certification of this performance measure for fiscal year 2011 because the Board could not provide adequate documentation to support the results it reported in ABEST. Specifically, as a result of the data migration issues discussed in Chapter 1, the Board lacked sufficient support from Versa, the system it used to generate this performance measure's annual results, for the performance measure data for the first three quarters of fiscal year 2011. Because of that, auditors could not rely on the data that the Board provided for recalculating the performance measure. The Board should implement the recommendations in Chapter 1 to verify that data in Versa is complete and reliable to support the calculations for this performance measure.

Number of Field Investigations Conducted (for fiscal year 2011 and the first quarter of fiscal year 2012)

Factors prevented certification of this performance measure for fiscal year 2011 and the first quarter of fiscal year 2012 because the Board could not provide adequate documentation to support the field investigation closed dates

⁵ The Board did not classify this performance measure as a key performance measure until fiscal year 2012; therefore, auditors did not test this performance measure for fiscal year 2011.

that it reported in Versa, which are the dates that are used to calculate this performance measure. Specifically:

- For fiscal year 2011, 5 (31 percent) of 16 field investigation files tested did not have supporting documentation showing the date on which the Board closed the field investigation as reported in Versa.
- For the first quarter of fiscal year 2012, 3 (15 percent) of 20 field investigation files tested did not have sufficient supporting documentation showing the date on which the Board closed the field investigation as reported in Versa.

The Board does not have documented policies or procedures that define how the closed date for each field investigation is determined, supported, and entered into the system. Without that information, the actual date closed cannot be verified. Title 22, Texas Administrative Code, Section 367.8, requires the Board to maintain certain information for each written complaint, including a summary of investigation results and an explanation for closing the file, in accordance with the Board's record retention schedule. Developing a consistent process for documenting its field investigations would help the Board retain sufficient support for its performance measures and comply with legislative requirements.

In addition, neither the performance measure definition in ABEST nor the Board's policies and procedures define what constitutes a field investigation, how to determine the date when a complaint is considered closed, and the support for the date closed. Some of the field investigations tested included evidence of an investigator physically going on site to determine compliance with plumbing regulations, while other field investigations tested included evidence of the investigator verifying insurance or advertising complaints over the phone. The performance measure definition states that the performance measure should report all jurisdictional complaints that are investigated by staff; however, the Board did not have the capability to code field investigations in Versa as jurisdictional and non-jurisdictional investigations. As a result, 2 (12.5 percent) of the 16 files tested for fiscal year 2011 were non-jurisdictional investigations and should not have been included in the performance measure calculation. Without clearly defining what constitutes a field investigation, the Board is at increased risk of reporting inconsistent results across multiple reporting periods.

Recommendations

The Board should:

- Maintain adequate supporting documentation showing the closed date of field investigations reported in Versa to help ensure that the data used to calculate the Number of Field Investigations Conducted performance measure is valid and reliable.
- Implement documented policies and procedures that define how the closed date for each field investigation is determined, supported, and entered into the system for all field investigations to help ensure that the data used to calculate the Number of Field Investigations Conducted performance measure is valid and reliable.
- Document what types of activities constitute a field investigation for the purposes of calculating the Number of Field Investigations Conducted performance measure.
- Develop a process to distinguish in Versa which investigations are jurisdictional and exclude all non-jurisdictional investigations from its performance measure calculation, in accordance with the performance measure definition for the Number of Field Investigations Conducted.

Management's Response

1. *Maintain adequate supporting documentation showing the closed date of field investigations reports in Versa to help ensure that the data used to calculate the Number of Field Investigations Conducted performance measure is valid and reliable.*

TSBPE Response: The Director of Enforcement has created an additional form used to ensure reliability in confirming and entering the complaint investigation close date. Procedures for the use of the new form will be included in the revision of the documented closing procedures. In addition, some fields used to collect data within the Versa Regulation Enforcement module will be customized to become required fields to prevent user error. The customizations to the system should be ready by January 2013. The update of the complaint closure procedure will be completed by September 1, 2012. The new investigation closure form is already in use.

2. *Implement documentation policies and procedures that define how the closed date for each field investigation is determined, supported and entered into the system for all field investigations to help ensure that the*

data used to calculate the Number of Field Investigations Conducted performance measure is valid and reliable.

TSBPE Response: The existing procedures for processing complaints have been updated and adjusted for use in the new Versa Regulation System. The detailed complaint investigation report template created in 2004 has been updated to include the additional steps as recommended by auditors.

3. *Document what types of activities constitute a field investigation for the purposes of calculating the Number of Field Investigations Conducted performance measure.*

TSBPE Response: Management has requested, as referenced in the overall conclusion and response [see Appendix 2], to modify the definition of a field investigation as well as the purpose of the measure to more accurately reflect the agency's workload regarding the number of complaints investigated and more specifically what constitutes an investigation. We expect to have a clarified definition and updated procedure in place by December 2012.

4. *Develop a process to distinguish in Versa which investigations are jurisdictional and exclude all non jurisdictional investigations from the performance measure calculation, in accordance with the performance measure definition for the Number of Field Investigations Conducted.*

TSBPE Response: Management agrees with the auditor recommendations. Management has revised the methods used to capture the date when a complaint investigation is completed and closed. New policies are being implemented to reflect the use of the Versa Regulation licensing and enforcement system and to ensure the continued capture of accurate data. It should be noted that only those complaints not related to plumbing work are considered non-jurisdictional complaints. However, all complaints require investigation to determine jurisdiction. Less complex complaints require investigation, but not necessarily travel to a jobsite to view the actual plumbing installed. Requests for additional disposition codes have been made to better distinguish any complaint that may not be within the jurisdiction of the TSBPE. The new codes added in the Versa Regulation Enforcement module for non jurisdictional complaints will be ready for use by September 1, 2012.

The Board Should Improve Certain Controls Over Its Information System

Overall, the Board's general information technology controls and application controls over its licensing and enforcement system (Versa) contain weaknesses that should be addressed. The Department of Information

The Board's Information Systems Management

The Board has an agreement with the Department of Information Resources and the Health Professions Council to host and manage its information system and data. The system and underlying database are shared by five agencies in addition to the Board, including the:

- Board of Dental Examiners.
- Board of Professional Land Surveying.
- Optometry Board.
- Board of Pharmacy.
- Board of Examiners of Psychologists.

The Department of Information Resources' data center vendor, Xerox, maintains the servers on which the system resides. The Health Professions Council provides all help desk and software support. When an issue arises, the Health Professions Council determines whether it can resolve the issue or whether it needs to refer the issue to Xerox or the system's vendor, Iron Data, LLC.

Resources and the Health Professions Council host and manage the Board's information system and data (see text box). The servers storing the Board's information system are housed at the Department of Information Resources' Austin Data Center, which provides reasonable assurance that physical access to computer equipment, storage media, and program documentation is restricted to authorized individuals. The Austin Data Center also provides adequate protection against fire and water damage. In addition, auditors determined that Versa had generally effective input controls to help ensure the integrity of the Board's licensing and enforcement data.

However, the Board should work with the Health Professions Council to improve certain general and application controls. Because several agencies use

Versa, the weaknesses and risks identified at the Board could also apply to the other agencies using the system.

Access Management. Auditors identified some areas in which the Board should improve its administration of access management. Specifically:

- The Board did not have a documented process for reviewing the appropriateness of user access rights on a regular basis.
- Auditors identified two active user accounts that were assigned to individuals who no longer needed access.
- Sixteen user accounts, including one individual from the Board of Pharmacy and another individual from the Board of Examiners of Psychologists, had full administrator access to the Board's data and data of the five other state agencies that share Versa. It is important that the Board regularly monitor those administrator accounts and verify that they are still appropriate and necessary.

Failure to adequately monitor user access rights and disable the access of users whose job duties no longer require access increases the susceptibility of data to unauthorized access and changes.

Database Administration. Several individuals share accounts that provide access to the database containing the Board's licensing and enforcement information. As a result, the actions of the individuals who use those shared accounts cannot be tracked in accordance with Title 1, Texas Administrative Code, Chapter 202, which requires that each user of information resources be assigned a unique identifier. Shared access accounts decrease accountability and increase the risk of unauthorized changes to key data.

Change Management. Auditors identified some areas in which the Board should improve its processes for making changes to its applications. Specifically:

- The Health Professions Council's programmers have the ability to modify production data for Versa. This increases the risk that unauthorized changes could be made to licensing and enforcement data.
- The Health Professions Council did not document that it adequately segregated duties so that the individual who develops or tests a program change does not also move it into production without appropriate approvals. Five (83 percent) of 6 items tested lacked sufficient documentation of segregation of duties among developing, testing, and migration.

Inadequate change management controls increase the likelihood that unauthorized modifications could be made to Versa and the Board's data.

Disaster Recovery Plan. The Board had not updated its disaster recovery plan to reflect its change to a new primary information system. Failure to maintain an updated disaster recovery plan increases the likelihood of business interruption or loss of essential data in the case of an emergency.

Recommendations

The Board should work with the Health Professions Council to:

- Develop and document a formal process for regularly reviewing user and administrator accounts for appropriate access.
- Eliminate the use of shared database accounts.
- Ensure that it adequately segregates the duties for programming, testing, and implementing changes to production environments and that it documents this separation of duties.
- Update its disaster recovery plan to reflect changes in its environment, including its transition to a new primary information system.

Management's Response

The Board should work with the Health Professions Council to:

1. *Develop and document a formal process for regularly reviewing user and administrator accounts for appropriate access.*

See response # 2.

2. *Eliminate the use of shared database accounts.*

TSBPE Response: Management agrees and understands that controls available to staff will be reestablished with regards to the new licensing and enforcement system. The sixteen user accounts with full administrator access are out of the approximately 150 users of the shared database system involving the six agencies and not solely TSBPE staff. The Board has begun developing a process to document periodic review of user and administrator accounts while working with HPC to continue secure use of the database. It should be noted that the Board has no in-house IT staff, and relies on HPC staff to make necessary changes to the data and configuration of the system. The Executive Director met with HPC staff and the other five agencies involved in the use of Versa Regulation to discuss the auditors' concerns regarding the elimination of shared database accounts, and the segregation of duties for programming, testing, and implementing program changes. TSBPE Management agrees with the auditors' concerns regarding these matters and will continue to meet with HPC staff to ensure compliance in all areas.

3. *Ensure that it adequately segregates the duties for programming, testing, and implementing changes to production environments and that it documents this separation of duties.*

TSBPE Response: Management has requested that HPC better document all program changes and assist in the segregation of all duties. In order to make program changes to Versa Regulation, agency staff submits system issues to HPC's helpdesk system. A ticket is created and communication through the helpdesk system regarding the helpdesk ticket is time stamped. TSBPE staff test the requested changes and upon approval of the changes close the helpdesk ticket and confirm the request with HPC staff. HPC then implements changes to the system upon approval. Additional steps for verification of changes have been implemented.

4. *Update its disaster recovery plan to reflect changes in its environment, including its transition to a new primary information system.*

TSBPE Response: Additional information from HPC and DIR staff is pending in order to complete the update to the agency's disaster recovery plan.

Appendices

Appendix 1

Objectives, Scope, and Methodology

Objectives

The objectives of this audit were to determine whether the Board of Plumbing Examiners (Board):

- Is accurately reporting its performance measures to the Automated Budget and Evaluation System of Texas (ABEST).
- Has adequate controls in place over the collection, calculation, and reporting of its performance measures.

Scope

The audit scope included four key performance measures the Board reported for fiscal year 2011 and the first quarter of fiscal year 2012 (September 1, 2011, through November 30, 2011).

The Board did not classify the Number of Licenses Renewed (Individuals) as a key performance measure until fiscal year 2012; therefore, auditors did not test this performance measure for fiscal year 2011. In addition, the Board reported the Percentage of Complaints Resolved Resulting in Disciplinary Action on an annual basis in ABEST; therefore, auditors did not test this performance measure for the first quarter of fiscal year 2012.

Methodology

The audit methodology consisted of auditing reported results for accuracy and adherence to performance measure definitions, evaluating controls over performance measure calculation processes, testing documentation, and assessing the reliability of the data obtained from the Board's information systems that support the performance measure data.

Auditors assessed the reliability of the data by (1) determining population completeness and reasonableness, (2) reviewing queries used to generate data related to the calculation of the performance measures, (3) interviewing Board employees and information technology administrators knowledgeable about the data and systems, and (4) reviewing source documentation for performance measure data when possible. Auditors determined that the data was sufficiently reliable for two of the four performance measures tested for the purposes of this audit. Because the Board (1) lacked adequate documentation showing that all data migrated completely and accurately when it implemented a new system in May 2011 and (2) lacked adequate

documentation to support some key data, auditors determined that the data for two of the four performance measures tested was not sufficiently reliable for the purposes of this audit.

Information collected and reviewed included the following:

- Performance measure data stored in the Board's information systems and spreadsheets.
- Supporting documentation retained in hard-copy license and complaint files.
- Information technology system reports, manuals, and programming code.
- Board policies and procedures.

Procedures and tests conducted included the following:

- Interviewing Board staff to gain an understanding of the processes the Board used to calculate performance measures.
- Interviewing information technology staff at the Health Professions Council and the Department of Information Resources to gain an understanding of the information systems the Board used to collect and calculate its performance measures.
- Evaluating the sufficiency of the Board's policies and procedures to determine whether they were adequate to help ensure the correct calculation of performance measures.
- Auditing performance measure calculations for accuracy and to determine whether the calculations were consistent with the methodology on which the Board; Legislative Budget Board; and the Governor's Office of Budget, Planning, and Policy agreed.
- Testing a sample of documentation to verify the accuracy of reported performance and the effectiveness of controls.
- Reviewing queries used to report and calculate performance measures.
- Performing logical access control testing.
- Assessing performance measure results in one of four categories: certified, certified with qualification, inaccurate, and factors prevented certification. For this audit, a result was considered reliable if it was certified or certified with qualification.

Criteria used included the following:

- *Guide to Performance Measure Management* (State Auditor's Office Report No. 06-329, August 2006).
- ABEST performance measure definitions.
- Title 1, Texas Administrative Code, Chapter 202 – Information Security Standards.
- Title 22, Texas Administrative Code, Chapter 367 – Enforcement.
- Board policies and procedures.

Project Information

Audit fieldwork was conducted from March 2012 through May 2012. 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.

The following members of the State Auditor's staff performed the audit:

- Jennifer Ranea Robinson, CPA (Project Manager)
- Adam Wright, CFE, CGAP, CIA (Assistant Project Manager)
- Amy Cheesman
- Lindsay Johnson
- Ann E. Karnes, CPA
- Laura Nienkerk, MAcy
- Sherry Sewell, CGAP
- J. Scott Killingsworth, CIA, CGAP, CGFM (Quality Control Reviewer)
- Ralph McClendon, CISA, CCP, CISSP (Audit Manager)

Management's Overall Conclusion and Response

Management agrees and understands auditor concerns regarding controls with the licensing and enforcement computer system. However, it should be noted that the TSBPE, along with five other agencies, recently participated in acquiring and launching a new shared computer program. The Versa Regulation computer application and database was put into production on May 31, 2011. Unfortunately many of the customizations are slow in being developed. The uniqueness of our customers' needs requires that certain customizations be performed separately from the other participating agencies. In addition, our Memorandum of Understanding with the Health Professions Council (HPC) somewhat dictates and separates our responsibilities in regard to Versa Regulation. The TSBPE is dependent upon the assistance of HPC to maintain and operate the new system. TSBPE staff has worked hard to serve our customers while overcoming many obstacles during the transition to the new program, including the fact that TSBPE did not have control or access to our previous system once it was decommissioned by the Department of Information Resources (DIR). Much of staff's resources were spent providing good customer service immediately after the implementation of Versa Regulation and now staff is able to focus on customizing and updating many of our processes. Management has and will continue to establish enhanced internal controls over the next few months. In addition, prior to notice of this audit, management had begun the task of updating performance measure definitions to reflect the changes within the new system. The audit has provided additional insight to other changes that could be made and a detailed request for alteration of our performance measures has been sent to the Legislative Budget Board and the Governor's Office of Budget, Planning and Policy. We hope to better harmonize our performance measure elements with the measure purposes. These requested changes and enhanced internal controls will result in improvements in our data collection and reporting processes.

Copies of this report have been distributed to the following:

Legislative Audit Committee

The Honorable David Dewhurst, Lieutenant Governor, Joint Chair
The Honorable Joe Straus III, Speaker of the House, Joint Chair
The Honorable Steve Ogden, Senate Finance Committee
The Honorable Thomas “Tommy” Williams, Member, Texas Senate
The Honorable Jim Pitts, House Appropriations Committee
The Honorable Harvey Hilderbran, House Ways and Means Committee

Office of the Governor

The Honorable Rick Perry, Governor

Board of Plumbing Examiners

Members of the Board of Plumbing Examiners

Ms. Tammy K. Betancourt, Board Chair
Mr. Enrique Castro
Mr. Carlos DeHoyos
Ms. Janet L. Gallagher
Mr. Ricardo Jose Guerra
Mr. David Lilley, Jr.
Mr. Rick Lord
Mr. Alejandro Meade, III
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