

**WASTEWATER DEPARTMENT
ENVIRONMENTAL LABORATORY
AUDIT 19-05
February 25, 2019**



CITY OF TAMPA

Bob Buckhorn, Mayor

Internal Audit Department

Christine Glover, Internal Audit Director

February 25, 2019

Honorable Bob Buckhorn
Mayor, City of Tampa
1 City Hall Plaza
Tampa, Florida

RE: Wastewater Department– Environmental Laboratory, Audit Number 19-05

Dear Mayor Buckhorn:

Attached is the Internal Audit Department's report on Environmental Laboratory.

We thank the aforementioned management and staff for their cooperation and assistance during this audit.

Sincerely,

/s/ Christine Glover

Christine Glover
Internal Audit Director

cc: Dennis Rogero, Chief of Staff
Sonya Little, Chief Financial Officer
Ernest Mueller, Chief Assistant City Attorney
Brad Baird, Administrator Public Works & Utility Services
Eric Weiss, Director of Wastewater
Erik Garwell, Wastewater Treatment Plant Manager
Dominic Fralli, Environmental Lab Supervisor

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/s/ Anthony D. Tiwari

Auditor

/s/ Christine Glover

Audit Director

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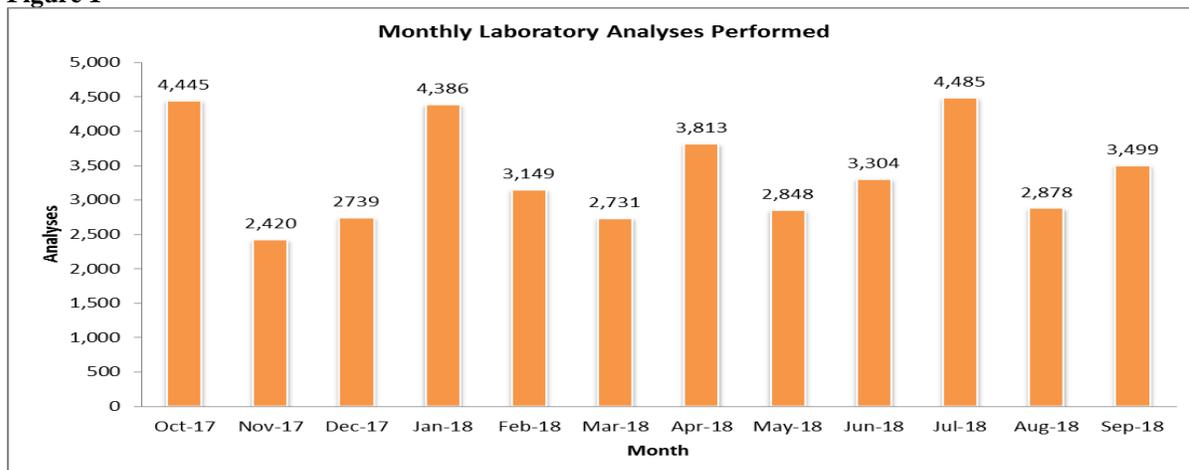
BACKGROUND

The Environmental Laboratory (laboratory) conducts analyses to ensure that the performance of Advanced Wastewater Treatment Plant (AWTP) satisfies standards set by various regulatory agencies and to provide the basis for process control. The laboratory operates under a National Pollution Discharge Elimination System (NPDES) discharge permit, administered by Florida’s Department of Environmental Protection (DEP), tailored to the environmental considerations surrounding the City of Tampa (COT). The laboratory plays an important role in quantitatively and qualitatively assessing the status of the wastewater treated at the AWTP which is continuously monitored by the Department of Health (DOH). In addition to providing data for the AWTP, the laboratory also performs critical analyses for the following:

1. Bay Studies Group
2. Industrial Waste Section
3. Pilot Plant Studies
4. Quality Control for Chemicals Used at the AWTP
5. Storm Water Runoff Program
6. Wastewater Spills, Overflows, and Possible Cross Connections

The laboratory is equipped to perform all routine tests concerned with monitoring and process control¹. The analytical reporting data is used to make informed decisions by not only plant management and city administration but also by regulatory authorities and public interest groups. The laboratory personnel comprises of a highly skilled ten person team that performed a total of 40,697 analyses in FY18. Figure 1 displays the number of analyses performed by month for FY18.

Figure 1



Source: Auditor interpretation of laboratory reporting data for FY18

¹. “Laboratory Control,” Wastewater Department Document Library

STATEMENT OF OBJECTIVES

This audit was conducted in accordance with the Internal Audit Department's FY19 Audit Agenda. The objectives of the audit were to evaluate the following:

1. Document retention procedures conform to the State of Florida's records retention guidelines.
2. Maintenance activities of the laboratory's equipment have been formally documented according to regulatory standards.
3. The laboratory's compliance with the DEP and DOH permitting requirements.

STATEMENT OF SCOPE

The audit period covered FY18. Both qualitative and quantitative assessments were performed to determine whether the management and staff of the laboratory were fulfilling their stated duties and responsibilities in an effective and efficient manner. Original records as well as copies were used as evidence and verified through observation and physical examination.

STATEMENT OF METHODOLOGY

We achieved our audit objectives by utilizing the following methods:

1. Interviewed key personnel to determine the establishment of internal controls.
2. Reviewed Policy and Procedure documentation to determine alignment with overarching governance.
3. Conducted a walkthrough of the facilities to map internal processes.
4. Observed the safety and cleanliness of the working environment.
5. Examined records held in the controlled document storage room.
6. Reviewed the process of training, development and demonstration of capability.
7. Reviewed the laboratory's purchasing, receiving and reconciliation procedures.
8. Analyzed prior year's permit assessments and the corrective action taken to recommendations.
9. Performed a user access review on the laboratory information management system (LIMS) to determine the appropriate levels of access and segregation of duties.
10. Performed a data reliability analysis to determine the completeness and accuracy of data reported from the LIMS.

The sample size was based on the criteria of 90% confidence and 10% error rate, used to infer the results of the testing on the data acquired from the laboratory. When appropriate, judgmental sampling was used to improve the overall efficiency of the audit.

STATEMENT OF AUDITING STANDARDS

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 conclusions based on our audit objectives.

NOTEWORTHY ACCOMPLISHMENTS

The laboratory's management team has developed a robust internal review process to continuously improve procedures and verify compliance to analytical methods, internal policy, data reliability and regulatory agencies.

AUDIT CONCLUSIONS

Based upon the audit work performed, our conclusions were as follows:

1. Document retention procedures did not conform to the State of Florida's records retention guidelines.
2. Maintenance activities of the laboratory's equipment have been formally documented according to regulatory standards.
3. The laboratory is compliant with the DEP and DOH permitting requirements.

DOCUMENT RETENTION

Statement of Condition: The laboratory does not actively remove records that have exceeded the requirements in the State of Florida General Records Schedule and Internal Quality Manual document retention guidelines. It was noted that a large number of documents dating back to the 1980's and 1990's were being retained in the laboratory's controlled document storage room.

Criteria: State of Florida's General Records Schedule GS1-SL for State and Local Government Agencies identifies the retention guidelines for Environmental Regulation Compliance Records as five fiscal years after completion of project, reporting requirement, or other applicable activity. The Internal Quality Manual, Records Management and Storage section states that all records necessary for the historical reconstruction of data shall be maintained for a minimum of five years.

Cause: Management retained documentation beyond the guidelines for historical purpose.

Effect of Condition: Retention of information in excess of the State of Florida General Records requirements could expose the COT to potential legal liability. There are increased overhead costs associated with controlled storage of documentation indefinitely.

Recommendation: Management should consult with the COT's Archives and Records Division for support in ensuring compliance with the State requirements.

Management Response: The Environmental Laboratory understands and agrees with the need to improve our record retention policies and adhere to the COT's record storage requirements.

We anticipate it will require up to one year to review all of the stored data, disposing of unnecessary records properly, and incorporating other modifications to comply with the COT internal audit findings.

Target Implementation Date: January 31, 2020.

The following list (1-4) outlines how the Environmental Laboratory plans to address the COT's audit finding of December 4, 2018. Additionally, the Environmental Laboratory will obtain guidance from the COT's Department of Archives and Records on required protocols for records retention and disposal.

1) Data retention requirements for analytical and ancillary laboratory data:

- **Minimum Time Limit:**

The minimum time requirement for Treatment Plant and Water Analysis (Wastewater/Environmental Water) records are ten years according to the State of Florida, General Records Schedule for Public Utilities (GS-14), Item #108 and 118. This document was provided as guidance by the COT's Department of Archives and Records. The exception to this schedule is for the Bio solids

Application Site Summaries, which requires that these records are retained indefinitely according to the following permit requirements and regulations: Howard F. Curren Wastewater Treatment Plant permit (FL0020940), State (62-640-650(4) (c) F.A.C. and 62-640-650(5)(e), and Federal (EPA's Bio solids Rule 503 Subpart B) regulations.

- Maximum Time Limit:

Public agencies may maintain their records longer at their discretion. (State of Florida, General Records Schedule for Public Utilities GS-14)

2) Procedure for records review of analytical and other data:

- The laboratory will examine the oldest data first.
- Analytical records, i.e., laboratory results, will be disposed of if it exceeds the ten-year requirement unless data is deemed essential to plant operations or the Tampa Augmentation Project.
- Bio solids data will be retained as required by the regulations mentioned earlier.
- Ancillary data, such as employee training records, instrument logs, and calibration data will be retained based on the laboratory certification requirements per The NELAC Institute (TNI) and National Environmental Laboratory Accreditation Program (NELAP). Plant process/operations data will be retained or disposed as directed by the Wastewater Plant Management.
- Under the guidance of Laboratory Management selected staff members will compile a list of records that exceed the ten-year requirement. This list will then be available to Laboratory and Plant Management which will determine the disposition of the data.

3) Modification of current Standard Operating Procedures (SOP):

- The Environmental Laboratory will modify relevant SOP's to incorporate the data retention requirements.

4) Electronic files:

- The Environmental Laboratory will adhere to COT's electronic data storage requirements as specified by the COT's Department of Archives and Records Management.