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**CITY OF SAN ANTONIO  
OFFICE OF THE CITY AUDITOR**

**SAN ANTONIO METROPOLITAN HEALTH DISTRICT  
AUDIT OF AIR MONITORING PROGRAMS  
PROJECT NO. AU24-018  
APRIL 24, 2025**

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**BUDDY VARGAS, CPA, CIA, CFE  
CITY AUDITOR**



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# Executive Summary

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As part of our annual Audit Plan approved by City Council, we conducted an audit of the San Antonio Metropolitan Health District (SAMHD), specifically the air monitoring programs. The audit objectives, conclusions, and recommendations follow:

**Determine if Public Center for Environmental Health (PCEH) Air Monitoring Programs are effective and adequately managed.**

The PCEH Air Monitoring Programs are effective and adequately managed by SAMHD. SAMHD has adequate procedures in place to ensure that Field Operators are properly collecting and reporting equipment data. Furthermore, preventative maintenance is properly reported to Texas Commission of Environmental Quality (TCEQ). SAMHD also has established physical access controls for TCEQ sites located within the San Antonio area.

In addition, SAMHD has procedures in place to ensure that the BioWatch audit, conducted via the U.S. Department of Homeland Security (DHS), was compliant with standard operating procedures (SOPs) and corrective action plans were developed as necessary. SAMHD also has effective controls in place to ensure that TCEQ and BioWatch grant reimbursement requests were properly approved and supported with grant related expenses.

Furthermore, the Air Pollution Control (APC) Program has effective procedures in place to identify and register businesses that emit air pollution. The APC Program also has effective controls in place to ensure the PCEH meets their annual performance measures.

Finally, the SAMHD has adequate procedures in place to verify appropriate user access for SAP.

We make no recommendations to the SAMHD; consequently, no management responses are required. Management's acknowledgment of these results is in Appendix B on page 8.

## Background

SAMHD's Public Center for Environmental Health (PCEH) manages three air monitoring programs: Texas Commission of Environmental Quality (TCEQ), BioWatch, and Air Pollution Control (APC) Program. These programs help monitor the air quality within the City of San Antonio and surrounding areas.

TCEQ is a state agency that provides a contract to SAMHD to assist in operating and maintaining continuous air monitoring<sup>1</sup> stations at locations within the City of San Antonio and surrounding areas. SAMHD Field Operators monitor equipment at these stations and update TCEQ on a continuous basis. This data is uploaded into TCEQ's Leading Environmental Analysis and Display System (LEADS). Additionally, there is one non-continuous air monitoring<sup>2</sup> station that requires Field Operators to collect filter samples and ship them to a TCEQ air laboratory.

BioWatch is a cooperative agreement funded federal program led by the U.S. Department of Homeland Security (DHS) that provides air-monitoring, analysis, notification procedures, and risk assessment for bioterrorism<sup>3</sup> within 30+ jurisdictions, including the City of San Antonio. SAMHD Field Operators monitor and collect samples from BioWatch equipment, which are then delivered to a BioWatch laboratory for testing. This is to allow for early detection or warning against possible bioterrorist attack.

The Air Pollution Control (APC) Program was created per City ordinance to address air pollution. The program's purpose is to educate and register local businesses who have been identified as a pollution emission source within the City of San Antonio limits. The APC Program registration process helps SAMHD determine strategies to lower ozone levels, air pollutants, and emissions within San Antonio. Businesses who fall under the APC Program description for emitting air pollution are required to register with SAMHD by completing a registration form and paying an annual fee of \$200. The APC Program is funded by the revenue generated from the annual fees.

Below is a table detailing revenue for fiscal years (FY) 2023 and 2024 by program.

**Table 1: Revenue by Program**

Program	FY 2023	FY 2024
TCEQ	\$214,897	\$219,553
BioWatch (DHS)	\$326,804	\$284,139
APC Program	\$316,924	\$273,099
<b>Total</b>	<b>\$858,625</b>	<b>\$776,791</b>

Source: SAP

<sup>1</sup> Continuous Air Monitoring – Equipment monitors air quality in a specific area in real time.

<sup>2</sup> Non-Continuous Air Monitoring – Equipment runs a filter every 12 days to monitor air quality in a specific area.

<sup>3</sup> Bioterrorism – The intentional release of a pathogen (disease causing agent) or biotoxin (poisonous substance produced by a living organism) against humans, plants, or animals.

Audit of San Antonio Metropolitan Health District  
Air Monitoring Programs

SAMHD Field Operators are responsible for daily operations and monitoring the air quality sites. This may include the collection of air filters, tracking air quality levels, and conducting maintenance on the equipment. SAMHD fiscal team is responsible for gathering supporting documentation and requesting reimbursement payments from TCEQ and DHS while ensuring they maintain compliance with their grant agreements.

# Audit Scope and Methodology

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The audit scope was from October 2022 to September 2024. This included compliance with air monitoring programs, specifically the Texas Commission of Environmental Quality (TCEQ) and BioWatch grant agreements, and the Air Pollution Control (APC) Program ordinance.

To gain an understanding of SAMHD operations, we interviewed SAMHD personnel and conducted walkthroughs of field operator sample collections, preventative maintenance, business payment collection, and grant reimbursements. The TCEQ and BioWatch grant agreements, APC Program ordinance, standard operating procedures (SOPs), and COSA Administrative Directive 8.10 Financial Management of Grants were our primary criteria for this audit.

We assessed internal controls relevant to the audit objective. This included a review of the criteria above. In addition, as part of our testing procedures we reviewed:

- Collection and reporting of TCEQ equipment data and preventative maintenance reports to determine if they were accurate and timely.
- BioWatch audit conducted by the U.S. Department of Homeland Security (DHS) for compliance with SOPs.
- Grant reimbursement requests for TCEQ and BioWatch to determine if they were accurate and properly approved.
- New and current business registrations and complaints to confirm compliance with the APC Program.
- Physical security at TCEQ air monitoring sites and SAP user access to confirm access was appropriate and adequately monitored.

We relied on computer-processed data in SAP to validate reimbursement payments paid to the City from TCEQ and DHS. We also relied on Leading Environmental Analysis and Display System (LEADS) to validate field operator visits at TCEQ sites. Our reliance was based on performing direct tests on the data rather than evaluating the system's general and application controls. We do not believe that the absence of testing general and application controls had an effect on the results of our audit.

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.

## Audit Results and Recommendations

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The PCEH Air Monitoring Programs are effective and adequately managed by SAMHD. These programs include TCEQ, BioWatch, and the APC program.

For TCEQ, we reviewed 20 non-continuous air monitoring station collection dates and 20 continuous air monitoring station filter calendar days, between October 2022 and September 2024. We confirmed SAMHD Field Operators are properly collecting equipment data. Furthermore, preventative maintenance was properly reported to TCEQ. We also confirmed that TCEQ sites located within the San Antonio area were properly monitored and had adequate physical safeguards to include locked sites.

For BioWatch, we reviewed the BioWatch audit conducted by the U.S. Department of Homeland Security (DHS) and determined BioWatch was in compliance with BioWatch Field Standard Operating Procedures and SAMHD developed corrective action plans as necessary.

Additionally, we reviewed a sample of 16 TCEQ and BioWatch grant reimbursement requests (from October 2022 to September 2024) totaling \$506,516. We confirmed that grant reimbursements requests were properly approved and supported by grant related expenses.

For the APC Program, we reviewed a sample of 25 businesses enrolled in the APC Program and determined there are adequate procedures in place to identify and register businesses that emit air pollution within the San Antonio area. We also reviewed 5 business complaints from the APC Program and determined the complaints were addressed and documented. In addition, the APC Program has effective controls in place to ensure that the PCEH meets their annual performance measures to include new business registrations, quality control checks on air monitors, and preventative maintenance operations.

Finally, we reviewed 15 users within the PCEH Air Monitoring Programs division and determined they had appropriate SAP user access.

## Appendix A – Staff Acknowledgement

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Abigail Estevez, CPA, CIA, CISA, Audit Manager  
Sabrina Saldana, Auditor in Charge  
Kaycie Requejo, Auditor



## Appendix B – Management Acknowledgement



### CITY OF SAN ANTONIO

SAN ANTONIO TEXAS 78283-3966

March 6, 2025

Buddy Vargas, CPA, CIA, CFE  
City Auditor  
San Antonio, Texas

RE: Management's Acknowledgement of its Review of PCEH Air Monitoring Programs

The San Antonio Metropolitan Health District has reviewed the audit report and provided its comments to the auditors. As there are no recommendations for management, no management responses are required.

San Antonio Metropolitan Health District:



Fully Agrees



Does Not Agree (provide detailed comments)

Sincerely,

Claude A. Jacob, DrPH/MPH  
Director  
SA Metropolitan Health District

3/25/25

Date

Erik Walsh  
City Manager  
City Manager's Office

4/4/25

Date

