
CITY OF SAN ANTONIO
OFFICE OF THE CITY AUDITOR



Audit of San Antonio Metropolitan Health District

Air Monitoring Programs

Project No. AU18-006

November 15, 2018

Kevin W. Barthold, CPA, CIA, CISA
City Auditor

Executive Summary

As part of our annual Audit Plan approved by City Council, we conducted an audit of the San Antonio Metropolitan Health District (Metro Health), specifically air monitoring programs. The audit objective, 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 to ensure that ambient air is monitored on a daily basis. We determined that Metro Health has adequate controls to ensure equipment is secure and maintained and staff training requirements are met. Additionally, we determined that grant reimbursement requests were accurate and reporting was submitted timely to Texas Commission on Environmental Quality (TCEQ).

However, there are opportunities to improve the outreach and education efforts to businesses that contribute to air pollution as well as the identification of air pollution sources. We recommend that Metro Health Management increase the resources and equipment dedicated to engaging businesses contributing to air pollution and identifying new sources of air pollution.

Metro Health Management agreed with the audit recommendations and has developed positive action plans to address them. Management's verbatim response is in Appendix B on page 6.

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Background

The San Antonio Metropolitan Health District (Metro Health) is the public health agency charged by State law, City code, and County resolution with the responsibility for providing public health programs in San Antonio and unincorporated areas of Bexar County.

A key service Metro Health offers is environmental monitoring. Metro Health's Public Center for Environmental Health (PCEH) is responsible for monitoring the air in and around San Antonio.

The City of San Antonio is contracted by the Texas Commission on Environmental Quality (TCEQ) to assist in the analysis of air quality to identify small particles that could cause respiratory problems for small children, the elderly and the general public. The TCEQ contract also requires the City to operate and maintain continuous air monitoring stations that measure gaseous air pollutants including ozone. Additionally, the Department of Homeland Security (DHS) provides funding to the City to detect the presence of biological agents that have been intentionally released into the air. The program provides early warning of a bioterrorist attack through air-monitoring, analysis, notification procedures, and risk assessment.

A City Ordinance was established in 2015 to assist in the identification of local businesses that contribute to air pollution. The Ordinance requires businesses that emit air pollution to register with Metro Health and pay an annual registration fee of \$200. This registration process helps to identify local sources of air pollutants and develop steps to lower emissions and improve air quality for residents. Below is a table detailing the fiscal years 2018 and 2019 funding sources for Metro Health's air monitoring efforts.

Air Monitoring Funding Sources Budget

Source	FY2018	FY2019
DHS	\$340,611	\$342,661
TCEQ	230,521	221,590
Revenue from Registration Fees	228,200	233,200
City's General Fund	150,000	145,000
Total	\$949,332	\$942,451

Source: SAP

Audit Scope and Methodology

The audit scope was fiscal year 2017 through August 2018.

To establish our test criteria, we reviewed state and federal regulations, Metro Health policies and procedures, City Ordinances, and grant agreements. We interviewed Metro Health management and staff to gain an understanding of the air quality programs. Additionally, we observed the equipment and physical security at one of the three regulatory continuous air monitoring stations.

As part of our testing procedures we performed tests to ensure that grant reimbursement requests and report deliverables were submitted timely to Texas Commission on Environmental Quality (TCEQ) per contract terms. Report deliverables included monthly verifications, quarterly calibrations, and quarterly data completeness reports for the ambient air monitoring equipment.

Additionally, we reviewed personnel files for all air monitoring staff to ensure sufficient training and current licenses for Metro Health staff. Furthermore, we reviewed citizen complaints about air pollution sources to verify timely action was taken. Finally, we reviewed the process for registering businesses with the Air Pollution Control Program.

We also relied on computer-processed data in SAP, the City's accounting system to validate program funding amounts and grant reimbursements. 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

A. Unknown Sources of Air Pollution

Metro Health lacks the resources and equipment to effectively identify businesses and areas within San Antonio that contribute to air pollution.

To ensure that the air quality is safe, one of Metro Health's objectives has been to identify businesses that are sources of air pollution. On a daily basis, the Metro Health Sanitarian searches for certificates of occupancy requests in a City database to identify new businesses that could potentially be a source of air pollution. If a potential source is identified, the Sanitarian conducts an on-site visit to inform the business of City ordinances regarding air pollution and educates the business about the impact their emissions have on the public health and the environment. The business is then added to Metro Health's database containing all identified sources of air pollution and is required to register with Metro Health's Air Pollution Control Program.

Metro Health also relies on citizen complaints to assist with identifying sources of air pollution, which are also investigated and resolved by the Sanitarian.

As a result of having only one City employee responsible for identifying sources of air pollution, educating new businesses, and investigating citizen complaints, there are numerous businesses that have not been contacted or registered with the City. The following table illustrates the number of known businesses contributing to the City's air pollution and their status with Metro Health.

Known Businesses with Air Pollution
as of September 10, 2018

Status	Number of Businesses
Pending Contact	503
Contacted, Not Registered	350
Registered	1,120
Total	1,973

Source: Metro Health and SAP

Furthermore, the U.S. Environmental Protection Agency (EPA) requires cities in the U.S. to meet certain air quality standards to ensure a safe and healthy environment. In July of 2018, the EPA designated Bexar County in marginal nonattainment for ozone of federally mandated air quality standards. The EPA made its decision using air quality monitoring data and its own modeling studies. The EPA's decision will result in stricter regulation of Bexar County's air quality and will increase costs on new or expanding industrial businesses.

An insufficient approach to identify sources of air pollution increases the health risk to San Antonio citizens and the environment. In addition to the lack of resources dedicated to identifying and educating businesses with air pollution, Metro Health does not have sufficient equipment to effectively identify areas where the major sources of air pollution exist. Specialized equipment such as infrared cameras and handheld detectors would assist Metro Health with detecting remote fugitive emissions (i.e. gas leaks).

Recommendation

Metro Health Management should increase the resources and equipment dedicated to engaging businesses contributing to air pollution and identifying new and unknown sources of air pollution.

Appendix A – Staff Acknowledgement

Gabe Trevino, CISA, Audit Manager
Holly Williams, CISA, CRISC, Auditor in Charge
Denise Trejo, Auditor

Appendix B – Management Response



CITY OF SAN ANTONIO

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October 24, 2018

Kevin W. Barthold, CPA, CIA, CISA
City Auditor
San Antonio, Texas

RE: Management's Corrective Action Plan for the Audit of Metro Health's Air Monitoring Programs

Metropolitan Health District has reviewed the audit report and has developed the Corrective Action Plans below corresponding to report recommendations.

Recommendation					
#	Description	Audit Report Page	Accept, Decline	Responsible Person's Name/Title	Completion Date
1	<p>Unknown Sources of Air Pollution</p> <p>Metro Health Management should increase the resources and equipment dedicated to engaging businesses contributing to air pollution and identifying new and unknown sources of air pollution.</p>	4	Accept	Mario Martinez, Assistant Director	Sept. 30, 2019
<p>Action plan: An RFI was released in October 2018 to gather information on identification and remediation of air emission sources. Information from this RFI will help us determine the most appropriate method to identify and remediate precursors to ozone.</p> <p>We are also currently determining appropriate staffing levels given the additional duties added to the Department for ozone attainment. A plan will be presented to the City Manager before Thanksgiving and will include a two phase plan to add staff and other resources.</p>					

We are committed to addressing the recommendations in the audit report and the plan of actions presented above.

Sincerely, *Colleen Bridger*
Dr. Colleen Bridger
Director
Metropolitan Health District

11-5-18
Date

Erik Walsh
Erik Walsh
Deputy City Manager
City Manager's Office

11/6/18
Date