



Audit of Landfill Closure and Post-Closure Liability and Monitoring Expense

March 17, 2021

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Executive Summary

Objective and Scope

The objective of this audit was to evaluate the City of Dallas' landfill closure and post-closure liability and monitoring expenses to ensure:

- Contractors are selected on a competitive basis.
- Contractor charges align with the contract, purchase agreements, or other terms.
- Recorded financial liability is determined by a methodology consistent with industry practices.

The scope of the audit was landfill post-closure activities and operations from October 1, 2018, through September 30, 2020.

What We Recommend

We recommend management:

- Complete quarterly reviews of actual expenses to vendor's estimated costs.
- Document delivery orders completely and accurately.
- Rotate vendor and employee contract monitoring activities.
- Ensure internal accountability.
- Monitor vendor performance.

Background

The City of Dallas received a final judgment from the U.S. District Court on November 3, 2006, regarding the Deepwood and Loop 12 landfill sites for not being protective of human health and the environment. The landfill sites were remediated under the Voluntary Clean Up Program, and the Texas Commission of Environmental Quality issued a Conditional Certificate of Completion as of April 2007. To maintain the certification, the City of Dallas must perform routine and continued operational activities such as monitoring of the groundwater and landfill gas collection system and inspection of landfill caps.

The City of Dallas has worked with Terracon Consultants Inc. for 13 years to perform monthly, quarterly, and annual monitoring activities and reporting to the Texas Commission of Environmental Quality annually. The Office of Environmental Quality & Sustainability monitors the vendor's services; the Department of Sanitation Services ensures funds are available and invoices are paid; and, the City Controller's Office demonstrates financial liability assurance for the estimated \$4.7 million for the next 17 years.

What We Found

Opportunities exist to improve:

- Review of variances between actual and estimated costs.
- Monitoring vendor performance for consistency and internal reviews for accountability.

Objectives and Conclusions

1. Are monitoring contractors selected on a competitive basis?
Yes. The procurement process for the non-environmental engineering services follows the City's process.
2. Do monitoring contractor charges align with the contract, purchase agreement, or other terms?
Generally, yes. Opportunities exist to improve contractor's reporting, invoicing, and monitoring. (See Observations A and B.)
3. Is the booked financial liability determined by a methodology consistent with industry practice?
Yes. The estimated \$4.7 million financial liability for the next 17 years was determined by a methodology consistent with industry practice.

Audit Results

As required by *City Council Resolution 88-3428*, departments will establish internal controls in accordance with the standards established by the Comptroller General of the United States pursuant to the *Federal Managers' Financial Integrity Act of 1982*. Administrative Directive 4-09, *Internal Control* prescribes the policy for the City to establish and maintain an internal control system. The audit observations listed are offered to assist management in fulfilling their internal control responsibilities.

Observation A: Invoicing

Invoice billing amounts do not match the vendor's estimated amounts per the *Post Response Action Care Plan* statement of work. As a result, the City of Dallas may be paying for services not rendered or not agreed to in the *Post Response Action Care Plan* statement of work.

Estimates vs. Actual

A review of the fiscal year 2019 and 2020 monthly billing amounts showed that actual fee codes, billing amounts per fee code, and services rendered did not match the *Post Response Action Care Plan* statement of work and cost estimate provided by the vendor Terracon Consultants Inc.

Fiscal Year 2019

Actual invoice billings for fiscal year 2019 indicated a cost of \$30,710 was associated with fee codes that were not part of the vendor's estimate. Of the \$30,710, \$26,594 was attributed to fee codes *3001 Principal* and *3002 Project Manager*, both of which were not identified in the 2019 *Post Response Action Care Plan* statement of work.

Although the vendor's *Post Response Action Care Plan* statement of work and actual invoice amount and fee codes did not match, the actual annual amount for fiscal year 2019 remained within the estimated amount.

Fiscal Year 2020

- Actual invoice billings for fiscal year 2020 indicated a cost of \$5,962 was associated with fee codes that were not part of the vendor's original estimate in the *Post Response Action Care Plan* statement of work. The cost is attributed to fee codes 3057 (*various descriptions*) and 3056 *Subcontractor plus 10 percent*.
- Actual to date cost for fiscal year 2020 indicated a cost of \$8,792 over the vendor's estimated amount. For fee codes 3001 *Principal* and 3002 *Project Manager*, the estimated cost was \$30,115. The current actual cost for these same fee codes is \$38,853.
- In August 2020, Terracon Consultants Inc. noted in email communications that there would be a reserve of funds for 2020 that could be used for repairs that were not identified in the annual 2019 report. Since 2020 monthly reports are in review, there does not appear to be support for the repairs.

According to the Office of Environmental Quality & Sustainability, since the fee codes were included in the master services agreement, the use of the fee codes was reasonable and permissible despite not being included in the original proposal. Per the Office of Procurement Services, the master service agreement acts as a menu of services that the vendor can provide and includes all fee codes the vendor uses. Therefore, the delivery order and the statement of work (in this case, the *Post Response Action Care Plan*) should specify the fee codes and cost estimates prior to initiating work, as these are the tools that the City of Dallas relies on to hold vendors accountable.

Delivery Orders

Key information fields are missing from delivery orders used to establish the annual cost for services and formally receive approval for payment by the Department of Sanitation Services.

- Fiscal Year 2021 Delivery Order: The description of services states, "*Laboratory and Field-Testing Services: Air Quality Monitoring*." Air quality is not one of the post-closure activities identified in the *Post Response Action Care Plan* statement of work or site remediation services by the Texas Voluntary Cleanup Program. Also, the delivery order does not indicate the service dates.
- Fiscal Year 2020 Delivery Order: The description of services states, "*Deepwood PA Groundwater Monitoring Post Closure (1st Quarter)-\$245, 872*." However, the delivery order should be for the entire year, as the cost indicates. The delivery order does not indicate whether it includes gas monitoring or all post-closure activities. Additionally, the delivery order does not indicate service dates.
- Fiscal Year 2019 Delivery Order: There are no service dates.

Criteria

- ❖ Administrative Directive 4-05 Contracting Policy, *Section 15.4.2*
- ❖ Standards for Internal Control in the Federal Government, *Principle 10 – Design Control Activities*

Assessed Risk Rating:

Moderate

We recommend the **Director of the Department of Sanitation Services:**

A.1: Complete quarterly reviews of the monthly invoice billings to the *Post Response Action Care Plan* statement of work details for accuracy, identify gaps between actual and estimates, and reconcile variances prior to payment.

A.2: Document delivery orders completely and accurately to reflect the *Post Response Action Care Plan* statement of work to ensure accountability.

Observation B: Monitoring

The Office of Environmental Quality & Sustainability does not proactively monitor the vendor Terracon Consultants Inc. In addition, internal monitoring responsibilities are distributed between the Office of Environmental Quality & Sustainability and the Department of Sanitation Services, without sufficient documentation of responsibilities. As a result, the City of Dallas could have difficulty holding the vendor and/or internal personnel accountable for expected operations.

Vendor Monitoring

The Office of Environmental Quality & Sustainability does not monitor the routine pre-determined vendor's activities through deliverables, regular meetings, random site visits, or unscheduled audits of daily operations.

Deliverables

Terracon Consultants Inc. does not provide deliverables (monthly and annual reports) timely. Supporting email communications indicate that deliverables were behind schedule consistently. For example:

1. Annual reports for 2017 and 2018 were not submitted until March 2020. The 2019 annual report was not submitted until November 2020, seven months after the vendor's *Post Response Action Care Plan* statement of work's stated date. Although, the City of Dallas did receive a confirmation from the Texas Commission on Environmental Quality that reports could be submitted as of November 2020, the letter did not comment on current compliance.
2. Quarterly reports sent to the Texas Commission on Environmental Quality were not timely. The fiscal year 2020 fourth quarter (September 2020) report states that work will be performed. The next quarterly report, which is due in the first quarter of fiscal year 2021 (December 2020), was sent in November 2020 and using August 2020 dates. Additionally, fiscal year 2020 third quarter (June 2020) was not submitted.
3. Monthly reports for all of 2018 were provided in February 2019. Monthly reports for 2020 were in review as of August 2020. In general, monthly reports are provided once towards the end of the year. It is not clear why monthly reports are provided annually and not monthly.

Regular Meetings

Email communications and meeting invites (regular meetings), which are used as primary mechanisms to monitor the vendor and the status of the landfill operations, do not demonstrate consistency.

- A review of 12 email discussion threads for fiscal years 2019 and 2020 do not discuss the status of the landfill operations. Most of the emails were related to Terracon Consultants Inc., stating the vendor was behind schedule on deliverables (see *Deliverables* section for details).
- Of the seven meeting invites between Terracon Consultants Inc. and the City of Dallas for fiscal years 2019 and 2020, two meeting invites were consistent and requested annual site visits.

The remaining meeting invites did not demonstrate consistency:

- In fiscal year 2019, one meeting invite was titled “*Discuss Deepwood*” (December 2018), one meeting invite was for “*report review*” (June 2019), and one meeting invite was for “*invoice review*” (May 2019).
- In fiscal year 2020, one meeting invite was titled “*discuss report*” (October 2019), and the other meeting invite was titled “*Texas Commission on Environmental Quality call*” (May 2020).

Internal Monitoring

There are no internal procedures or a memo of understanding between the Office of Environmental Quality and Department of Sanitation Services to ensure that both departments complete all required routine activities to maintain compliance. The Administrative Directive 4-05 Contracting Policy, *Section 15.4.2* states, “*In the event multiple departments use a vendor, each City department still has the primary responsibility for monitoring...*” Since the landfill monitoring activities are distributed across multiple departments, there is a risk that key compliance aspects will not be met.

Per the Office of Environmental Quality & Sustainability management, the contractor has provided support for the routine activities for 13 years and was the original contractor who proposed the *Post Response Action Care Plan*. The Office of Environmental Quality & Sustainability management stated the manager, with various other employees in the division, had administered the contract for the past 13 years, creating a reliance on one key employee to fulfill this task. The Committee of Sponsoring Organizations of the Treadway Commission suggests an organization can improve controls with regular rotation of duties among personnel.¹

Criteria

- ❖ Administrative Directive 4-05 Contracting Policy, *Section 15.4.2*
- ❖ Standards for Internal Control in the Federal Government, *Principle 10 – Design Control Activities*

Assessed Risk Rating:

Moderate

We recommend the **Director of the Department of Sanitation Services:**

B.1: Consider rotating the vendor providing services using other pre-approved vendors in the master services agreement.

¹ Committee of Sponsoring Organizations of the Treadway Commission (COSO), *Fraud Risk Management Guide* (September 2016), “*Implement Segregation of Duties*,” p. 46.

B.2: Develop internal procedures, in consultation with the Office of Environmental Quality & Sustainability, for accountability such as a checklist of routine activities that are expected from the vendor and from the Office of Environmental Quality & Sustainability internal personnel for post-closure activities completion.

We recommend the **Director of the Office of Environmental Quality & Sustainability:**

B.3: Consider rotating the employee monitoring task to other employees to reduce familiarity and train additional employees on contract monitoring activities.

B.4: Monitor the vendor's performance proactively through activities such as regular meetings, random site visits, or unscheduled audits of daily operations.

Appendix A: Background and Methodology

Background

The City of Dallas has a combination of landfills and transfer stations that it owns, manages, and operates. Of these landfills and transfer stations, Deepwood, an illegally operated private landfill turned over to the City by a federal judgment, and Loop 12 landfills are closed. The City of Dallas received a final judgment from the U.S. District Court on November 3, 2006, regarding the Deepwood and Loop 12 landfill sites for not being protective of human health and the environment. The landfill sites were remediated under the Voluntary Clean Up Program and the Texas Commission of Environmental Quality issued a Conditional Certificate of Completion as of April 2007. The site of the Deepwood landfill is now part of the Trinity River Audubon Center.

To maintain the certification, the City of Dallas must perform routine and continued operational activities such as monitoring the groundwater and landfill gas collection system and inspecting landfill caps. The landfill sites consist of two capped areas, about 44 acres, containing consolidated solid waste, construction debris, and soil overburden from mining operations. The wastes were capped with a clay landfill cap in 2003. The landfill sites have an active landfill gas (LFG) control system that includes collection trenches, blower, flare (B/F) station, sewer easement ventilation system, soil gas vents, and monitoring wells.

The City of Dallas has worked with Terracon Consultants Inc. for 13 years to ensure compliance. Compliance involves performing monthly, quarterly, and annual monitoring activities and reporting to the Texas Commission of Environmental Quality annually.

Sanitation Services

The Department of Sanitation Services is responsible for ensuring that funds are available for post-closure activities. This means that the Department of Sanitation Services ensures that invoices are paid timely and sufficient funds are available annually and for future liability. The Department of Sanitation Services is not involved in verifying whether the City of Dallas maintains compliance with the Texas Commission on Environment Quality.

Office of Environmental Quality & Sustainability

The Office of Environmental Quality & Sustainability monitors the vendor's activities and is responsible for verifying that the vendor is delivering in accordance with compliance requirements. The Office of Environmental Quality & Sustainability is responsible for verifying that the monthly, quarterly, and annual monitoring activities are performed and reported timely to the Texas Commission of Environmental Quality. The Office of Environmental Quality & Sustainability must retain records to demonstrate compliance with the Texas Commission on Environment Quality about the status of landfill monitoring activities.

City Controller's Office

Per federal and state requirements, the City of Dallas must support post-closure activities and show financial assurance that these post-closure activities can be performed. Per the City of Dallas' Comprehensive Annual Financial Report 2019, the post-closure liability is estimated at \$4.7 million for landfill sites for the remainder of the compliance program. The City Controller's Office sets these financial liabilities.

Methodology

The audit methodology included: (1) interviewing personnel from the Department of Sanitation Services, Office of Environmental Quality & Sustainability, Office of Procurement Services, and the City Controller's Office; (2) reviewing policies and procedures, federal and state compliance requirements, applicable Administrative Directives, and best practices; and (3) performing various analyses and documents as needed to support conclusions. All five internal control components of the *Federal Internal Control Standards* were considered in this engagement.

This performance audit was conducted 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 upon our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Major Contributors to the Report

Bob Smith, CPA – In-Charge Auditor

Mamatha Sparks, CIA, CISA, CRISC – Audit Manager

Appendix B: Management's Response

Memorandum



DATE: March 15, 2021
TO: Mark S. Swann, City Auditor
SUBJECT: Response to Audit of Landfill Closure and Post Closure Liability and Monitoring Expense

This letter acknowledges the City Manager's Office received the *Audit of Landfill Closure and Post Closure Liability and Monitoring Expense* and submitted responses to the recommendations in consultation with the Department of Sanitation Services and the Office of Environmental Quality & Sustainability.

The City recognizes the importance of effectively monitoring the City's contracts to ensure our residents and community receive value and quality service. While the Department of Sanitation Services and the Office of Environmental Quality & Sustainability perform significant vendor monitoring, there are opportunities to better document the monitoring activity.

To ensure consistent and effective contract monitoring across the City, the City developed and launched the Dallas Contracting Officer Representatives (D-COR) training program last year and has invested in more robust contract monitoring tools.

Additionally, the City is pleased with the efforts to transform the Deepwood landfill, an illegally operated private landfill turned over to the City in a federal judgement, into the 120 acre Trinity River Audubon Center. Restoration and on-going management efforts through the TCEQ Voluntary Cleanup Program have ensured protection of human health and the environment while providing an aesthetic landscape integrated with the Trinity River Audubon Center, AT&T Trail, and surrounding Great Trinity Forest.

Sincerely,



for
T.C. Broadnax
City Manager

"Our Product is Service"
Empathy | Ethics | Excellence | Equity

Assessed Risk Rating	Recommendation	Concurrence and Action Plan	Implementation Date	Follow-Up/ Maturity Date	
Moderate	We recommend the Director of the Department of Sanitation Services:				
	A.1: Complete quarterly reviews of the monthly invoice billings to the <i>Post Response Action Care Plan</i> statement of work details for accuracy, identify gaps between actual and estimates, and reconcile variances prior to payment.	Agree:	Sanitation will compare monthly invoices to the Post Response Action Care Plan statement of work details quarterly to ensure accuracy, identify gaps between actual and estimates, and reconcile variances.	9/30/2021	6/30/2022
	A.2: Document delivery orders completely and accurately to reflect the <i>Post Response Action Care Plan</i> statement of work to ensure accountability.	Agree:	Sanitation will document delivery orders completely and accurately to reflect the Post Response Action Care Plan statement of work.	9/30/2021	6/30/2022
	B.1: Consider rotating the vendor providing services using other pre-approved vendors in the master services agreement.	Agree:	The City is in the process of soliciting vendors for inclusion on the pre-approved master services agreement. Sanitation will consider rotating vendors, in accordance with the City's procurement process, in its selection of a vendor or vendors to assist in ensuring environmental monitoring compliance for closed landfills.	3/31/2022	9/30/2022
	B.2: Develop internal procedures, in consultation with the Office of Environmental Quality & Sustainability, for accountability such as a checklist of routine activities that are expected from the vendor and from Office of Environmental Quality & Sustainability internal personnel for post-closure activities completion.	Agree:	Sanitation will develop, in consultation with the Office of Environmental Quality & Sustainability, a checklist of routine activities and deliverables that are expected from the vendor and the Office of Environmental Quality & Sustainability for post closure activities completion.	9/30/2021	6/30/2022

Assessed Risk Rating	Recommendation	Concurrence and Action Plan		Implementation Date	Follow-Up/ Maturity Date
Moderate	We recommend the Director of the Office of Environmental Quality & Sustainability:				
	B.3: Consider rotating the employee monitoring task to other employees to reduce familiarity and train additional employees on contract monitoring activities.	Agree:	The Office of Environmental Quality & Sustainability will consider rotating the employee monitoring task to other employees to reduce familiarity and train additional employees on contract monitoring activities.	9/30/2021	6/30/2022
	B.4: Monitor the vendor's performance proactively through activities such as regular meetings, random site visits, or unscheduled audits of lab reports.	Agree:	The Office of Environmental Quality & Sustainability will monitor the vendor's performance proactively through activities such as regular meetings, random site visits, or unscheduled audits of lab reports.	9/30/2021	6/30/2022