

**SOLID WASTE DEPARTMENT  
MCKAY BAY FACILITY  
AUDIT 14-10  
JULY 10, 2015**



# CITY OF TAMPA

Bob Buckhorn, Mayor

Internal Audit Department

Christine Glover, Internal Audit Director

July 10, 2015

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

RE: McKay Bay Facility Audit 14-10

Dear Mayor Buckhorn:

Attached is the Internal Audit Department's report on the McKay Bay Facility.

The Solid Waste Department has already taken positive actions in response to our recommendations. We thank the management and staff of the Solid Waste Department 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  
Brad Baird, Administrator of Public Works and Utility Services  
Mark Wilfalk, Director of Solid Waste

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/s/ Stephen Mhere

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Auditor

/s/ Christine Glover

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Audit Director

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**BACKGROUND**

The Solid Waste Department encompasses the McKay Bay Facility which is the central location for disposing the City's solid waste. The McKay Bay Facility consists of the Scale House, the Refuse to Energy Facility, and the Transfer Station. The following are summaries of these areas.

- **Scale House.** The City operates the Scale House which is the entry point for all vehicles entering the facility to dispose waste. The Scale House is responsible for weighing vehicles as they enter and exit the facility and collecting the fees for disposing waste. Fees for disposing waste vary based on the type of waste disposed. Vehicles entering the facility must weigh in and pay a deposit that is generally in excess of the anticipated cost of disposing the waste. The final cost is determined when the vehicles are re-weighed after disposing the waste. If the deposit was underestimated and the customer has a balance, then it is due at checkout. Similarly, if the deposit was overestimated, then the customer is refunded the excess amount paid at check out.
  
- **Refuse to Energy Facility.** After gaining entry into the facility, commercial vehicles proceed to the waste disposal site known as the Refuse to Energy (RTE) Facility. The RTE Facility is operated by a contractor, Wheelabrator, through an agreement with the City. To ensure that Wheelabrator fulfills its contractual obligations, the City entered into an agreement with a consulting engineering firm, Arcadis, to monitor the operations and maintenance of the facility. Arcadis conducts periodic onsite inspections and provides an annual report detailing the operational performance and maintenance levels of the RTE Facility.
  
- **Transfer Station.** The Transfer Station is operated by the City in accordance with its permit. The Transfer Station is responsible for accepting waste that cannot be processed at the RTE Facility or waste that must be sorted before it can be accepted by the RTE Facility. Once waste is separated, it is transported by a hauling contractor to the appropriate location for disposal.

**STATEMENT OF OBJECTIVES**

This audit was conducted in accordance with the Internal Audit Department's FY2014 Audit Agenda. The objectives of this audit were to determine whether:

1. The Scale House controls are sufficient to ensure accurate estimation and collection of fees for disposing waste.
2. The Transfer Station is operating in accordance with its permit standards and goals.
3. The contract monitor, Arcadis, is fulfilling its contractual obligations and whether there are areas with inefficiencies.
4. The invoice review process for the operator, Wheelabrator, is sufficient to ensure that inaccurate invoices are identified in a timely manner.

## **STATEMENT OF SCOPE**

The audit covers services provided at the McKay Bay Facility from October 2013 through July 2014. However, testing was expanded to cover October 1995 through July 2014 for waste disposed directly into the furnace due to an issue identified in that area. Test work for this audit was performed related to collecting waste disposal fees at the Scale House, processing waste at the Transfer Station, and operating the Refuse to Energy Facility.

## **STATEMENT OF METHODOLOGY**

To achieve the audit objectives, the following steps were taken:

1. Scale House: We obtained and analyzed data from October 2013 through July 2014 of all transactions where customers either lacked sufficient funds to pay the fees incurred or did not return to weigh out. Further, we analyzed the rates in the billing system and identified an issue with the rate of waste disposed directly into the furnace. As a result, we obtained a statistically valid sample of data for waste disposed directly into the furnace. The sample size was generated using a desired confidence level of 95% with a margin of error of plus or minus 5%. The results of the statistically valid sample were extrapolated to the entire population.
2. Transfer Station: We obtained records of waste disposed at the Transfer Station from October 2013 through July 2014. Further, we analyzed the Transfer Station's inspection reports from the Florida Department of Environmental Protection (DEP) and conducted observations in June 2014 to determine whether the Transfer Station was operated in accordance with its permit.
3. Refuse to Energy Facility: We obtained invoices from both Wheelabrator and Arcadis from October 2013 through July 2014. We analyzed the documentation to determine if the invoices were accurate and if the review process identified inaccurate invoices in a timely manner.

## **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 findings and conclusions based on our objectives.

## **AUDIT CONCLUSIONS**

Based on the test work performed we conclude that:

1. Although controls are in place, the Scale House should enhance its system to ensure that all transactions are captured accurately. Further, the rates in the system should be updated to reflect the proper rates.
2. Adequate oversight of the Transfer Station is needed to ensure that the Transfer Station is operated in accordance with its permit standards.

3. Arcadis is fulfilling its contractual obligations and the City is obtaining the services it requested.
4. The invoice review process for Wheelabrator is sufficient to ensure that inaccurate invoices are identified in a timely manner.

**NOTEWORTHY ACCOMPLISHMENTS**

The Department's contractor, Wheelabrator, maintains an outstanding understanding of waste to energy operations and often exceeds regulatory agency requirements by setting more stringent standards.

While the findings discussed below may not, individually or in the aggregate, significantly impair the operations of the McKay Bay Facility, they do present risks that can be more effectively controlled.

## **MCKAY BAY RATES**

**STATEMENT OF CONDITION:** Our review noted that the billing system does not reflect the appropriate rate for waste disposed directly into the furnace. We compared the McKay Bay rates in the billing system to the rates passed by City Council resolution and found that the rate for waste that is disposed directly into the furnace was changed from \$920 per ton to \$1,100 per ton by City Council Resolution 95-1653. The higher rate went into effect on October 1, 1995, but was never updated in the billing system. We analyzed a statistically valid sample of waste disposed directly into the furnace to determine the lost revenue and found that the City potentially lost \$105,600 in revenue.

**CRITERIA:** City Council Resolution 95-1653 revised the rates for Solid Waste fees which included a rate increase for waste that is disposed of directly into the furnace.

**CAUSE:** The billing system was not updated.

**EFFECT OF CONDITION:** Revenues were lost and the Department is not in compliance with City Council Resolution 95-1653.

**RECOMMENDATION 1:** The Department should review all rates and promptly update its billing system to reflect the proper rates. Further, the Department should ensure that future rate changes are implemented timely and add procedures to verify rate changes within its billing system on a periodic basis.

**MANAGEMENT RESPONSE:** Management conducted research into this concern. The findings confirmed that the rate for Special Waste disposal should have been adjusted as authorized by the Tampa City Council in 1995. Since discovering this discrepancy, the Department adjusted the disposal rate for Special Waste from \$920 per ton to \$1,100.

**TARGET IMPLEMENTATION DATE:** May 4, 2015.

## **TRANSFER STATION OVERSIGHT**

**STATEMENT OF CONDITION:** Oversight is not adequate to ensure that the Transfer Station is operated efficiently, safely, and within permit standards. We observed the Transfer Station over several days and found the following:

- Oversight responsibilities for staff and the public are not consistently performed, as a considerable amount of employee time is spent away from the Transfer Station. As such, the public is not sufficiently supervised and waste is disposed of in the wrong areas or in excess of the facility's capacity.
- No one is actively ensuring that personal protective equipment is used by the public who are disposing waste underneath the roofline even though extra equipment is readily available.
- The Transfer Station waste is not cleared out every week nor is the floor cleaned multiple times during the week as required.
- The main floor drain is covered in waste and is not checked for clogging as required on a daily basis.

In addition, we reviewed the Florida DEP's inspection reports of the Transfer Station performed in December 2013 and April 2014. We noted that similar issues existed during these inspections. Further, although the DEP acknowledged that corrections were made, during our observations which were conducted after the DEP's inspections, we found that some of the same conditions were again present.

**CRITERIA:** Section 3 of the Transfer Station's Operations Plan, which is a part of the permit, specifies how the Transfer Station should be operated. Specifically, the plan states that:

- The Transfer Station will be staffed with two to four employees and at least one trained operator will be on duty to oversee daily operations and supervise personnel.
- The floor drain should be checked daily for clogging and cleaned weekly or more frequently.
- The floor should be cleaned twice per week and the waste unloading area should be swept daily and washed at least once a week.

Further, the Transfer Station's Permit also states that waste should not be stored at the Transfer Station for more than seven days.

**CAUSE:** Until recently, the Transfer Station lacked a permanent supervisor in close proximity to the Transfer Station. Further, the equipment is frequently inoperable, thereby decreasing productivity.

**EFFECT OF CONDITION:** Failure to adhere to permit conditions could result in fines or revocation of the permit. In addition, failure to ensure that sufficient oversight is provided creates the risk that employees and the public could be injured.

**RECOMMENDATION 2:** The Department should ensure that sufficient oversight of the Transfer Station is provided such that the Transfer Station is operated in compliance with its

permit. The Department should expedite execution and enforcement of its operating plan to avoid remedial action from the DEP.

MANAGEMENT RESPONSE: We agree with the observations and recommendations addressed in this audit of the McKay Bay Transfer Station. Prior to the commencement of this audit, the Department recognized and was in the process of addressing similar concerns identified by the auditor. Prior attempts to manage the Transfer Station operations with part-time supervision proved to be counter-productive. During the month of May 2014, a full-time Residential Services supervisor was assigned to lead the Transfer Station operations. The full-time Transfer Station Supervisor will ensure the Transfer Station continues to function safely while maintaining full compliance with the Department of Environmental Protection's (DEP) permit operating guidelines.

Listed below, are responses to the Statement of Conditions identified in this audit.

- The supervisor is responsible for ensuring the Transfer Station is operating safely and according to DEP guidelines. In addition, when the supervisor is unavailable, the Transfer Station Monitor, Lead Driver, as well as the rest of the front line employees are expected to use independent judgment and make sound decisions when operating the citizen window and tipping floor. Priorities and expectations of Transfer Station staff will be officially documented and entered into employee files.
- Customers who utilize the Citizen Drop-off facility at the Transfer Station are not required to wear personal protective equipment (P.P.E.) as long as they are not under the roof line of the facility. The spare P.P.E. is provided as a courtesy for customers, without P.P.E., who are required to dispose of materials under the roof line of the facility. The Transfer Station employees will be expected to increase their scrutiny of customers required to discard materials underneath the roof line. In addition, the Transfer Station's standard operating procedures will be adjusted to adopt P.P.E. best practices in the industry.
- The Transfer Station floor is cleared and washed every week to the extent practicable. The amount of waste will be minimized by the supervisor by ensuring an adequate number of waste hauling transfer vehicles are provided by the vendor each week. Prior concerns regarding the limited number of available transfer vehicles, extensive loading times and inoperable equipment has been addressed by having a full-time supervisor assigned to the facility and assistance from the City's Fleet Maintenance Division.

Since the assignment of a full-time supervisor at the facility, the floor drains are being adequately maintained. The supervisor is responsible for conducting weekly reviews and briefings with the staff to ensure this task is performed accordingly. This was corrected immediately and regular monitoring and cleaning is logged and recorded.

TARGET IMPLEMENTATION DATE: November 30, 2014

UPDATED MANAGEMENT RESPONSE: The full-time supervisor at the transfer station continues to maintain the operation according to our Operations Plan and the Department of

Environmental Protection guidelines. The supervisor has clarified performance duties and expectations for each employee assigned to work at this facility.

- Effective December 1, 2014, new personal protective equipment (PPE) standard operating procedures require all operators of commercial vehicles provide and utilize their own PPE when utilizing the transfer station. PPE is not required for customers who wish to utilize the citizen drop-off bay since they are not required to enter beneath the roof line when discarding items. When extensive wait times are eminent at the citizen drop-off bay, transfer station monitors take proactive measures to decrease waiting times by providing PPE to customers and directing them to utilize the tipping floor.
- The transfer station continues to operate under the "first in, first out" rule. The tipping floor is cleared out at the end of the week to the extent practical. The floor is washed and cleaned daily where accessible. The current load times are exceeding the benchmark set by the department and truck availability has not been an issue due to supervisor communication with the contractor.
- The leachate drains are cleaned twice a week and monitored daily by the Transfer Station Monitor and Lead Driver. Records of these inspections are maintained on a leachate inspection log which indicates the date and time the inspection occurred. In addition, new lids have been fabricated and installed over the leachate containment tank systems.
- February 5, 2015, the transfer station had annual inspection by the Department of Environmental Protection. Although the original report has not been finalized, the DEP inspector verbally confirmed all of the transfer station was passed the inspection and staff either met or exceeded compliance standards in all areas of the inspection. Despite multiple requests to obtain the final written report from DEP, as of June 10, 2015, the department has not received the final inspection documents.

## **SCALE HOUSE TRANSACTIONS**

**STATEMENT OF CONDITION:** Occasionally, Scale House transactions are forced closed and do not accurately represent the transactions. We reviewed documentation from October 2013 through July 2014 and found 101 transactions that were forced closed out of about 34,843 transactions. We noted that when customers do not return to check out, their tickets are manually adjusted in the Auto Scale system by creating data to generate a ticket with a charge equal to or slightly less than the amount collected. The difference is documented on a form outside of the system and marked as a forfeited refund.

Similarly, when customers do not have sufficient funds to pay their disposal fees, their tickets are manually adjusted in the Auto Scale system by creating data to generate a ticket with a charge equal to the amount collected. The outstanding balance is documented on a form outside of the system until the customer returns to pay the balance. When the customer returns, data is created to generate a ticket in the system with a charge equal to the amount that the customer is paying.

**CRITERIA:** The Scale House's cash deposit policy requires customers to pay a deposit for the waste that is discarded to ensure that customers have sufficient funds to cover the cost of disposing waste.

**CAUSE:** The Scale House's system requires closure of all transactions at the end of the day. A transaction cannot be closed if it reflects an outstanding balance.

**EFFECT OF CONDITION:** While force closing occurs at a minute rate, failure to ensure that all transactions are accurately recorded could result in misappropriation of funds and collected data inaccurately represents actual operations.

**RECOMMENDATION 3:** Although the Department has recently implemented written procedures related to these transactions, we further recommend that the Department enhance its system such that all transactions can be accurately recorded. In doing so, the Department should use a cost benefit analysis to ensure the benefit derived from such an enhancement exceeds its cost.

**MANAGEMENT RESPONSE:** Management acknowledges the design flaw in the now obsolete Mettler-Toledo Auto-Scale software system used to record Scale House transactions. While the Scale House operation manually logs such transactions when they occur, electronically recording the transactions requires modification to the Mettler-Toledo Auto-Scale software. Still, capturing such transactions would require Scale House staff to manually input those transactions into a modified Mettler-Toledo Auto-Scale software system, which management finds unacceptable. Management required the purchase of Auto-Scale software that automatically captures these types of transactions thereby eliminating the need for manual re-entry.

Realizing this problem, management instituted an Insufficient Funds Policy in February 2014, and in July 2014, the Department (1) used a third party software consultant to flowchart all Scale House operations including transactions such as these; (2) used the same third party software consultant to flowchart new best practices to be implemented in a new Auto-Scale system; (3) Based on this information, in August 2014, the City's Department of

Technology & Innovation opened a new project to develop an RFP and subsequently purchase Scale House software that will correct this problem and others that were identified.

TARGET IMPLEMENTATION DATE: The target date to issue an RFP for Scale House Software is February 2015. Evaluation, selection, contract negotiations and approval by Council target dates are July 2015, with full implementation of new auto scale software system expected by December 2015.

UPDATED MANAGEMENT RESPONSE: A Request for Proposal (RFP), 61051815-0-2015/LJJ – Utility Management System, was issued on March 18, 2015 by the City's Purchasing Department. Proposals were received on May 18, 2015. Submittals will be reviewed by a committee in July 2015 and an award is expected by December 2015. The awardee will secure a system that will provide the scale-house with the capability to establish accounts, provide on-demand billing, and invoicing. In order to properly optimize our ability to perform these functions with accuracy, it is imperative that the Scale House software and hardware chosen properly and fully integrate with the overall City of Tampa Utility Management System. Additional progress updates will be provided by June 2016.