

**Employee Safety: Solid Waste Services  
Follow-Up Report**

**February 2004**

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**DEDICATED TO IMPROVING THE CITY AND BUILDING PUBLIC TRUST**



**OFFICE OF THE CITY AUDITOR**

**AUSTIN, TEXAS**

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# City of Austin

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February 24, 2004

To: Mayor and Council Members  
From: Stephen L. Morgan, City Auditor  
Subject: Solid Waste Services employee safety follow-up audit

I am pleased to present this report on the status of Solid Waste Service's implementation of audit recommendations made in our April 2001 audit report *Employee Safety: Solid Waste Services*.

Industry-accepted measures indicate significant safety performance improvements at SWS since 2001: the lost-time injury rate, steady in FY 01 and 02, dropped by 50 percent in FY 03. We also found that efforts are underway in all areas of safety management to improve performance and achieve the spirit of the original audit recommendations. Of the nine original recommendations reviewed, we found five fully implemented and four partially implemented.

Most notable among the management initiatives contributing to performance improvements is the implementation of a return-to-work (case management) program for employees injured on the job. Similarly, important injury data integrity issues have been properly addressed in 2003. Management ratified an Accident Prevention Plan, approved by the Texas Worker's Compensation Commission, in 2002, and the Safety Office has introduced or improved several preventive, detective and corrective processes in 2003.

Our work indicated that consistently holding operators accountable for working safely will be central to further improvements in safety performance. Management must strengthen support for supervisors whose activities in the field can eliminate three main causes of injury on the job: imprecise execution of physical work, employee negligence, and failure to follow procedures. In time, the full implementation of the Accident Prevention Plan should make SWS competitive with the waste management industry when it comes to safety.

We appreciate the cooperation and assistance from Solid Waste Services' staff during this audit.

Stephen L. Morgan, CIA, CGAP, CFE, CGFM

## COUNCIL SUMMARY

**Solid Waste Services has made significant improvements in safety program management and performance since 2001.** When the original Employee Safety audit was issued in 2001, SWS had considerable work to do to strengthen their safety program and performance. Since that time, management has documented and communicated goals, strategies, and roles for safety throughout the department, and has supported the department's safety team in their initiatives. The safety team has greatly improved the frequency and scope of workplace inspections, has improved the quality of safety data, its analysis and distribution. They have also implemented tracking systems that measure some accountability processes within operations, namely the implementation of corrective actions following injury incidents, and the remediation of problems identified in routine inspections. Furthermore, the first in a series of standard operating procedures have been ratified since the last audit. A measurable and significant reduction since 2001 in the frequency of lost-time (severe) injuries can be attributed to improvements in safety management.

**Of the nine original recommendations reviewed, we found five fully implemented, while efforts are underway in all areas to achieve the spirit of the recommendations.** In 2002, the State required SWS management to introduce a number of measures that coincided with OCA recommendations. Upper management defined strategies and roles for safety management throughout the department. The department's safety team, with management's support, further improved or introduced detective, preventive, and corrective processes. It is in the operations areas themselves where implementation of OCA recommendations has yet to be realized. For example, although the director has ratified several new standard operating procedures, evidence shows supervisors have yet to adopt these as tools to hold operators accountable when they are witnessed violating procedures. Similarly, while roles are widely communicated, more specific expectations for roles in accountability procedures, such as taking corrective actions following an injury, documentation of violations, and the use of counseling or written reprimands, are unclear and inconsistent. Implementation is achieved when each level of the organization is integrated into the safety management system.

**Lack of accountability enforcement procedures in the field remains the key barrier to SWS achieving competitive safety performance in the waste industry.** In our audit work, we found that day-to-day procedures for ensuring accountability in the three high-hazard operating divisions need to be strengthened. Supervisors report widely varying approaches to holding workers accountable when they violate procedures. In this way, standard operating procedures have yet to be effectively integrated as tools. A disciplinary policy that can guide supervisors in holding crews accountable for working safely at all times became effective July 2003. However, the supervisors and operators that we spoke to are unaware or unclear about when and how to apply such a policy.

Analysis of injury data bears out the finding that operators are not being held accountable. According to SWS Safety Office data, imprecise execution of highly physical work, combined with employee negligence, and a failure to follow procedures have led to the majority of injuries in the department over the last three years.

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## BACKGROUND

The basic components of an effective employee safety program include: the consistent involvement and support of senior management; methods to identify hazards and potential causes of injury; methods to control the hazards once identified; education and training for employees on hazard control and injury prevention. Specific practices, procedures, and processes underpinning these components contribute to program success and effectiveness. Exhibit 1.1 illustrates the basic safety program framework we used to evaluate the Solid Waste Services (SWS) program and performance in 2001, and to assess the scope of improvements made since the original audit report.

OCA issued the SWS Employee Safety audit report in April 2001. It contained 15 recommendations designed to improve the department's existing safety program. Management concurred with all the recommendations, and presented an action plan to the City Council's Audit and Finance Committee for their implementation.

Original recommendations addressed the need to strengthen key areas of program operation: management roles, standard operating procedures governing job performance, human resource allocation, incident management and accountability processes, and performance measures.

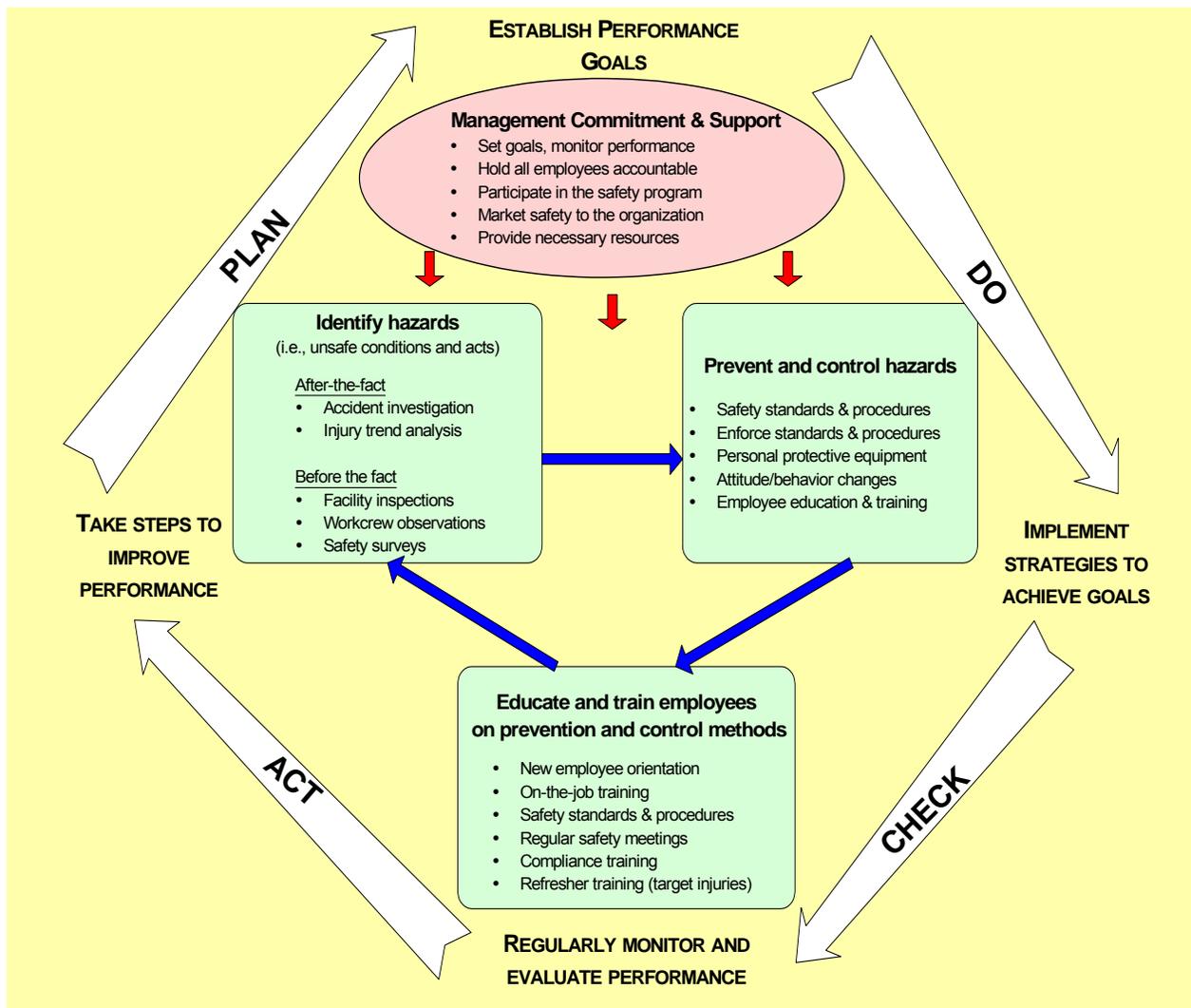
**The State designated SWS a Hazardous Employer in 2002, and cleared the department of this status in 2003.** Several significant events occurred following the issuance of OCA's original audit report. In April 2002, the Texas Workers' Compensation Commission (TWCC) notified the City of SWS's Hazardous Employer status, based on their performance during a twelve-month audit period ending July 2001. The designation required an independent safety program survey, implementation of an Accident Prevention Plan prescribed by the State, and measurable performance improvements. To evaluate performance, and identify hazardous employers, TWCC uses a measure of those on-the-job injuries for which an employee loses more than seven days of work.

SWS was removed from hazardous employer status in April 2003, based on the results of the State's own inspection. However, the department's lost-time greater-than-7-days rate remained higher than the expected rate, and SWS was placed on monitoring status until October 2003. The current rate falls below the threshold.

## OBJECTIVE, SCOPE AND METHODOLOGY

The objective of this follow up work was to assess the progress that the SWS department has made toward addressing findings and implementing recommendations set forth in the SWS Employee Safety audit report of 2001. We limited our scope to verifying implementation status of 9 of 15 original recommendations. Specific injury cases reviewed occurred between October 2002 and June 2003, in three high hazard divisions.

**EXHIBIT 1.1**  
**Safety Program Management**



SOURCE: Office of the City Auditor (OCA) analysis of safety industry literature.

To accomplish our objective we interviewed management and operations staff, and reviewed and analyzed a variety of safety data, internal documents, and management reports.

This audit was conducted in accordance with generally accepted government auditing standards.

## AUDIT FINDINGS

**A key measure of safety, the departmental lost-time injury rate, decreased by almost 50 percent from FYs 01 and 02 to FY03.** A lost-time injury case is one where an employee injured on the job loses one or more days due to that injury. The dramatic drop in the department’s reported lost-time injury rate, presented in Exhibit 1.2, was due to at least two discernable factors. First, SWS’s safety team implemented a return-to-work program, an internal process improvement in case management. This program places injured employees in limited-duty jobs as soon as possible following injury, accommodating an employee’s limited capacity to work until a doctor releases them back to full duty. Secondly, Safety staff have worked to correct data that was resulting in overstatements of lost days associated with injury incidents in FYs 01 and 02 and early FY 03. For the past year, SWS’s Safety Office staff, in cooperation with the City’s third-party administrator JI Specialty Services, Inc., has diligently sought to ensure more accurate data reporting.

With only one year of reliable data, it is not yet possible to demonstrate that the decline in the frequency of lost-time cases is attributable to an actual decline in the severity of injuries (e.g., employees sustaining fewer serious lacerations as opposed to minor cuts). It is also not yet possible to show the degree to which initiatives such as inspections and ratification of accident prevention plan may have had an impact on the lost-time rate.

**EXHIBIT 1.2  
SWS Lost Time Rates, FY 01 – FY 03**

	FY01	FY02	FY03
Lost time rate, 1+ days lost	13.62	13.90	7.12
Lost time rate, 8+ days lost *	N/A	9.18	4.93

\* State regulators monitor the frequency of those on-the-job injury cases resulting in eight or more lost days.

SOURCE: Human Resources Department; FY 03 data verified by SWS. Rates indicate number of injuries per 100 FTEs.

**The reduction in reported lost time injuries has not yet resulted in competitive safety performance.** To assess the competitiveness of SWS’s lost time rate for FY03, one should compare FY 03 performance, 7.12 lost-time injuries per 100 FTEs, to the Bureau of Labor Statistics industry average for the same period, 4.1. According to these figures, the City’s rate was 45 percent higher than the industry benchmark. SWS’s improvements so far have, however, resulted in the department’s release from Hazardous Employer status. (TWCC uses a hybrid measure of the lost-time rate to make its status determination.)

**A small increase (6 percent) in the overall claim rate since FY 01 (see Exhibit 1.3) may indicate that the inherent seriousness of injuries at SWS has not yet abated, despite major improvements in case management and a decline in the lost-time**

**injury rate.** In other words, if serious injuries had declined at the same time as lost time cases have declined we would expect to see a parallel decline in the overall claim rate.

**EXHIBIT 1.3  
SWS Workers' Compensation Claims,  
FY 01 – FY 03**

	FY01	FY02	FY03
Lost-time cases *	52	53	25
All other claims **	111	121	143
<b>Total claims</b>	<b>163</b>	<b>174</b>	<b>168</b>
Claim rate	42.69	45.64	46.01

SOURCE: HRD. FY 01 and FY 02 totals not audited; FY 03 totals corroborated by SWS. FY 03 claim rate calculated by OCA based on HRD data. Rates indicate claims filed per 100 FTEs.

\* A lost-time case is one for which one or more days were lost due to on-the-job injury.

\*\* This group includes medical-only cases, limited duty cases incurring no lost-time, as well as injuries that , while a claim is initially filed, do not result in a doctor's visit or incurred medical costs.

Despite some data limitations – namely, the inability to distinguish between incident only and medical cases when using the Human Resources Department's (HRD's) data - the lack of a significant change in the overall claim rate suggests a lack of impact so far on actual injury experience. With the further implementation of preventative recommendations, one should expect to see a decline in medical and lost-time cases.

**Corporate Safety's current reporting practices do not distinguish between incident-only, medical, and limited duty cases, complicating efforts to detect or demonstrate important improvements that may be occurring in work force safety.** Unlike SWS's Safety staff, the City's Corporate Safety program staff do not currently segregate those worker's compensation claims which never advance to a medical or lost-time case, from claims that do. To do so is particularly important because, while an increase in incident-only claims may indicate improved safety awareness among City employees, an increase in medical-only cases indicates a decline in worker safety, all things remaining equal. Furthermore, in order to see the *full spectrum* of injury severity, HRD also needs to separately report cases that result in limited duty assignments. Until HRD excludes from their "medical only" rate those incidents that do *not* result in a doctor's visit, it will not be possible to see improvements in City departments' precise injury experience over time.

OCA has issued a separate memo to the Director of HRD outlining these reporting issues.

## FOLLOW UP AUDIT RESULTS

### At-A-Glance: Verified Implementation Status

Rec #	Recommendation's issue area	Partially Implemented	Implemented
1	Goals, strategies		√
2	Performance evaluation	√	
3	Assigned roles		√
4	Accountability system	√	
6	Inspections, assessments	√	
8	Cause analysis		√
9	Corrective actions		√
10	Standard Operating Procedures	√	
14	Training		√

## **Recommendation #1**

Establish and communicate goals and strategies

✓ **Implemented**

**Now cleared of Hazardous Employer status, Solid Waste Services staff views their industry's average incident rate as the department's current safety performance goal.** Until cleared of monitoring status in October 2003, SWS's Safety Office staff referred to the State's incident rate threshold as the department's safety performance goal. While the Texas Workers' Compensation Commission (TWCC) expected rate was the least stringent of performance benchmarks available, the threat of State sanctions was a persuasive reason to adopt this target. The Safety Officer now considers the waste management industry benchmark a viable goal; the City's Corporate Safety program, similarly, evaluates departmental performance against industry averages as calculated by the Bureau of Labor Statistics. [Success in *achieving* goals is addressed in the previous section on Audit Findings.]

**SWS management has ratified a department Accident Prevention Plan describing goals, strategies, and roles for safety management.** The Accident Prevention Plan is a statement of intention, with strong criteria for ongoing implementation of a safety management program. Implementation timelines, however, were not included. The Accident Prevention Plan (APP) was ratified in July 2002. SSPRs for Division Managers, Public Service Managers, Supervisors, and Operators currently reflect the specific responsibilities laid out in the APP, fulfilling the intent of OCA's original recommendation, that employees at all levels be informed of their role in the safety program. In addition, management held a series of meetings with all department employees in order to launch the plan.

**Department management does not include safety goals in its business plan.** SWS business plans and budgets for FYs 03 and 04 include no safety performance measures, and make no mention of initiatives to meet either State or industry benchmarks. The two other high-risk City departments audited in 2001 (Emergency Medical Services and the Parks and Recreation Department) both include safety measures for FY 04. Inclusion of safety measures would reflect a management commitment to achieving production goals while working safely. The SWS Safety Officer tracks several key measures of safety performance appropriate for inclusion in a business plan.

**Many SWS operators and their supervisors we spoke to were broadly aware of management's concern about safety performance.** Supervisors and operators reported a noticeable, new emphasis on working safely. However, some operators stated that the department does not care about the employees, as much as they do avoiding regulator penalties.

### **Suggested strategies for further implementation:**

1. Include measures as part of business plan.

## **Recommendation #2**

The Director must track measures of Safety performance, and take action when standards have not been met

-- **Partially implemented**

**To date, the Director has not ordered a formal, comprehensive evaluation of the SWS safety program.** Since SWS was designated a hazardous employer, significant work has been done to improve safety management. However, a comprehensive evaluation of these efforts, with attention to program components that demonstrate implementation failures or omissions is yet to occur.

**The SWS Occupational Health the Safety Officer (Safety Manager) reports that a thorough program review will become part of the safety program, as the department continues to meet its priority needs identified by the State and the Safety team itself.** The manager's first scheduled comprehensive review was to be conducted by November 2003. (TWCC highlights SWS's intention to conduct this first annual review of the Accident Prevention Plan in an April 2003 correspondence.) Once fulfilled, the director will be able to take further necessary action where standards have yet to be met.

**The Safety team produces and distributes safety data that can be used by management to address problems in high injury areas of SWS operations.** The team issued the first, monthly 'Safety Team Data Summary' in January 2003. The quality of case data, and the strength of collection, storage and analysis of the data has ensured good quality summaries. Analyses are typically frequencies, without the benefit of comparable rates.

Summaries are memo-ed to all Division Managers and the Director, and are designed to help management direct any necessary actions in the operations themselves. Included in these reports are substantial collisions analysis, and data showing a key performance measure, training attendance.

### **Suggested strategies for further implementation:**

1. Conduct annual evaluations of safety management system risks and vulnerabilities.
2. Improvements in Data Summaries could include:
  - Frequencies by Operational Division and Supervisors section/crew, expressed as rates
  - Measurable goals for each supervisor and public service manager.
  - Analysis of causes
3. Director and Division Managers act on the results of safety manager's APP evaluation, and the OCA evaluation.

### **Recommendation #3**

Assign safety responsibilities

✓ **Implemented**

**SSPRs, drafted in 2002 for FY 03, communicate safety goals and strategies to all employee levels, although there are weaknesses.** We reviewed SSPRs for all employment levels. Unfortunately, stated goals tend to define a measure rather than specify a measurable performance expectation. For example, the measures “number of employee injuries” and “lost time injury rate” do not specify numeric targets. Also, the latter is not tracked at the division or crew level.

SSPRs are stronger in documenting strategies towards which employees are expected to contribute. Under the employee responsibility section for operators and their supervisors the following are examples:

- 100% attendance at safety meetings and trainings
- Using Daily Driver Reports
- Using Supervisor reports.

For the *effectiveness* of the inspection, detection, and prevention methods, see other recommendations.

#### **Suggest strategies for improvement:**

1. Specify a measurable performance expectation for operations managers and supervisors.

**Recommendation #4**

Establish a system for ensuring accountability for safety performance and enforcing the department's safety procedures, which is applicable to all employees within the department.

**-- Partially implemented**

This recommendation focuses on accountability issues in the SWS organization and is addressed by recommendations 6 (inspections), 8 (causal/trend analysis), 9 (corrective actions, including personnel and Human Resource matters) and 10 (standard operating procedures).

## **Recommendation #6**

Establish and implement a proactive inspection and assessment process  
**-- Partially implemented**

**The Safety Office has implemented scheduled and unannounced inspection processes that address crew and vehicle safety.** The SWS Accident Prevention Plan states that the SWS Safety Office will conduct spot inspections of various areas, inspections upon request, and inspections of new operations. The addition of impromptu spot inspections by the Safety Office is an improvement since April 2001, when such inspections were not being performed. Monthly manager's inspections were initiated in February 2003, and bi-annual facilities inspections initiated March 2003.

Spot inspections by Safety Office staff comprise randomly checking vehicles before crews leave the yard, and riding along with crews to evaluate the safety of the vehicle and performance of the crews on their routes. When Safety staff witness a violation, the Safety Office sends the crew's supervisor recommendations to address the violations found. The Safety Office tracks all correspondence with operations regarding violations and the responsiveness from operations. A supervisor interviewed says he feels crews are working more safely now due to unannounced spot inspections; operators never know when their work is being watched and evaluated. An operator interviewed states that the "field inspectors [from Safety] just 'pop up' sometime." Examples of safety violations include poor housekeeping, and broken fire extinguishers. The recommendations issued by the Safety Office come from observing the violations and include, for example, cleaning out the cab of trucks, and using safety equipment.

**Day-to-day reinforcement of safe work procedures by line managers and supervisors is insufficient to hold operators and their supervisors accountable for working safely.** The SWS Accident Prevention Plan requires supervisors to see that unsafe conditions or practices are not permitted in the department. This requires that operations supervisors perform regular safety observations of employees and intervene when unsafe procedures are observed.

A process intended to meet this accountability objective is the field evaluation. However, we found that not all supervisors interviewed conduct formal field evaluations. Using field evaluation forms, a supervisor is expected to evaluate the operator on performing specific driving responsibilities, wearing appropriate personal protective equipment, and meeting bin replacement guidelines and lifting technique expectations. Among reasons for not conducting field evaluations, one supervisor reports that when safety violations are found, documentation of the incident(s) is too time consuming to complete during a shift. A copy of the field evaluation must be submitted to the supervisor of each crew member observed violating a safety procedure. Another supervisor interviewed states he does not perform field evaluations because he was not aware of a means for reprimanding employees found to be violating safety procedures.

For those supervisors who use the field evaluation process, we found that supervisors are unclear about the number of field evaluations management requires them to perform each month. Two supervisors said 20 field evaluations are expected in a month while another

said 40 field evaluations are to be completed in a month. Further, supervisors are unclear if they are to evaluate their own crews or the crews of other supervisors.

**Supervisors are not sufficiently involved in daily vehicle inspections and maintenance issues.** The department's Accident Prevention Plan states that division managers shall act on all employee recommendations for safety improvements by responding to their concerns and that employees are responsible for informing their supervisors of hazards and recommending how to eliminate them, or how to improve safety performance. However, operators state that they often report vehicle maintenance issues that are not addressed in a timely manner. The most frequently cited maintenance problems that do not get immediate attention include bald tires and leaking fluids, such as anti-freeze, hydraulic and transmission fluids. Moreover, operators state that supervisors rarely check a pre-trip vehicle inspection report against the actual vehicle. Failure to check the actual vehicle against the inspection report could result in overlooking a serious maintenance issue. While we did not review the pre- and post-trip system in detail, the issues raised by staff suggest the benefit of reviewing the current process.

**Without a clear process for handling violations, some supervisors are more lenient than others when it comes to holding employees accountable for working safely.** The SWS Accident Prevention Plan states that Division Managers and supervisors shall take disciplinary action "as necessary" with employees who fail to follow safe work procedures. A disciplinary policy became effective July 2003. However, supervisors and operators that we spoke to are unaware or unclear about when and how to apply this policy.

One supervisor interviewed stated that he gives a verbal warning the first time an employee violates a safety procedure, while the second time the employee violates the same policy, a written reprimand goes into the worker's personnel file. If an employee violates the safety policy a third time, they are suspended without pay. A second supervisor stated that he gives employees a "heads up" for the first observed safety violation, followed by a "verbal warning" for the second violation, and then a "written reprimand" is given to the employee for violating the same safety issue for the third time. A third supervisor interviewed stated that he does not discipline his employees for violations because he feels they could not help the injury or collision. He stated that if he believes the employee to be at fault for causing an injury or a collision, he would reprimand the employee by first providing "verbal counseling." Additionally, auditors witnessed one supervisor, in his office, apologizing to his crew for having to hold them accountable by writing reprimands for not following a procedure.

This confusion is reflected in the fact that only one of the eight supervisors interviewed providing evidence of ever having given a written reprimand to an employee for failure to follow proper safety procedures without incident. Two of the nine injured operators in our sample were written up for safety violations following their injuries. In summary, management of SWS is inconsistent in holding staff accountable for following procedures and guidelines.

**Suggestions for further improvements:**

To improve accountability in the field management could:

1. Assess the effectiveness of Field Evaluations at the operations level of the organization;
2. Assess the effectiveness of the pre- and post-trip process and current vehicle maintenance practices;
3. Consider posting industrial safety signs, communicating a SWS supervisor's enforcement responsibilities; and
4. Complete, implement and monitor the effectiveness of the SWS Disciplinary Policy.

**Recommendation #8**

Analyze injury cause trends

-- **Implemented**

**Safety staff attribute causes to the injury incidents they investigate and organize their data in a meaningful and manageable number of categories.** Since the previous OCA audit, Safety has used National Safety Council methodologies when attributing injury causes. The five classes of cause include ‘People,’ ‘Management,’ ‘Equipment,’ ‘Environment’ and ‘Other’ causes, which include for example *re-occurrence of an old injury*, and *unseen hazards*. (See Exhibit 1.5 for the types of causes within in these five classes.) Audit used SWS Safety’s injury data to generate Exhibit 1.4, sorted by frequency. Of 639 recorded cases, 552 had a cause attributed, while the remainder were unspecified.

**EXHIBIT 1.4  
Injury Cause Frequencies**

Category	Frequency FYs01-03
People	193
Other	150
Environment	135
Equipment	57
Management	17
	<b>552</b>

SOURCE: SWS Safety database.

Current analyses of injury data, conducted by Safety Office staff and distributed to upper and middle management, include frequency analysis of incidents by nature of injury (type), work area, cost (collisions only), and by the responsible supervisor. However, within the audit scope, staff did not conduct an analysis of the cause data it develops and collects.

**While operators are generally believed to ‘know how to do their job’, the most common cause of incidents - imprecise execution of physical work - indicates there is a level of precision either not learned, or not enforced.** According to the data, imprecise *body positioning* (83 cases) was the most frequently occurring cause among all 552 cases; backs, ankles and shoulders were most prone, according to the SWS data. This finding means that employees need immediate reinforcement, or enforcement, of the precise physical requirements of the job. One employee we talked to stated that he had not been instructed when hired on where to stand in relation to his truck, yet was held accountable for knowing that procedure following his injury incident. Some employees we spoke to judged written SOPs and thoroughness of hands-on demonstrations as helpful but insufficient training.

As long as the department is committed to using the modified task system, which provides incentives for getting the job done without overtime, (hence ‘ripping and running’) training, and vigilant enforcement shall remain a necessity. The relationship of the modified task system to injury rates was noted in the previous OCA audit report.

**The high frequency of failure to follow procedures and negligent behavior (69 cases total) highlights the need to better ensure sufficient training, and to strengthen oversight accountability for following procedures and preventing injuries on the job.** Despite SWS management being implicated in employee negligence or inattention to procedures, management’s *failure to enforce procedures, failure to establish procedures*, or ensure *training* is rarely attributed by investigators as a cause of injury (17 cases in all). Historically, SWS has not had established procedures for much of its

equipment or processes. While the majority of the 192 cases attributed to people are ascribed to the injured employee themselves, *citizens* are also at fault in 19 cases.

***Repetitive motion over time (74 cases), among ‘other’ causes, was the second most frequently recorded cause among all 552 cases, after imprecise body position.*** Backs are hurt in almost 50 percent of *repetitive motion* cases, and hands and wrists hurt in 10 percent of cases. *Slips trips and falls*, and *unseen hazards* are also included in the ‘other’ category, a class of cause that may be more difficult to control.

***Equipment failure and malfunctions was a significant cause (37 cases).*** However, equipment-based causes are far less frequently attributed than People, Other, or Environmental causes.

***Animals/insects was the most commonly attributed environmental cause of injury (35 cases).*** Environment is an inherent hazard of a SWS Operator’s job. Environmental-based injury may result however from an operator’s failure to wear protective equipment. For example, dust or solid waste in eyes may be prevented by the proper wear of protective glasses. In such a case, cause should be attributed to *failure to follow procedures*.

The frequency of injuries resulting from vehicle collisions was less considerable (17 cases). Safety Staff analyze vehicle collisions in detail due to property damage and legal costs associated with these incidents.

**EXHIBIT 1.5  
Selected causes, with highest occurring frequencies, for cases  
occurring in FYs 01, 02, and 03.**

CAUSE	TOTAL	CAUSE	TOTAL
<b>Environment</b>		<b>Other</b>	
Animal/Insect	35	Hidden/Unseen Hazard	22
Chemicals	8	Re-occurrence of old injury	5
Heat/Sun	29	Repetitive Motion over time	74
Work Surface	20	Slips/Trips/Falls	22
<b>Equipment</b>		Vehicle Collisions	17
Failure/malfunction	37	<b>People</b>	
Not suitable for the task	12	Body Position	83
Not used properly	6	Citizen Act	19
<b>Management</b>		Failure to follow Safety procedures	35
Failure to enforce est’d procedures	2	Negligence-Employee	34
Failure to establish procedures	4		
Inadequate Training	3		
No training	8		

SOURCE: SWS Safety database. Data are not audited. n=475

**Suggested strategies for further implementation:**

1. Continue to attribute cause. Consider adding root cause and contributing cause categories/fields to the database to capture all the data in investigations.
2. Continue to review sufficiency of training, and mandatory refresher training.
  - Review the use of refresher training to include demonstrated performance of tasks, in order to correct body positioning.
3. Ensure that all cases have an attributed cause.

### **Recommendation #9**

Establish a system to ensure that corrective actions are developed, documented, and implemented

**-- Implemented**

**The Safety Office staff develops corrective action recommendations following injuries occurring on the job.** In the course of an injury investigation, Safety Office investigators attribute an underlying cause, or causes, of injury and documents these causes in the Safety database. Then, the Safety Office issues corrective action recommendations to division managers and supervisors in order to reduce the risk of causing future injuries. Eight of the nine Safety Office investigations we reviewed had corrective actions that were sent to the division managers.

**Unfortunately, improvements made in this preventive process often break down at the operations level.** The SWS Accident Prevention Plan states managers and supervisors are responsible for following up to see that corrective action has been taken following an employee injury. However, upon review of the Safety Office tracking data of the past two years, only 25 percent of the corrective action recommendations issued by the Safety Office received a response – either accepting or declining the recommendation - from division management and/or the supervisors in operations. For the nine injury cases reviewed, the Safety Office issued seven corrective action recommendations to management and received only two responses.

Residential customers too, when allowed to ignore SWS guidelines for curbside pickup, contribute to injury rates and costs. In one case in our sample, construction materials were improperly disposed of in a residential garbage can. Consequently, an operator sustained a severe back injury attempting to lift the unexpectedly heavy load. The medical costs incurred for this injury exceeded \$3,000, and productivity and worker's compensation costs covered 78 lost days of work. Following the injury, the collection crew left this customer's inappropriate residential refuse. However, the crew was later directed to return to the residence to collect the contents, despite non-compliance.

Corrective action recommendations that did not receive a response by division management and/or operations supervisors include:

- “Conduct a tailgate meeting to discuss where employees should be when the blade is cycling.”
- “Remind employees to take the time to sweep broken glass with a broom rather than by hand.”
- “Management should develop and implement a written Standard Operating Procedure for safe operation of the new Labrie vehicle.”
- “Inform employee if the pain persists to seek medical attention.”

At the same time, management has implemented some corrective actions that had positive results. For example, dust pans have reportedly been issued to all trucks following an injury where an operator cut his hand while picking up broken glass on a recycling route. In another example, for curbside recycling, it is now required that corrugated cardboard should be flattened and folded to 2 ft. by 2 ft. and tied into

manageable bundles with string or twine. This followed an operator sustaining a severe hand injury while pushing cardboard into the recycling truck to get the cardboard to fit into the truck's recycling bin. This injury has so far cost the City \$37,840 in medical expenses, and 168 days of productivity losses and worker's compensation costs.

**We found recommendations issued by the Safety Office were not being implemented at the operational level.** The SWS Accident Prevention Plan states that division managers are responsible for reviewing and implementing corrective action recommendations submitted by the Safety Office. However, of the eight operations level supervisors interviewed, one supervisor states he does not know who is responsible for implementing corrective action recommendations from the Safety Office and guessed he might be the one responsible for his crew, but was not certain. Another supervisor said that he was responsible for implementing the recommendations and that he would be written up for failing to implement the corrective actions issued by the Safety Office. Other supervisors state that it is at their discretion whether or not they will implement a corrective action recommendation from the Safety Office and that supervisors do have to report back to the Safety Office regarding the status of the recommendation, even if they decide not to implement the recommendation. A supervisor in Recycling stated that since he no longer sees the recommendation from Safety (it goes to the division manager), he cannot implement the recommendation. One operator interviewed said the crew leader is responsible for implementing safety recommendations from the Safety Office.

**Suggestions for further improvements:**

1. Clarify the Division Manager and Supervisor roles and responsibilities as they relate to the implementation of corrective action recommendations issued by the Safety Office.

### **Recommendation #10**

Ensure safe operating standards are developed, documented, implemented, and enforced for all operations in the department.

**-- Partially implemented**

**Across the three SWS divisions reviewed, standard operating procedures (SOPs) are in different stages of development.** A supervisor stated that in July through December of 2001, the SWS supervisors of his division gathered to draft a 'wish list' of SOPs needed, primarily corresponding to equipment operations. A consultant was later hired to assist in drafting the SOPs. In July of 2003, Pay As You Throw (PAYT) division drafted and ratified 13 SOPs, but not all PAYT supervisors interviewed are aware of this fact. The 13 PAYT SOPs are indexed and dated and were provided to the auditors by the Safety Office. In October 2003, Litter Abatement had two SOPs ready for ratification by the department Director. These SOPs address the operation of a street sweeper and street cleaning. The most recent SOP that a Litter Abatement supervisor was aware of relates to training. It was reported that new operators are provided an SOP packet as part of their orientation process.

**Not all supervisors or operators interviewed knew the term 'standard operating procedure' and not all supervisors could locate copies of their SOPs when requested to do so.** Of the eight supervisors and operators interviewed, one PAYT supervisor and three operators said they have not heard the term standard operating procedure or SOPs used in the organization.

Supervisors who do not know what a standard operating procedure is or who cannot locate their copies of SOPs, may have difficulty clearly communicating the contents of the SOPs to the crews they supervise. This makes the Accident Prevention Plan clear communication objective difficult to achieve.

**Additional methods of communicating SOPs would be beneficial.** An operator stated that it would be helpful if a new safety procedure is demonstrated to him and not only presented in an oral or written form. He believes operators would better understand how to perform a new procedure if they could see an example of the procedure being performed. One operator interviewed stated that not all operators understand English fluently, and have difficulty understanding training on new standard operating procedures when a translator is not present.

Additionally, reading and writing challenges lead to problems disseminating new SOP information to their crews.

**Handling of SOP violations is inconsistent across the three SWS divisions reviewed.** As discussed in Recommendation 6, the handling of employees observed violating SOPs is inconsistent across supervisors and divisions.

### **Suggestions for further improvements:**

1. Continue to develop, implement, and enforce SOPs.

Recommendation #14

Centralize training records

✓ **Implemented**

**The department has centralized training records.** All training records are currently stored on TRAIN, the City's system of record for tracking training, and in the Safety team files. Access to these records facilitates routine checks of training records following an injury, to determine if lack of training contributed to incident cause. SWS consolidated its training, human resource administration and Safety functions in 2002.

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## **APPENDIX A**

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P.O. Box 1088

Austin, Texas 78767

**MEMORANDUM**

**TO:** Brian K. Williams, Assistant City Auditor  
Office of the City Auditor

**FROM:** William E. Rhodes, P.E., Director  
Solid Waste Services Department

**DATE:** January 16, 2004

**SUBJECT:** Employee Safety Audit Follow-Up

I have reviewed the findings of the Employee Safety Audit Follow-Up report dated January 9, 2004, with my management team. Solid Waste Services (SWS) appreciates the time that you and your staff devoted to the follow-up audit.

The Employee Safety Audit of 2001 resulted in fourteen (14) recommendations, which SWS agreed with for improving our safety performance. Since the Employee Safety Audit in 2001, the management team and employees of SWS have made concerted efforts to raise the level of awareness regarding safety within the department and to make the department a safer workplace. Those efforts were intensified when the Texas Workers' Compensation Commission declared the department a Hazardous Employer in April 2002. However, in March 2003, SWS was removed from Hazardous Employer status and in October 2003, SWS was removed from a monitoring status.

While SWS agrees with the recommendations made in the 2001 Safety Audit, SWS disagrees with your conclusions in the final audit report of January 9, 2004. We remain firm in our opinion that all of the recommendations have been implemented in accordance with the Employee Safety Audit of 2001. SWS will continue to seek opportunities for continued improvement to further reduce our incident rates.

  
William E. Rhodes, P.E., Director  
Solid Waste Services Department

cc: John Stephens, Acting Assistant City Manager  
Don Birkner, Assistant Director – Solid Waste Services Department  
Charles Williams, SW Division Manager – Human Resources  
Ellen Jensen, Occupational Health & Safety Manager

WER: caw

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## **APPENDIX B**

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## STATUS OF RECOMMENDATIONS TESTED

**Recommendation 1:** The Director of SWS, along with the Safety Manager, should establish, and communicate to all employees, specific safety goals and related strategies to improve the department's safety performance.

Per OCA review: IMPLEMENTED

**Recommendation 2:** The Director of SWS should annually evaluate the department's safety performance to determine its success at meeting established goals and take necessary action when performance is not up to standard.

Per OCA review: PARTIALLY IMPLEMENTED

**Recommendation 3:** The Director of SWS should assign responsibilities for key safety roles and functions throughout the department which are:

- Clearly delineated and delegated to the Safety Office staff, each level of management, and line employees, and
- Directly tied to the achievement of the department's goals for improving safety performance.

Per OCA review: IMPLEMENTED

**Recommendation 4:** The Director of SWS should establish a system for ensuring accountability for safety performance and enforcing the department's safety procedures, which is applicable to all employees within the department.

Per OCA review: PARTIALLY IMPLEMENTED

**Recommendation 6:** The Director of SWS along with the Safety Manager should establish and implement a proactive inspection and assessment process to identify and correct hazardous conditions and acts that could result in accidents or injuries. The inspection and assessment process should include:

- Monthly facility inspections,
- Impromptu facility inspections and work crew observations, and
- Annual comprehensive safety surveys.

Per OCA review: PARTIALLY IMPLEMENTED

**Recommendation 8:** In order to identify and address common causes of injuries over time, the Director of SWS should direct the Safety Manager to begin to analyze injury cause trends over time and report such trends in quarterly safety performance reports along with suggested prevention strategies.

Per OCA review: IMPLEMENTED

**Recommendation 9:** The Director of SWS, along with the Safety Manager, should establish a system to ensure that corrective actions are developed, documented, and implemented immediately following an employee injury as well as following the identification of common causes or patterns of injury over time.

Per OCA review: IMPLEMENTED

**Recommendation 10:** In order to control known job hazards, the Director of SWS should ensure that safe operating standards are developed, documented, implemented, and enforced for all operations in the department.

Per OCA review: PARTIALLY IMPLEMENTED

**Recommendation 14:** To facilitate assessment of employee training needs, the Director of SWS should direct the Safety and Training managers to establish a centralized system to track employee safety training requirements and attendance records.

Per OCA review: IMPLEMENTED

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