



June 28, 2004

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SUBJECT: Audit Report – Efforts to Prevent Accidents, Injuries, and Illnesses in the Arkansas and Oklahoma Performance Clusters (Southwest Area) (Report Number HM-AR-04-007)

This report presents the results of our audit of the Arkansas and Oklahoma Performance Clusters' (Southwest Area) efforts to prevent accidents, injuries, and illnesses (Project Number 03YG011LH005). Our overall objective was to determine whether the performance clusters were reducing the number of accidents, injuries, and illnesses through prevention methods. This report is the fifth in a series of 7 reports we will issue on accident prevention initiatives in 6 areas and 12 performance clusters. The seventh report will address issues with nationwide impact and will provide the results of our best practice review of safety issues.

The Arkansas and Oklahoma Performance Clusters had implemented prevention initiatives that have the potential to become best practices in reducing accidents, injuries, and illnesses. In addition, the prevention initiatives reduced the number of accidents, injuries, and illnesses in both performance clusters, and the initiatives were implemented in a timely manner.

Although both performance clusters were accumulating and analyzing accident, injury, and illness data for prevention initiatives, the Human Resources Information Systems and the Risk Management Reporting System are antiquated and will be replaced. Finally, in all six facilities we visited in the Arkansas and Oklahoma Performance Clusters, the reporting processes facilitated accurate reporting of accidents, injuries, and illnesses.

Management stated the report accurately reflects the attention that both District Managers give to protecting the Postal Service's most valuable assets from job-related injuries. Management also stated that both performance clusters use *CustomerPerfect!*, a process that closely aligns with the organization's values, to determine the causes of accidents and the gaps in processes. In addition, management stated that both clusters are committed to accurate and timely accident reporting.

We appreciate the cooperation and courtesies provided by your staff during the audit. If you have any questions or need additional information, please contact Chris Nicoloff, Director, Human Capital, at (214) 775-9114 or me at (703) 248-2300.

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EXECUTIVE SUMMARY

Introduction

This report presents the results of our self-initiated audit to determine whether the Arkansas and Oklahoma Performance Clusters located in the Southwest Area were reducing the number of accidents, injuries, and illnesses through prevention initiatives.

Results in Brief

The Arkansas and Oklahoma Performance Clusters have implemented prevention initiatives that could become best practices in reducing accidents, injuries, and illnesses. In addition, the prevention initiatives reduced the number of accidents, injuries, and illnesses in both performance clusters, and the initiatives were implemented in a timely manner.

Although both performance clusters were accumulating and analyzing accident, injury, and illness data for prevention initiatives, the Human Resources Information Systems and the Risk Management Reporting System are antiquated and will be replaced.

Postal Service Headquarters officials told us they were addressing this issue at the headquarters level. We will issue a summary report on the audit results for the six areas visited. In that report, we may make a recommendation to the Senior Vice President, Human Resources, regarding the data systems.

Finally, in all six facilities we visited in the Arkansas and Oklahoma Performance Clusters, the reporting processes used within the various functional areas facilitated the accurate reporting of accidents, injuries, and illnesses.

Summary of Management's Comments

Management stated the report accurately reflects the attention that both District Managers give to protecting the Postal Service's most valuable assets from job-related injuries. Management also stated that both performance clusters use *CustomerPerfect!*, a process that closely aligns with the organizational core values, to determine the causes of accidents and the gaps in processes. In addition, management stated that both clusters are committed to accurate and timely accident reporting. Management's comments, in their entirety, are included in Appendix E of this report.

INTRODUCTION

Background

With responsibility for more than 38,000 facilities, major transportation networks, and universal delivery, the Postal Service faces significant challenges in the areas of health and safety. These include making the health and safety of Postal Service employees a priority, managing the associated costs and lost productivity in operations, and responding when accidents and injuries have an unfavorable impact on the workplace. In addition, the Postal Service must address citations and monetary penalties for noncompliance with Occupational Safety and Health Administration (OSHA) standards.

In its April 2002 Transformation Plan, the Postal Service stated that to meet its challenges and prepare for transformation, it will implement a number of strategies to “push business effectiveness and operational efficiency.” One of the strategies outlined was to reduce its workers’ compensation costs. According to the Office of Workers’ Compensation Programs’ (OWCP) chargeback¹ reports, the Postal Service workers’ compensation costs have increased from \$538 million to \$822 million between chargeback years 1997 and 2003.²

The following table is a comparison of Postal Service-wide accidents³ and OSHA injuries and illnesses⁴ for fiscal years (FYs) 2002 through 2003, which shows decreases in four categories. In addition, total expenses in FY 2003 decreased significantly.

¹ The OWCP’s chargeback system is the mechanism by which the Department of Labor annually bills the cost of compensation for work-related injuries and deaths to employing agencies.

² The OWCP’s chargeback year is July 1 through June 30.

³ The Postal Service considers accidents as all reportable and nonreportable incidents, including unadjudicated occupational illness cases that cover certain kinds of injuries, illnesses, or damages. OSHA defines an accident as any unplanned event that results in personal injury or property damage.

⁴ OSHA defines an injury or illness as an abnormal condition or disorder. Injuries include, but are not limited to cuts, fractures, sprains, or amputations. Illnesses include both acute and chronic illnesses, such as, but not limited to skin diseases, respiratory disorders, or poisoning.

Table 1. Comparison of Postal Service-wide Accidents and OSHA Injuries and Illnesses, FYs 2002 through 2003

Category	FY 2002	FY 2003
Motor Vehicle Accidents	23,404	23,100
Non-Motor Vehicle Accidents	99,195	93,251
OSHA Injuries	51,630	46,317
OSHA Illnesses	6,972	5,550
Total Accident, Injury, and Illness Expenses	\$1,652,449,865	\$1,620,024,027

Source: Postal Service Web-Enabled Enterprise Information System (WebEIS).

Some Postal Service Headquarters officials did not know specifically what was responsible for the reduction in accidents. They believed, however, it was the result of accident prevention initiatives.

To determine why the number of accidents, injuries, and illnesses declined, we conducted a survey of the accident prevention programs in the Postal Service's Western New York and Baltimore Performance Clusters, located in the Northeast and Capital Metro Areas, respectively. Our results showed that accident prevention initiatives in each performance cluster were different and yielded contrasting results. We conducted this audit to determine whether similar situations existed in the Arkansas and Oklahoma Performance Clusters. We did not audit the performance clusters' overall safety programs. Our focus was on accident prevention initiatives at the locations we visited.

Objectives, Scope, and Methodology

Our overall objective was to determine whether the Arkansas and Oklahoma Performance Clusters were reducing the number of accidents, injuries, and illnesses through prevention initiatives. Our four subobjectives were to determine whether:

- The number of accidents and injuries were declining as a result of corrections to unsafe working conditions and practices.⁵

⁵ Corrections to unsafe working conditions and practices were considered both corrective actions and prevention initiatives. The purpose of this subobjective was to determine the effectiveness of prevention initiatives.

- Corrective actions and/or prevention initiatives were made in a timely manner.
- Data were being accumulated and analyzed for prevention initiatives.
- Processes facilitated accurate reporting.

We discuss our scope and methodology in Appendix B.

Prior Audit Coverage

In the Arkansas and Oklahoma Performance Clusters, we did not identify any prior audits or reviews related to the objectives of this audit.

AUDIT RESULTS

The Arkansas and Oklahoma Performance Clusters have implemented accident prevention initiatives. We determined that the prevention initiatives were reducing the number of accidents, injuries, and illnesses in both performance clusters, and the initiatives were implemented in a timely manner.

Although the performance clusters were accumulating and analyzing accident, injury, and illness data in two different automated systems; the systems are antiquated and will be replaced. Further, the reporting processes used within the various functional areas facilitated accurate reporting of accidents, injuries, and illnesses.

Accident Prevention Initiatives

The Arkansas and Oklahoma Performance Clusters' prevention initiatives have the potential to become best practices in reducing accidents, injuries, and illnesses. These initiatives could also help other performance clusters to enhance their safety programs. For example, the Arkansas Performance Cluster:

- Installed strobe lights and orange warning sticks on vehicles to reduce motor vehicle accidents. The strobe lights replaced the emergency flashers on long-life vehicles to bring attention to the slow-moving or parked vehicles. Strobe light bars were provided to rural carriers to attach to their vehicles for the same effect. The orange warning sticks are mounted on the right front bumper and serve as a reference point with regard to the distance between the vehicle and fixed objects.
- Developed a Safety Captain Handbook that contains guidelines and instructions for safety captains. As a result, safety captains have a clearer understanding of their roles and responsibilities.

The Oklahoma Performance Cluster implemented the following prevention initiatives:

- Issued "Shur Steppers" to prevent slips, trips, and falls due to icy conditions. "Shur Steppers" are rubber shoe covers with cleats and are worn by

letter carriers. Safety personnel said that in FY 2003, slips, trips, and falls due to icy conditions did not happen to personnel who were wearing "Shur Steppers."

- Developed a driver's training course for new employees and drivers who had previous accidents. This course is mobile and was given in many locations throughout the performance cluster. The course consisted of actual driving conditions and hazards.

**Effectiveness and
Timeliness of
Prevention Initiatives**

For FY 2002 through accounting period 8 in FY 2003, we determined the Arkansas and Oklahoma Performance Clusters' accidents, injuries, and illnesses were reduced as a result of prevention initiatives, and prevention initiatives were implemented in a timely manner. For example, as a result of installing orange warning sticks on long-life vehicles in 2003, the Arkansas Performance Cluster experienced a 32 percent reduction in the number of accidents involving striking fixed objects (from 19 accidents in 2002 to 13 in 2003). The orange sticks were initially purchased for the entire performance cluster in 2000, but their useful life was only three years. The performance cluster began replacing these in the spring of 2003 and finished by the end of the year. As of April 2004, there have been only four accidents involving striking fixed objects.

The Oklahoma Performance Cluster implemented a mobile driving course in September 2002 that focused on training employees with two or fewer years driving experience. Planning for this initiative began in March 2002. The performance cluster experienced a substantial decrease in preventable motor vehicle accidents, from 52 in September 2002 to 34 in September 2003. This represents a 35 percent reduction.

Overall, the accident numbers and frequency rates⁶ for OSHA injuries and illnesses and motor vehicle accidents, for both performance clusters, decreased for FYs 2002 and 2003. The following table illustrates these decreases.

⁶ OSHA injury and illness and motor vehicle accident frequency rates are the number of accidents per 100 employees for a specific period. These rates provide measurements that make accident data comparable between large and small facilities.

Table 2. OSHA Injury and Illness and Motor Vehicle Accident Numbers and Frequency Rates in the Arkansas and Oklahoma Performance Clusters for FYs 2002 and 2003

Performance Cluster	Numbers		Average Frequency Rates	
	FY 2002	FY 2003	FY 2002	FY 2003
Arkansas				
OSHA injury and illness	378	282	6.57	5.11
Motor Vehicle	221	194	7.24	6.39
Oklahoma				
OSHA injury and illness	700	599	9.23	8.23
Motor Vehicle	265	214	6.89	5.71

Source: Postal Service WebEIS.

Postal Service policy⁷ stated that safety personnel were responsible for developing and monitoring a comprehensive safety and health program and analyzing accident, injury, and illness data so they could advise management on corrective actions. Policy⁸ also required installations to develop methods to identify program needs for accident prevention. In addition, policy⁹ required supervisors to implement written programs and action plans, monitor employees' safety performance, and prevent operational safety accidents.

**Management's
Comments**

Management stated the report accurately reflects the level of attention and focus that both District Managers give to protecting the Postal Service's most valuable assets from job-related injuries. They stated that both performance clusters use *CustomerPerfect!*,¹⁰ a data-driven process that closely aligns with the organization's core values, to determine the causes of accidents and the gaps in processes. Management stated these activities are routinely validated through internal and external sources in the form of program evaluations and leadership business reviews.

⁷ Employee and Labor Relations Manual 17.2, Section 813.31, February 2003.

⁸ Employee and Labor Relations Manual 17.2, Section 821.32, February 2003.

⁹ Supervisor's Safety Handbook, Handbook EL-801, Chapter 1, Section 1-1, May 2001.

¹⁰ *CustomerPerfect!* was implemented to help the Postal Service to meet the challenges of an increasingly competitive environment.

Accident Reporting Systems

Both the Arkansas and Oklahoma Performance Clusters were accumulating and analyzing accident, injury, and illness data in the Human Resources Information Systems (HRIS) and the Risk Management Reporting System (RMRS). However, Headquarters personnel told us these systems are antiquated and will be replaced. Safety personnel at both performance clusters told us they either were not experiencing problems with the two systems, or were able to work around the problems.

For example, based on trend accident analysis, the Arkansas Safety Office developed a Strategy and Indicator System to target the performance cluster's top accident categories. This system outlines the performance cluster's strategies, activities, and steps to accomplish and perform the strategies.

The Oklahoma Performance Cluster developed an accident reduction program for their at-risk employees. This program was based on an analysis of HRIS data showing that employees who had previous accidents and employees with fewer than three years' experience were at risk to have future accidents. The program's objective was to take a proactive approach and bring positive change in employees' work practices through observation. The performance cluster plans to observe about 800 employees to make them aware of the need for safety and focus on preventable accidents.

Postal Service policy¹¹ requires the safety officer responsible for facilities where accidents occurred to enter accident report information into HRIS. Postal Service policy¹² also states that the analysis of accidents and injuries was vital to effective accident prevention programs, and requires management to use reports and statistical analyses to identify and eliminate the principal causes of accidents and hazardous conditions. Postal Service policy¹³ further requires each business area that manages source data to identify an individual or organization that is responsible for developing standards and usage rules to ensure data integrity. The policy also states that the

¹¹ Employee and Labor Relations Manual 17.2, Section 821.123, February 2003.

¹² Employee and Labor Relations Manual 17.2, Section 821.31, February 2003.

¹³ Management Instruction 860-2003-2, Administrative Support, March 6, 2003.

standards and rules must ensure that data was accurate, available, usable, and consistent with the data location and other business considerations.

According to the Headquarters Program Manager, Information Technology, Human Resources Portfolio, the Postal Service has developed the Injury Compensation Performance Analysis System, and a component of it will replace HRIS and RMRS. The Manager also stated that the system is scheduled for implementation late in calendar year 2004. We will address this issue in a separate report.¹⁴

Reporting Processes

In all six facilities we visited in the Arkansas and Oklahoma Performance Clusters, the reporting processes used within the various functional areas facilitated the accurate reporting of accidents, injuries, and illnesses.

We used a statistical sample to project the accuracy of the Arkansas and Oklahoma data in HRIS for FY 2002 and the first 11 accounting periods of FY 2003. We projected that almost all of the information on the accident reports was contained in the system (see Appendices C and D).

We also used a statistical sample to project the completeness of the Arkansas and Oklahoma Performance Clusters' accident report forms.¹⁵ We projected that almost all of the Arkansas and Oklahoma forms, for FY 2002 and the first 11 accounting periods of FY 2003, were complete (see Appendices C and D).

Postal Service policy¹⁶ requires supervisors to fully complete the accident report by including preventive action codes¹⁷ and descriptions of accident prevention efforts. The policy also requires managers to review each accident report for accuracy and conduct a follow-up assessment to ensure that action was taken to prevent similar occurrences. In addition, supervisors and managers are required to sign the report as proof they have reviewed it. In addition,

¹⁴ We will issue a summary report on the audit results for the six areas visited.

¹⁵ Postal Service Form 1769, Accident Report, was used to report accidents. The instructions on the form required it to be completed for all accidents, regardless of the extent of injury or amount of damage. This included all first aid injury cases, both reportable and nonreportable.

¹⁶ Employee and Labor Relations Manual 17.2, Section 821.13, February 2003.

¹⁷ Preventive action codes described the action taken to eliminate or reduce the accident cause(s) and prevent similar accidents.

policy¹⁸ requires the safety officer to enter the accident report information into HRIS.

We believe the accident reporting process was accurate because supervisors and managers had received the safety training required by the performance clusters and had communicated the accident reporting process to employees through safety talks and posters.

**Management's
Comments**

Management stated that they monitor accurate and timely accident reporting through program evaluations and leadership business reviews. They stated that both clusters maintain high levels of commitment in accurate and timely accident reporting, with a better than 97 percent accuracy rate and a 95 percent timeliness rate.

¹⁸ Employee and Labor Relations Manual 17.2, Section 821.12, February 2003.

APPENDIX A. ABBREVIATIONS

e-FOIA	Electronic Freedom of Information Act
FOIA	Freedom of Information Act
FY	Fiscal Year
HRIS	Human Resources Information Systems
OSHA	Occupational Safety and Health Administration
OWCP	Office of Workers' Compensation Programs
RMRS	Risk Management Reporting System
WebEIS	Web-Enabled Enterprise Information System

APPENDIX B. SCOPE AND METHODOLOGY

Our performance cluster selections were based on the lowest and highest combined OSHA injury and illness rates and accident frequency rates from FY 2002¹⁹ through accounting period 8²⁰ in FY 2003.²¹ The Arkansas average total OSHA injury and illness rates and accident frequency rates were 5.7 percent and 14.5 percent, respectively. The Oklahoma average total OSHA injury and illness rates and accident frequency rates were 9.0 percent and 18.9 percent, respectively. The average total accident frequency rate of 18.9 percent in the Oklahoma Performance Cluster meant that out of every 100 employees, an average of 18.9 had an accident for that period.

We selected three facilities at each performance cluster based on size and type (for example, airport mail center, processing and distribution center, and main post office). The Arkansas facilities we visited were the Little Rock Processing and Distribution Center, the North Little Rock Main Post Office, and the Little Rock Main Post Office. The Oklahoma facilities we visited were the Oklahoma City Processing and Distribution Center, the Norman Post Office, and Penn Station.

To accomplish our objectives, we reviewed applicable federal laws and Postal Service and OSHA policies and procedures related to accident and injury prevention.

To verify whether the number of accidents and injuries was declining as a result of corrections to unsafe working conditions and practices, we obtained data by accident category and code (slips, trips and falls, lifting, dog bites, repetitive motion, striking against, struck by objects, and motor vehicles) for each performance cluster and facility visited. In addition, we obtained accident numbers and accident frequency rate data from the Postal Service WebEIS for FYs 2002 and 2003. We also obtained from RMRS the accident frequency rates and OSHA injury and illness rates for FY 2002 and the first eight accounting periods in FY 2003. We reviewed data from both WebEIS and RMRS to determine whether downward trends indicated a reduction in accidents, injuries, and illnesses.

To determine whether corrective actions and prevention initiatives were made in a timely manner to reduce the number of accidents, injuries, and illnesses, we reviewed Postal Service policy to learn whether a national or other standard policy existed that addressed how unsafe working conditions and practices should be corrected in a timely manner. We reviewed documentation for corrective actions and prevention initiatives implemented from FY 2002 through accounting period 11 in FY 2003²² for the Oklahoma Performance Cluster, and FYs 2002 and 2003 for the Arkansas Performance Cluster.

To determine whether accident, injury, and illness data were accumulated and analyzed for prevention initiatives, we analyzed accidents, injuries, training documents, and workplace inspection data for sources and locations of accidents and jobs with high occurrences of accidents. We also analyzed accident and injury trends to determine whether a pattern of accidents with common causes could be identified in order to prevent future occurrences. We reviewed action plans and Program Evaluation Guide data that were accumulated and analyzed for prevention initiatives during FYs 2002 and 2003.

To determine whether processes used within the various functional areas facilitated accurate reporting of accidents, injuries and illnesses, we interviewed human resources, safety and health

¹⁹ The FY 2002 period for the Postal Service began September 8, 2001, and ended September 6, 2002.

²⁰ An accounting period is defined as a four-week period that forms one-thirteenth of the Postal Service fiscal year.

²¹ The first eight accounting periods in FY 2003 began September 7, 2002, and ended April 18, 2003. The FY 2003 period for the Postal Service began September 7, 2002, and ended September 5, 2003. However, the Postal Service transitioned its financial reporting system from accounting periods to monthly reporting periods on October 1, 2003. The transition period began September 6, 2003, and ended September 30, 2003.

²² The first 11 accounting periods for FY 2003 began September 7, 2002, and ended July 11, 2003.

program personnel, and management at the area, performance cluster, and facility levels. We obtained information related to accident prevention, such as resources, training, accident and hazard reporting, safety talks, and internal controls. In addition, we selected a statistical sample of accidents, injuries, and illnesses entered into HRIS for FY 2002 for the first 11 accounting periods in FY 2003 for the Oklahoma Performance Cluster and FYs 2002 and 2003 for the Arkansas Performance Cluster. We reviewed a sample of accident report forms for accuracy and completeness, and reviewed a sample of accidents from HRIS to determine whether the information on the accident report forms was entered accurately. (See Appendices C and D for a discussion of the sampling and projection methodologies used.)

This audit was conducted from May 2003 through June 2004 in accordance with generally accepted government auditing standards and included such tests of internal controls as were considered necessary under the circumstances. We discussed our conclusions and observations with appropriate management officials and included their comments, where appropriate. We believe the computer-generated data was sufficiently reliable to support the opinions and conclusions in this report.

APPENDIX C

STATISTICAL SAMPLING AND PROJECTIONS FOR REVIEW OF ACCIDENT REPORTING PROCESSES IN ARKANSAS PERFORMANCE CLUSTER

Purpose of the Sampling

One of the objectives of this audit was to assess the accuracy and completeness of the accident data in the HRIS. In support of this objective, the audit team employed a stratified random sample of accidents listed in the database. The sample design allowed statistical projection of the number of discrepancies between the database and the accident report forms on file. Existence of the appropriate supporting forms was also tested using the sample.

Definition of the Audit Universe

The audit universe consisted of 1,650 accidents, according to the HRIS database, for all of FY 2002 and through accounting period 11 in FY 2003. The universe was obtained on-site by requesting printed HRIS data from the safety manager responsible for the accident and injury prevention program.

Sample Design and Modifications

Because all files were stored in one location by fiscal year, we stratified the audit universe into two strata based on the fiscal year. Based on low error rates found at other review sites, we considered expected error rates of 1.5 percent to 2.0 percent, with a 5 percent risk of overreliance and a tolerable error rate of 5 percent. The resulting sample sizes ranged from 118 to 166; we selected 130 records as our desired sample size. We used interval sampling within each stratum to select individual accident report forms for review. For FY 2002, we used an interval of 13 starting with the third form, and for FY 2003, we used an interval of 12 starting with the ninth form. The resulting sample sizes within each stratum are indicated in the following table. (Because of the use of interval sampling, which involves use of integers, the "planned" and the "actual" numbers of items in the sample do not add to 130.)

Stratum	FY	Population Size	Sample Size (Planned)	Sample Size (Actual)
1	2002	872	66	67
2	2003	778	66	62
Total		1,650	132	129

To test the completeness and accuracy of the database, we tested ten attributes:

- Did the accident date shown on the accident report form agree with the database?
- Did the data entry date on the accident report form agree with the database?
- Did the pay location on the accident report form agree with the database?
- Did the labor distribution code and Functional Operations Number on the accident report form agree with the database?
- Did the activity code on the accident report form agree with the database?
- Did the type of accident code on the accident report form agree with the database?
- Did the accident-result code on the accident report form agree with the database?
- Did the work-location code on the accident report form agree with the database?

- Did the nature-of-injury code on the accident report form agree with the database?
- Did the injured body part code on the accident report form agree with the database?

For the completeness of the accident report forms, we tested two additional attributes:

- Was the preventive action code on the accident report form?
- Was the preventive action on the accident report form?

Statistical Projections of the Sample Data

For analysis of the sample results, we considered the interval sampling methodology to be equivalent to random sampling. As described in Chapter 7 of Elementary Survey Sampling, Scheaffer, Mendenhall, and Ott, c.1990, a systematic sample (also called interval sample or skip-step sample) is equivalent to a random sample if the order of the items in the population is random relative to (or is unrelated to) the occurrence of the factor being investigated. We considered that to be the case in this review.

For projection of the number of errors for each attribute, we observed that the sampled items contained very low error rates. Because of the extremely low occurrence rates, we were not able to use the normal approximation to the binomial to calculate occurrence limits. Instead, we analyzed the upper occurrence limits for each sample using as a basis the cumulative binomial methodology, as used in past General Accounting Office Financial Audit Manual work to generate the table "Statistical Sampling Results Evaluation Table for Compliance Tests." We adapted the upper error limit analysis concept to the stratified design. We used a 5 percent risk of overreliance (beta risk).

Results

All projections were made to the audit universe of 1,650 accidents, as described in the definition of the audit universe.

1. Did the accident date shown on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 51 accident dates in the database (3.01 percent) disagreed with the information on the accident report form. The point estimate is that no accident dates (0.0 percent) disagreed.

2. Did the data entry date on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 51 data entry dates in the database (3.01 percent) disagreed with the information on the accident report form. The point estimate is that no data entry dates disagreed (0.0 percent).

3. Did the pay location on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 138 pay locations in the database (8.36 percent) disagreed with the information on the accident report form. The point estimate is that 64 pay locations (3.86 percent) disagreed.

4. Did the labor distribution code and Functional Operations Number on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 170 labor distribution codes and Functional Operations Numbers in the database (10.28 percent) disagreed with the information on the accident report form. The point estimate is that 89 labor distribution code and Functional Operations Numbers (5.4 percent) disagreed.

5. Did the activity code on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 88 activity codes in the database (5.35 percent) disagreed with the information on the accident report form. The point estimate is that 26 activity codes (1.55 percent) disagreed.

6. Did the type-of-accident code on the accident report form agree with the HRIS database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 88 type-of-accident codes in the database (5.35 percent) disagreed with the information on the accident report form. The point estimate is that 26 type-of-accident codes (1.58 percent) disagreed.

7. Did the accident-result code on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 51 accident-result codes in the database (3.01 percent) disagreed with the information on the accident report form. The point estimate is that no accident-result codes (0.0 percent) disagreed.

8. Did the work-location code on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 51 work-location codes in the database (3.01 percent) disagreed with the information on the accident report form. The point estimate is that no work-location codes (0.0 percent) disagreed.

9. Did the nature-of-injury code on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 103 nature-of-injury codes in the database (6.23 percent) disagreed with the information on the accident report form. The point estimate is that 38 nature-of-injury codes (2.28 percent) disagreed.

10. Did the injured body part code on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 103 injured body part code as shown in the database (6.23 percent) disagreed with the information on the accident report form. The point estimate is that 38 descriptions of the injured body part code (2.28 percent) disagreed.

11. Was the preventive action code on the accident report form?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 51 accident report forms (3.01 percent) lacked the preventive action code. The point estimate is that no accident report forms lacked (0.0 percent) the preventive action code.

12. Was the preventive action on the accident report form?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 51 accident report forms (3.01 percent) lacked the preventive action. The point estimate is that no accident report forms lacked (0.0 percent) the preventive action.

APPENDIX D

STATISTICAL SAMPLING AND PROJECTIONS FOR REVIEW OF ACCIDENT REPORTING PROCESSES IN OKLAHOMA PERFORMANCE CLUSTER

Purpose of the Sampling

One of the objectives of this audit was to assess the accuracy and completeness of the accident data in the HRIS. In support of this objective, the audit team employed a stratified two-stage random sample. The sample design allowed statistical projection of the number of discrepancies between the database and the accident report forms on file. Existence of the appropriate supporting accident and report forms was also tested using the sample.

Definition of the Audit Universe

The team defined the audit universe as the Oklahoma City Post Offices, the Oklahoma City Processing and Distribution Center, and the Oklahoma City Customer Service District Office. For these locations, the audit universe consisted of 2,608 accidents, according to the HRIS database, for FY 2002 through accounting period 11 of FY 2003. The universe was obtained on-site by requesting printed HRIS data from the safety manager responsible for the accident and injury prevention program.

Sample Design and Modifications

The audit universe was stratified into six strata based on location and fiscal year. Because the file structure at each location was different, we designed separate sampling plans for each stratum. For strata one through four, we selected independent interval samples of accident report forms as described below. Random starts for each stratum were selected using the "randbetween" function in Microsoft Excel²³ to assign random numbers to the individuals on the universe listing.

Stratum	Location	FY	Population Size	Sample Size
1	Post Office	2002	279	24
2	Post Office	2003	167	24
3	Processing and Distribution Center	2002	145	24
4	Processing and Distribution Center	2003	82	20
Total			673	92

For stratum five, customer service offices for FY 2002, we selected a cluster sample of 26 facilities from the 183 facilities in the stratum population. This sample yielded a total of 60 accident report forms for this stratum, out of 1,050 forms total for the stratum.

For stratum six, customer service offices for FY 2003, we selected a two-stage cluster sample, with 25 facilities, from the 173 facilities in the stratum population, selected at the first stage. We selected a total of 60 accident report forms at the second stage, out of the 885 forms total for the stratum.

²³ Microsoft Excel is a spreadsheet program from the Microsoft Office suite of productivity tools for Windows and Macintosh.

Stratum	Location	FY	Population Size	Sample Size
5	Customer Service District Office	2002	1,050	60
6	Customer Service District Office	2003	885	60
Total			1,935	120

As shown in both tables above, the total population size or the audit universe was 2,608 (673 + 1,935 = 2,608).

The audit team selected individual accident report forms, within stratum six, on-site, using interval sampling defined as follows:

- Per folder:
 - If fewer than 10 accident report forms, check all forms.
 - If 10 to 20, check every other form starting with the first form.
 - If 20 to 49, check every third form starting with the second form.
 - If 50 to 99, check every fifth form starting with the fourth form.
 - If more than 99, start with the seventh form.
 - For 100 to 199, divide by 10 and use that number as the interval.
 - For 200 to 299, divide by 20 and use that number as the interval.
 - For 300 to 399, divide by 30 and use that number as the interval.

To test the completeness and accuracy of the database, we tested six attributes:

- Did the accident type shown on the accident report form agree with the database?
- Did the accident number on the accident report form agree with the database?
- Did the accident date shown on the accident report form agree with the database?
- Did the date the data was entered on the accident report form agree with the database?
- Did the listing of the involved person(s) on the accident report form agree with the database?
- Did the accident description on the accident report form agree with the database?

For the completeness of the accident report forms, we tested two additional attributes:

- Was the accident number on the accident report form?
- Was the accident description on the accident report form?

Statistical Projections of the Sample Data

For analysis of the sample results, we considered the interval sampling methodology to be equivalent to random sampling. As described in Chapter 7 of Elementary Survey Sampling, Scheaffer, Mendenhall, and Ott, c.1990, a systematic sample (also called interval sample or skip-step sample) is equivalent to a random sample if the order of the items in the population is random relative to (or is unrelated to) the occurrence of the factor being investigated. We considered that to be the case in this review.

For projection of the number of errors for each attribute, we observed that the sampled items contained very low error rates. Because of the extremely low occurrence rates, we were not able to use the normal approximation to the binomial to calculate occurrence limits. Instead, we analyzed the upper occurrence limits for each sample using as a basis the cumulative binomial methodology, as used in past General Accounting Office Financial Audit Manual work to generate the table “Statistical Sampling Results Evaluation Table for Compliance Tests.” We adapted the upper error limit analysis concept to the stratified two-stage design, combining an implied within variance for each installation in the sample (based on the cumulative binomial methodology) with a calculated between installation

variance. The between installation variance was zero for strata one through four based on the sample design. We used a 5 percent risk of overreliance (beta risk).

Results

All projections were made to the audit universe of 2,608 accidents, as described in the definition of the audit universe.

1. Did the accident type shown on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 72 accident types in the database (2.75 percent) disagreed with the information on the accident report form. The point estimate is that no accident types (0.0 percent) disagreed.

2. Did the accident number on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 86 accident numbers in the database (3.29 percent) disagreed with the information on the accident report form. The point estimate is that 11 accident numbers disagreed (0.42 percent).

3. Did the accident date shown on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 72 accident dates on the accident report forms (2.75 percent) disagreed with the information in the database. The point estimate is that no accident dates (0.0 percent) disagreed.

4. Did the date the data was entered on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 137 accident data entry dates on the accident report forms (5.24 percent) disagreed with the information in the database. The point estimate is that 49 accident data entry dates disagreed (1.88 percent).

5. Did the listing of the involved person(s) on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 108 listings of person(s) involved as shown on the database (4.15 percent) disagreed with the accident report form. The point estimate is that 30 listings of person(s) involved (1.13 percent) disagreed.

6. Did the accident description on the accident report form agree with the database?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 72 accident descriptions in the database (2.75 percent) disagreed with the information on the form. The point estimate is that no accident descriptions in the database (0.0 percent) disagreed.

7. Was the accident number on the accident report form?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 72 accident report forms (2.75 percent) lacked the accident number. The point estimate is that no accident report forms (0.0 percent) were lacking the accident number.

8. Was the accident description on the accident report form?

Based on projection of the sample results, we can state with 95 percent reliance that no more than 72 accident report forms (2.75 percent) lacked the accident description. The point estimate is that no accident report forms (0.0 percent) were lacking the accident description.

APPENDIX E. MANAGEMENT'S COMMENTS

GEORGE L. LOPEZ
VICE PRESIDENT, SOUTHWEST AREA OPERATIONS



May 21, 2004

USPS - OIG
Mary W. Demory
Attn: Kim H. Stroud
Director, Audit Operations
1735 N LYNN
ARLINGTON, VA 22209

SUBJECT: Efforts to Prevent Accidents, Injuries and Illnesses – (HM-AR-04-Draft)

This letter serves as our consolidated response to the Audit findings conducted at two Performance Clusters, Arkansas and Oklahoma, in the Southwest Area. The above referenced report, as revised, accurately reflects the level of attention and focus put forth by both District Managers in protecting our most valuable assets from job related injuries.

Both Clusters utilize data driven processes (Customer Perfect) that closely align with organizational core values in determining accident causation factors and gaps in their processes. These activities are routinely validated through internal and external sources in the form of program evaluations and leadership business reviews. These reviews monitor activity effectiveness along with accurate and timely accident reporting. Both Clusters maintain high levels of commitment in each of these areas with a better than 97% accuracy rate and 95% rate in timely reporting.

If my office or any member of my staff can be of further assistance please do not hesitate to contact this office.

A handwritten signature in black ink, appearing to read "G. Lopez".

George L. Lopez

cc: Suzanne F. Medvidovich, Sr. Vice President Human Resources
Sam Pulcrano, Manager, Safety Performance
District Managers, Arkansas, Oklahoma
District Managers, HR – Arkansas, Oklahoma.

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