



# Internal Audit Report

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Comprehensive Operational Audit

Port of Seattle Aviation Division – Airfield Operations

January 1, 2008 – December 31, 2010

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## Transmittal Letter

Audit Committee  
Port of Seattle  
Seattle, Washington

We have completed an audit of the Aviation Division's Airfield Operations Department. The purpose of the audit was to determine whether internal controls are adequate to ensure that operations are efficient and effective.

We reviewed information relating to department operations from January 1, 2008 – December 31, 2010, and through the end of fieldwork in November 2011.

Management has primary responsibility to establish and implement effective controls. Our role was to assess and test those controls in order to establish whether the controls were adequate to ensure effective operations and compliance.

We conducted the audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our conclusions based on our audit objectives.

The Airfield Operations Department has adequate controls to ensure efficient and effective operations in compliance with applicable rules and regulations.

We extend our appreciation to the Airfield Operations staff for their assistance and cooperation during the audit.



Joyce Kirangi, CPA  
Internal Audit, Director

## Executive Summary

**Audit Scope and Objective** The purpose of the audit was to determine whether management has implemented adequate controls to ensure:

1. Revenue generated by the Airfield Operations Department is complete and accurate
2. Professional services contracts are in compliance with requirements
3. Small and attractive items are properly safeguarded
4. Benchmarks are available and can be used to help improve airport operations

We reviewed information for the period January 1, 2008, through December 31, 2010, including activity through the end of fieldwork in November 2011.

**Background** The Airfield Operations Department has 24 employees with an annual operating budget of \$3.5 million (exclusive of depreciation expenses). The Department is responsible for ensuring continuing compliance with the Federal Aviation Administration's (FAA) Federal Aviation Regulations (FAR – Chapter 139) for airfield operations, operating certification, training and wildlife management. Additionally, the Department oversees the Airport Communications Center, and has taken the lead in implementing one of the nation's first Safety Management Systems at Seattle-Tacoma International Airport (STIA).

The Department accounts for all airfield revenues, including landing fees, gate fees and parking fees for all aircraft, in accordance with the fee schedule established under Port *Tariff No. 1*. During the period under audit, the Department collected an average of \$62 million annually for multiple airfield activities.

**Audit Result Summary** The Department has adequate controls to ensure airfield operations are efficient and effective, in compliance with internal policies and procedures and airfield revenues are complete and accurate. We have identified and shared some best practices to help improve controls and operational efficiencies.

## Background

The Airfield Operations Department has 24 employees with an annual operating budget of \$3.5 million (exclusive of depreciation expenses). The Department is responsible for ensuring continuing compliance with the Federal Aviation Administration’s (FAA) Federal Aviation Regulations (FAR – Chapter 139) for airfield operations, operating certification, training and wildlife management. Additionally, the Department oversees the Airport Communications Center, and has taken the lead in implementing one of the nation’s first Safety Management Systems at Seattle-Tacoma International Airport (STIA).

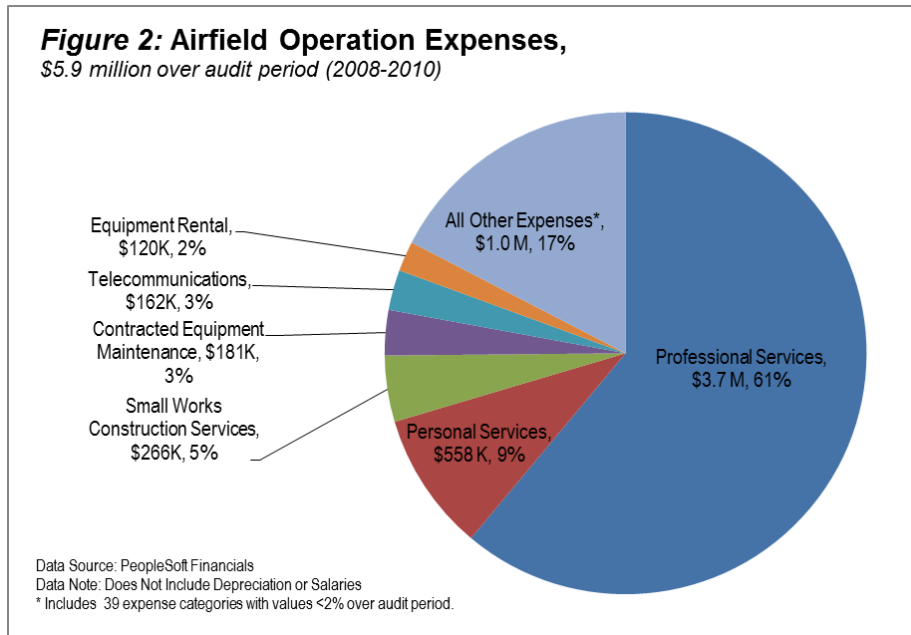
The Department accounts for all airfield revenues, including landing fees, gate fees and parking fees for all aircraft, in accordance with the fee schedule established under Port *Tariff No. 1*. During the period under audit, the Department collected at an average of \$62 million annually (see *Figure 1*). Decreases in airfield revenues beginning in 2009 relate to the economic recession, which began in 2008. As the recession eased, the revenues increased slightly in 2010.

**Figure 1: Airfield revenues by account, 2008-2010**

| Account                               | 2008                | 2009                | 2010                |
|---------------------------------------|---------------------|---------------------|---------------------|
| Signatory & Non-Signatory Airlines    | \$66,293,215        | \$51,500,618        | \$57,028,879        |
| Airline Gate Charge - <i>Exempt</i>   | \$2,514,132         | \$3,598,920         | \$3,519,402         |
| Ramp Tower Fee                        | \$979,687           | \$971,789           | \$973,591           |
| General Aviation                      | \$81,068            | \$54,558            | \$72,811            |
| Fuel Flowage Fees                     | \$100,232           | \$90,864            | \$42,821            |
| Space Rental Joint Use- <i>Exempt</i> | \$493               | \$439               | \$38,019            |
| Aircraft Parking -Cargo Hardstand     | \$0                 | \$0                 | \$1,229             |
| Miscellaneous Revenue - <i>Exempt</i> | \$300               | \$0                 | \$300               |
| Land Rental - Exempt                  | \$9,169             | \$0                 | \$0                 |
| <b>Total</b>                          | <b>\$69,978,296</b> | <b>\$56,217,188</b> | <b>\$61,677,052</b> |

Data Source: PeopleSoft Financials

The Department’s most significant expense during the audit period was the depreciation of airfield assets, which include the physical elements of the airfield (i.e., runway, lighting, and signage), accounting for 83 percent (or \$60 million) of total expenses. The other significant expenses are salaries, benefits, taxes and professional services.



The Department expended over \$3.7 million over the entire audit period for professional services, including the services of contractors and consultants. The professional services expenses are roughly comparable to the exempt and non-exempt employee salaries and benefits. During the audit period, the Department oversaw several capital projects, including the development of STIA's Safety Management System (SMS), which necessitated a number of professional service contracts. Outside of projects, professional services included:

The largest single expense under professional services was for contracted services to operate STIA's Ramp Tower (69 percent of professional services). The remaining expenses were related to the SMS program and specialized wildlife management and control operations.

### Audit Objectives

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## Highlights and Accomplishments

### *Landing Fee Review*

In 2010, the Airfield Operations Department hired a consultant to conduct the first review of airlines' landing activities and the accuracy of the airlines' self-reporting of these events, on which the Port bases its invoicing to the airlines. The consultant reviewed all airline self-reports (January 2008 to December 2009) for number of flights, fleet mix and landed weights and compared the self-reported data to the data in the BAC (Business Analytics Center) radar-database. The review revealed a revenue shortfall of \$480,831: (1) The airlines had under-reported 653 flights and underpaid landing fees by \$207,244. (2) The Port did not collect landings fees for non-revenue flights totaling \$273,577. Effective April 1, 2011, the Port began billing and collecting landing fees for all non-revenue flights.

### *Safety Management System*

In 2007, Seattle-Tacoma International Airport became the first of 21 American airports selected by the Federal Aviation Administration (FAA) to begin incorporating the best management practices of the International Civil Aviation Organization to the US through the implementation of a Safety Management System (SMS) Pilot Study Program. Airfield Operations received an FAA grant to perform a gap analysis of existing regulatory requirements and best management practices in the industry. In 2008, the Department received a second grant to document on the FAA's behalf the ability of airports to integrate SMS into their operating structure. Airfield Operations used a proof-of-concept approach to prove out key elements and components of the SMS manual and verify whether those elements were workable in the airport operating environment. In 2010, the Department received a third grant to continue its industry-leading role in SMS, by initiating implementation of the previous study findings and processes. In 2011, SMS training for Airport staff was completed.

### *ISAGO Audit*

The International Air Transport Association (IATA) sponsors and manages the IATA Safety Audit for Ground Operators (ISAGO) program. This program is internationally recognized for its safety standards and best management practices, and provides oversight for a minimum and consistent level of safe performance and operations by applicable ground service providers at Seattle-Tacoma International Airport. Through Airfield Operations, the airport has required all applicable ground service providers to participate in this program. This ensures that all ground handlers meet minimum ISAGO safety standards. Currently all ground handlers have either completed their audits or are in the process of doing so by the first quarter of 2012.

### *Gate & Parking Review*

In 2011, Airfield Operations began its second review of airline activity, related to self-reported common gate and aircraft parking. The Department hired a consultant to track all common gate arrivals and all parking activity around the clock for a two-month period of time: July - August 2011. The information will be compared to the self-reported activity provided by the airlines, as well as the Port's billings. The Department plans to complete the review by the end of 2011.

## Audit Scope and Methodology

We reviewed information for the period January 1, 2008, through December 31, 2010, including activity through the end of fieldwork in November 2011. We utilized a risk-based audit approach from planning to testing. We gathered information through research, interviews, observations and analytical reviews, in order to obtain a complete understanding of the Airfield Operations and its management. We conducted an assessment of significant risks and identified controls to mitigate those risks. We evaluated whether the controls were functioning as intended.

We applied additional detailed audit procedures to areas with the highest likelihood of significant negative impact as follows:

1. We conducted sample testing of airfield revenues to determine whether they were complete and accurate. For General Aviation (GA), we compared hard-copy records for the month of September 2010 with electronic fuel records to ensure that GA activity was cited and billed by the Port. For Signatory Airlines, we conducted expectation testing for the full three-year period to determine whether revenues were within the statistical expectation for each of the audit years.
2. We tested compliance with the requirements of CPO-1, which guides procurement of professional service contracts below \$50,000 (Category 1 contracts).
3. We conducted observational reviews of controls for small and attractive items, consisting primarily of firearms, ammunition and pyrotechnics, in order to offer recommendations for securing these items.
4. We obtained a limited number of responses from our external benchmarking of other airport authorities with ramp tower operations, wildlife management activities and General Aviation events.

## Conclusion

The Department has adequate controls to ensure airfield operations are efficient and effective, in compliance with internal policies and procedures and airfield revenues are complete and accurate. We have identified and shared some best practices to help improve controls and operational efficiencies.