



## AUDIT COMMITTEE

Report to the  
Board of Harbor Commissioners

**DATE:** February 23, 2017

**TO:** Marla Bleavins, CFO & DEDFA

**FROM:** *JA* J. H. Olds, Departmental Audit Manager

**SUBJECT:** WHARFINGERS DIVISION PERFORMANCE AUDIT

Please find enclosed our audit report related to our performance audit of the Wharfinger Division for the three fiscal years ended June 30, 2014. The report includes recommendations regarding the lack of verification of container volumes reported by customers, billing errors found during detail testing, the time-consuming nature of the Eagle Marine billing process, the artificial adjustment of customer-reported data for billing expediency, and missing file documentation. We also noted that we believe the revenue-sharing discounts we found during our audit are too high, which impacted POLA's cash flows. We conducted an exit meeting with Division management and they are aware of these findings.

We also discuss subsequent events we encountered since the audit related to the delayed implementation of the seventh Amendment to the Eagle Marine permit #733 regarding Eagle Marine's submission of TEU-based electronic shipping information.

We will be happy to provide this information to the Audit Committee. Please let me know if you have any questions.

Thanks.

cc: Mike DiBernardo, Deputy Executive Director – Marketing and Customer Relations



Los Angeles Harbor Department  
Finance Division  
Management Audit Section  
February 9, 2017

Performance Audit  
of  
Wharfinger Division

*For the Period from July 1, 2011 through June 30, 2014*

# EXECUTIVE SUMMARY

## Background

At the request of the Audit Committee, Management Audit has completed a performance audit of the Harbor Department's Wharfinger Division (Wharfingers). Harvey M. Rose Associates (HRA) completed a comprehensive process audit of the Wharfingers in late 2014 and presented their findings to the Audit Committee on April 23, 2015, where they explained the extent of their vessel revenue testing, consisting of a sample of seven ships (one from Eagle Marine and six from other terminals). The Audit Committee requested that additional testing be undertaken, so Management Audit estimated the costs and time required to complete such a study using HRA consultants versus internal Port of Los Angeles (POLA) staff. Management Audit concluded that internal staff performing statistical sampling and testing would be the best approach. Statistical sampling techniques are used to take audit samples in order to make more definitive conclusions regarding populations of data. Also, internal POLA staff would be able to devote more time to analyzing billing and other records for its detailed testing.

Most terminals are billed for wharfage at a commodity rate per container (Twenty-Foot Equivalent Unit (TEU)). The Eagle Marine terminal is billed using commodity rates at the Tariff No. 4 level, set in 1993. Wharfingers' procedures call for accurate and timely billing for all vessels. We found that the wharfage billings for TEU-based cargo were highly accurate and were based on electronic data, which helps POLA generate its invoices in a timely manner. But we found that Eagle Marine billings, based on commodity weights and measures reported by customers on paper documents, contained errors and were time-consuming to process.

## Scope

The audit was conducted to achieve the following objectives:

- a) Verify the completeness and accuracy of wharfage invoices;
- b) Measure the timeliness of invoice creation;
- c) Determine if billing practices comply with POLA and Division policies and procedures;
- d) Compare policies to industry best practices; and
- e) Identify potential billing or other risks.

## Divisional Processes

The Wharfingers oversee all POLA waterborne activities including processing all shipping service fees required by Tariff No.4 as well as individual lease agreements. They provide the Harbor's Accounts Receivable (AR) staff with detailed billing fees for all shipping agents and terminal operators' vessel activities ("ship calls") including arrivals, departures, docking, and loading/unloading and storage of cargo at the POLA.

The Wharfingers subscribe to Marine Exchange data and receive a daily report of all San Pedro Bay vessel movements: ship arrivals, departures, shifts, ship details etc. The Exchange is a non-profit organization which monitors all local vessel activity. The Wharfingers use this information for billing support, verification and reconciliation purposes. They also compare Exchange data to terminal and shipper reports and try to reconcile these data sources to identify possible discrepancies which may result in billing adjustments.

Each Wharfinger is assigned responsibility for billing activity at one or more terminals, which includes reconciling cargo quantities, identifying cargo types and applicable wharfage rates, assessing the correct wharfage revenues, etc. Wharfage data, such as bills of lading or manifests, is received from the shipping lines via the terminal operators (lessees of POLA). Sealed Vessel Wharfage Statements, along with the detailed bills of lading and manifests, are delivered to the Wharfingers by mail or courier. Upon receipt, the Statements are opened and stamped in, then the Statement data is scanned into the Wharfingers' cargo database and submitted to the terminal operator for acceptance. Once the Statement data is confirmed and accepted, billing information is compiled, coded, verified, then submitted to AR who prepares the official wharfage invoices.

For those terminals submitting hard-copy paper records, such as non-APL cargo received at Eagle Marine, including break-bulk, bulk, and autos, wharfage data must be compiled manually. Wharfingers manually code each cargo item listed in bills of lading and manifests by type, determine if commodities are billed by weight or measure, or by TEU container, and calculate billing amounts due based on the Tariff 4 rates. While internal Interpretation Guidelines help instruct Wharfinger staff on how to code various cargo types, some coding decisions are left up to each Wharfinger's individual judgment and this can lead to inconsistent coding.

As this manual process is time-consuming and labor-intensive, to speed up billings, the Wharfingers began preparing unverified draft invoices in the late 1980's. These draft invoices are based on summary Wharfage Statements, rather than detailed cargo records. The Wharfingers enter cargo information from the Wharfage Statements into POLA's KLEIN billing system, this data is summarized and reviewed, then submitted to AR for billing. Once the draft invoice is issued, Wharfingers begin the lengthy process to compare the reported cargo quantities on the bills of lading and manifests to container reports submitted by the terminal. Once their comparisons and calculations are completed, revised wharfage data is submitted to AR who prepares a final wharfage invoice and submits into the terminal operator for payment.

Today, most cargo data is based on TEUs shipped and this information is electronically transmitted by the terminal operators to POLA. This wharfage data can be much more easily compiled for invoicing. While container data is reconciled and discrepancies investigated, POLA no longer prepares unverified draft invoices for these TEU-based billings.

## Summary of Procedures

We selected 39 vessel files for detail testing during the three fiscal years ended June 30, 2014. For each vessel, we examined the entire vessel file, checking that all necessary documents were included, verified that reconciliations between the detailed container data and Wharfage Statements were completed, and that final invoices were completed in a timely manner. We interviewed Wharfinger management to become acquainted with Divisional operations, specifically, the processing and recording of vessel revenues. We also interviewed AR staff responsible for generating the final POLA invoices. Based on our testing, we formed preliminary conclusions. We also investigated wharfage processing at other West Coast ports to identify best practices and benchmark POLA's processes.

## AUDIT FINDINGS

### **Finding 1: Vessel wharfage billings are compilations of cargo information provided to POLA by the shipping lines and there is no verification of the accuracy or completeness of the information provided.**

Wharfingers receive all cargo wharfage data from the shipping lines and terminal operators. There is an underlying assumption that the information provided is complete and accurate. Cargo Manifests provide the shipping details input into the Klein billing system. Wharfingers verify that the data entered into Klein matches the Manifests and that the invoice amount is calculated correctly. While cargo data is compiled and summarized on the POLA invoice, we found that no further analysis or verification of the underlying billing data is made. Where draft invoices are used, these become final without any independent review and AR does not make any changes to the draft invoice.

We believe internal controls would be enhanced if the Wharfingers verified the information supplied by the shipping lines and terminal operators and if AR staff reviewed billing information in more detail before they issue final invoices. Independent verification of shipping data could be achieved by sampling Wharfage Reports and comparing details to cargo onboard ships. It would be necessary to obtain detailed shipping data prior to the ship-call. AR reviews Eagle Marine billings at the end of each calendar year to make summary calculations required by the permit related to Minimum Annual Guarantee (MAG) thresholds. While these calculations are not at a detail level, they have proved helpful. For example, AR reviews for FY2011-2013 netted POLA an additional \$130,175 in revenue-sharing requirements.

As current POLA invoices are prepared without verifying the accuracy of reported cargo volumes, they simply rely on the honor system. We believe that substantial risk exists that shippers or terminals could submit incorrect or incomplete data to POLA, which would directly impact billing completeness and accuracy and likely reduce POLA revenues. We contacted other West Coast ports in order to identify any mitigating controls they might use, such as independent

verifications of data or analysis of multiple data sources, but none have adopted any verification methods yet either.

**Recommendations:** Wharfingers should adopt sampling procedures to verify the completeness and accuracy of the shipping information provided by terminal operators, such as performing random spot-checking of containers reported as received, and enhance internal controls by obtaining shipping reports independently from shippers and terminal operators, and reconciling volumes between these reports prior to generating invoices.

**Finding 2: We found billing errors for 12 of 14 sampled Eagle Marine vessels totaling \$2,440 net overcharges, with statistical extrapolation over the three fiscal years under audit indicating an error range between \$182,700 in undercharges to \$435,000 in overcharges.**

For our sample of Eagle Marine vessels, we reconciled the detailed Cargo Manifests against the final invoice, calculated the total difference between the reconciled cargo amounts and the amounts billed to the customer, and netted the total differences together to calculate the total net difference per vessel. We applied statistical analysis to the sample data to measure the likely total impact on the entire Eagle Marine invoice population.

We sampled 14 vessels for detailed testing, of these, we found a total net difference of \$2,440 in overcharges on 12 ships (86%), an average of \$174 per vessel. The net overcharged balance was primarily due to one ship (APL Boston 1307136) which had an overage of \$2,170 (89% of the net sample total). Specifically, we found seven ships with undercharges totaling \$872 and five ships with overcharges totaling \$3,311.

Extrapolating this average to the 725 total Eagle Marine vessels calling at POLA during the three fiscal years tested, indicated a likely total difference of \$126,300. Statistically, to achieve a 95% confidence level, a range of likely differences would be between \$600 overcharged and \$252 undercharged per vessel. In other words, with 95% confidence, the sample results indicate an estimated error range between \$435,000 overcharged and \$182,700 undercharged for the three fiscal years we tested. While these errors are proportionally small compared to total Eagle Marine revenues of \$180.4 million for FY2012-FY2014, we believe each and every final invoice should be coded and billed correctly. One possibility would be to implement a review process to try to catch errors as they occur before final invoices are released to the customer.

**Recommendation:** Wharfingers should work to improve the accuracy of the Eagle Marine billing process.

**Finding 3: The creation of Eagle Marine final revenue invoices is a time-consuming process, much more labor-intensive than those created for TEU-based agreements.**

The average time elapsed between the vessel departure date and the final invoice creation date averaged over 19 days for the vessels we tested. Nine final invoices (11% of the 84 wharfage invoices we tested) took longer than 30 days to be processed. In fact, one Eagle invoice took 53 days to be processed. While the large amount of paper documentation contributes to the delays, as some Cargo Manifests exceed 100 pages in length and others even 1,000 pages, we believe it would help cash flow if Eagle Marine final invoices were generated faster. One possible solution would be to divide the task of compiling wharfage data by assigning several Wharfinger staff to work together simultaneously on different parts of the vessel manifests to expedite the processing of final invoices. Also, as mentioned above, if the Eagle Marine contract is converted to an electronic TEU-based formula, it is expected that final invoices will be generated much more quickly.

***Recommendation:*** The Wharfingers should adopt new procedures to ensure more timely preparation of Eagle Marine invoices. Efforts are underway to convert the Eagle Marine contract to a TEU basis, where Eagle Marine would provide electronic records to POLA. It is expected that doing so should speed up the billing process, so we recommend that POLA should expedite this conversion.

***Subsequent Event:*** The Board of Harbor Commissioners approved the seventh Amendment to permit #733 on June 28, 2016, to convert the Eagle Marine contract to a TEU basis, effective retroactively to April 1, 2016. Since the approval, Eagle Marine was not able to provide electronic shipping data in a format usable by POLA until late 2016. In addition, they also stopped providing the written shipping documents that had been provided for years. So, during the last six months of 2016, Eagle Marine was not in compliance with permit #733 or POLA Tariff #4 requirements. As a result, the Wharfingers could only prepare unverified invoices based on Eagle Marine's monthly summary Container Reports of their estimated volumes. Even though the unverified invoices were based on estimates, we found these invoices were not prepared timely. The Wharfingers were backlogged approximately five months when we began our inquiries. As a result, POLA was late in billing and receiving approximately \$5.6M in wharfage and other revenues related to Eagle Marine port calls.

Further, we inquired as to what actions were taken by POLA to bring Eagle Marine into compliance. We were informed by Wharfinger management that they met with Eagle Marine management on October 28, 2016 and they were able to resolve some of the issues with the electronic data. POLA began receiving revised electronic shipping details from Eagle Marine on October 31, which appeared to be more compatible with POLA's Klein billing system.

**Recommendation:** We also recommend that Wharfingers ensure Eagle Marine expedites its full implementation of the terms and conditions of the seventh Amendment, including providing complete, accurate, and useable electronic data to POLA.

Further, even though Eagle Marine was not in compliance with the revised terms and conditions of Permit#733 for some eight months, we found that the penalty provisions in the contract were apparently waived and POLA received no extra consideration for the noncompliance. We were informed that this waiver was given in consideration for the tenant implementing electronic reporting. But we could not find any written documentation of such waivers. We were informed by Wharfinger staff that the waiver was approved by “upper management”. Further, we could not find any waiver provision in the Permit. Based on the data provided by the Wharfingers, we estimated that POLA lost approximately \$100K in penalty fees by giving the waiver.

**Finding 4: Unverified draft invoices are created using artificially-adjusted commodity quantities to force reconciliations to shipping cargo values reported by the terminals.**

Preliminary Eagle Marine invoices are created by the Wharfingers when the invoicing process is expected to be more difficult due to factors such as vessel size, high variability of cargo types, incomplete cargo data, outstanding questions, etc. As vessel sizes increase, this dramatically increases the duration of the billing process. The preliminary invoice details are based on the shipping agent’s Cargo Summary, an estimate which may be above or below the final invoice amount. After the data is reviewed, a final POLA invoice is created, and the balance due is adjusted as appropriate. For example, if the draft invoice total is less than the final invoice total, AR issues a second invoice to the customer; if the draft invoice is more, AR issues a credit memo to the customer.

Several different commodity rates are used to create the preliminary invoice depending on the type of cargo being shipped. For our Eagle sample, we noted the “Not Otherwise Specified” (NOS) commodity rate was used for over 50% of the Cargo Manifest line-items we tested. We found the Wharfingers summarize the total dollar amount reported by the shipper or terminal by dividing the total Manifest cargo dollar value by the NOS commodity rate of \$5.15 to adjust the quantity of containers. In other words, the draft invoice is adjusted to “back into” reported cargo commodity values, rather than verifying or reconciling the actual quantities reported first. We understand that this quantity adjustment is used to simplify the billing process, but the end result does not accurately match the actual cargo volume received and the \$5.15 commodity rate does not match the actual commodity type.

**Recommendation:** Wharfingers ensure unverified invoices are created using the actual quantities reported by the customer and the appropriate commodity rates are used for all containers shipped. Also, unverified invoices should have at least one line-item to describe each commodity type received.



**Finding 5: We found some files lacked supporting documentation such as final invoices, preliminary invoices, Cargo Manifests, etc. Also, to conduct our testing of 15 vessel files we had to request a total of 24 files from Records Management.**

We found five vessel files were missing one or more supporting documents out of the 39 ships we sampled for testing (13%). The Amethyst Ace file was missing an outbound wharfage final invoice. The Ever Charming file was missing three inbound wharfage final invoices, while the APL California file was missing a Mitsui outbound draft invoice. Also, the APL Philippines file was missing a Mitsui inbound cargo manifest; and an APL Denmark file was missing its Hyundai outbound preliminary invoice. Another example related to an oil barge file we received which was missing the final dockage invoice. As soon as this omission was noted, Wharfinger staff quickly provided a copy which was placed in the file. While we do not believe these omissions indicate serious or chronic issues, we found enough missing documents to raise management concern over the completeness of Wharfinger records in general.

To augment our initial sample, we requested 15 files from Records Management (RM), but nine of the 15 (60%) files could not be found, so we ended up requesting 24 files to get 15. In this process, RM could not find three entire boxes of vessel files. We surmised that some of these files or boxes might have been checked out by other POLA staff, but since RM does not use out-cards, they had no way to trace the location of the missing records. Also, as some files were missing, we inquired if the Eagle Marine paper records were being scanned to create permanent electronic files, but were informed they were not due to the sheer volume of paper. As stated above, if the Eagle Marine contract is ever converted to the TEU basis, it is hoped that electronic filing of records will become feasible.

***Recommendation:*** Wharfinger staff should work with RM to devise a recordkeeping system which ensures that all file record locations are documented and that out-cards are used to indicate when records are in use by others. Also, the feasibility of using electronic records should be investigated carefully. It is likely these would be kept more accurately helping POLA achieve world-class recordkeeping.

**Finding 6: Revenue-sharing discounts are too high.**

Under terminal agreements, each terminal operator is liable for a Minimum Annual Guarantee (MAG) revenue amount. The Wharfingers receive electronic shipping data and compile unverified monthly shipping totals which it sends to AR for billing each terminal. Early each new calendar year, AR analyses the MAG versus actual annual revenues received and makes any required adjustments (either additional billings or refund credits). During this annual “true-up”, AR applies revenue-sharing discounts stipulated in each customer’s agreement, which are calculated on the total gross income reported during the year. The level of discount varies based on the cumulative total volume of containers imported and exported by the customer for the calendar year compared to required thresholds. In general, as volumes increase over the

thresholds, the discount rate increases. While the discount is usually between 50% and 85%, we found four vessels from our sample (Wisdom Ace, Amethyst Ace, Andromeda Spirit, and World Spirit) received revenue-sharing discounts of 100%. While this discount rate is allowable under the terms of Permit #900 for WWL Vehicle Services Americas Inc., we believe these discount levels are high and that POLA should pursue more aggressive lease terms and conditions in future negotiations to ensure higher and more consistent revenues are earned in the future.

**Recommendation:** Wharfingers work with the Real Estate Division (RED) to provide background information on terminal revenues and discount levels to the RED prior to their commencing new negotiations to renew lease agreements. Further, the RED should strive to negotiate lower revenue-sharing discounts on all new leases.

## **CONCLUSIONS**

Based on our review, we found that TEU-based invoices are accurate and are being produced in a timely fashion. Conversely, Eagle Marine invoices based on weights and measures require a laborious invoicing process which is slow and leads to errors. Based on our sample testing of vessel revenues between 2011 and 2015, at a 95% statistical confidence level, we found an estimated error range between \$435,000 overcharged and \$182,700 undercharged (total range of \$617,700). We believe each final invoice should be billed correctly and that POLA should settle these errors with Eagle Marine.

The Wharfingers can improve several aspects of their operations: initiate sample spot-checking at terminals to verify the completeness and accuracy of shipping information reported to POLA, completing reconciliations of all Eagle Marine invoices, and issuing Eagle invoices more quickly. Unverified invoices should show all quantities and rates used in calculating the preliminary invoice amounts and these should match supporting documentation such as Cargo Manifests. File storage should be improved so that all necessary supporting documents are included in vessel files and that file records are complete and accurate and available for use by all POLA staff when needed.



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