

**UNIVERSITY OF CALIFORNIA, DAVIS  
INTERNAL AUDIT SERVICES**

**School of Veterinary Medicine  
CA Animal Health & Food Safety Lab Revenue  
Project #12-04**

**March 2012**

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**MANAGEMENT SUMMARY**

As part of the Internal Audit Services (IAS) audit plan for fiscal year (FY) 2012, IAS conducted a review of California Animal Health and Food Safety Laboratory System (CAHFS) Revenue. The CAHFS was selected for review during the 2012 audit planning cycle because it was identified as having billings and revenue that are within the top twelve revenue producing units for University of California Davis (UCD).

The CAHFS is a public service program of UCD. The CAHFS was created through California legislation and operates in partnership with the California Department of Food and Agriculture (CDFA), UCD, California, veterinarians, and livestock and poultry producers. CAHFS' key objectives are to provide timely diagnostic support services in order to safeguard the health of California's livestock and poultry industries. CAHFS includes two functionally separate laboratories; the Veterinary Diagnostic Lab System (VDLS), and the Equine Analytical Chemistry Lab (EACL). The VDLS's main laboratory is located in Davis, but also includes three extension laboratories located in Turlock, Tulare and San Bernardino. The EACL is also located in Davis.

CAHFS employs approximately 175 people, and had an annual budget of approximately \$21 million for FY 2011. The CAHFS's primary source of funding is through an agreement with CDFA, which provided approximately \$13.5 million to CAHFS in FY 2011 for the operation of VDLS. The agreement with CDFA allows for additional services to be rendered or other clientele to be served as long as normal VDLS operations are not adversely affected nor costs in excess of available funds are incurred. FY 2011 revenue from laboratory services performed for external clients totaled approximately \$2.9 million for VDLS and \$2.3 million for EACL. CAHFS also recharged UCD federally funded research projects approximately \$60,000 in FY 2011. An external advisory board created through legislation is charged with monitoring CAHFS activity and with approving the rates used in invoicing clients of the VDLS and EACL.

The VDLS and EACL each have a separate laboratory information management system. VDLS utilizes StarLIMS, which tracks tests from the initial client request to release of results to the client, and provides information to be used in invoicing<sup>1</sup>. EACL utilizes the Nautilus (NLIMS) laboratory information management system for approximately half its tests, and tracks the remainder in a spreadsheet. While StarLIMS automatically interfaces with the CAHFS accounts receivable system (Great Plains), NLIMS and the EACL spreadsheet do not. EACL testing data from NLIMS and the spreadsheet must be input to Great Plains manually. Great Plains interfaces with DaFIS in order to update accounts receivable balances on UCD's general ledger.

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<sup>1</sup> StarLIMS produces the first invoice for the client, but subsequent invoices may also be produced by the CAHFS accounts receivable system.

The objectives for our review were to determine whether for the VDLS and EACL:

- All services provided were timely and accurately recorded and properly billed;
- All revenue due, received or written off was properly accounted for;
- Adequate internal controls were present within the revenue cycle; and
- Compliance with University policies and procedures was maintained.

To meet our objectives, we obtained an understanding of the entire revenue cycle for both VDLS and EACL, including the testing phase (sales), billing and collection activities. We also interviewed CAHFS management, reviewed financial activity, performed system interface analyses and reviewed the StarLIMS business rules used in calculating invoices. Our review focused on financial and operational activities for FY 2011, but included analyses of financial data for FY's 2007 through 2011. Our review was completed in March 2012.

Currently, there is no comprehensive reconciliation of activity in the laboratory management information systems, Great Plains and DaFIS. A lack of management reporting in key risk areas such as non billable charges, as well as manual processes and a lack of separation of duties increase the risk of errors and omissions in the CAHFS revenue stream. Risk is also presented by the lack of accountability over cash handling. Finally, rates are in need of review in order to ensure that CAHFS has a clear understanding of the cost of providing services prior to offering discounts or subsidies to its customer base.

CAHFS must enhance its internal controls over sales, billing and collection activities. Management must implement a comprehensive reconciliation of sales, accounts receivable balances, and the general ledger. In order for the reconciliation process to be truly meaningful, management must properly segregate duties within the sales, billing and collection process by, at a minimum, reassigning cash handling duties away from the Billing Manager. Reporting capabilities must be enhanced within VDLS' StarLIMS, and consideration should be given to upgrading NLIMS. Cash handling procedures must be enhanced so that individual accountability is maintained for cash receipts at all times. Consideration should be given to moving EACL payments to a lock box system, so that large amounts of cash are not being handled by CAHFS personnel. Finally, CAHFS should work with Accounting and Financial Services and Budgeting and Institutional Analysis to review and update its recharge rates.

#### IV. OBSERVATIONS, RECOMMENDATIONS, AND MANAGEMENT CORRECTIVE ACTIONS

##### A. Reconciliation Process

**A reconciliation of accounts receivable balances with sales and collections activity that includes the laboratory information systems for VDLS and EACL, the accounts receivable system and DaFIS has not been performed.**

For VDLS, a complete reconciliation of StarLIMS, Great Plains and DaFIS accounts receivable balances with sales and collections activity has never been performed. Similarly, for EACL, a complete reconciliation of NLIMS, Great Plains and the DaFIS accounts receivable balances has never been performed.

For VDLS, a difference of approximately \$40,000 currently exists between the total Great Plains and DaFIS accounts receivable balances, with the DaFIS balance of \$613,000<sup>2</sup> being greater. This difference appears to have several contributing factors. First, during the 2007 conversion to StarLIMS and Great Plains, a \$109,000 discrepancy between Great Plains client balances and the DaFIS accounts receivable balance arose and was not corrected. Secondly, IAS found that when processing refunds in DaFIS for overpayments to VDLS, the DaFIS accounts receivable balance and revenue accounts were erroneously reduced by \$69,000.

EACL does not have an accounts receivable balance discrepancy between Great Plains and DaFIS. However, CAHFS cannot be assured that all EACL billable activities have been input into Great Plains for proper billing and accounts receivable management because total tests recorded in NLIMS are not reconciled to Great Plains.

Without a comprehensive reconciliation of accounts receivable balances with sales and collections activity that includes the laboratory information systems for VDLS and EACL, the accounts receivable system and DaFIS, CAHFS cannot be assured that it is billing for and collecting all of the revenues to which it is entitled.

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<sup>2</sup> The DaFIS accounts receivable balance is as of August 31, 2011, which is the same date as the analysis of the StarLIMS, Great Plains and DaFIS accounts receivable activity and balances performed by IAS.

**Recommendations**

1. CAHFS must perform a complete reconciliation of all VDLS activity in StarLIMS to Great Plains and DaFIS on a monthly basis. The reconciliation must be performed by an individual who is not involved in the day to day cashing, billing and accounts receivable management in order to ensure a proper separation of duties.
2. In order to facilitate the reconciliation process for VDLS, the effects of the discrepancy during the conversion to Great Plains and the errors in accounting for client refunds should be isolated and adjustments made to the DaFIS revenue and accounts receivable balances to reflect actual amounts earned from and owed by clients.
3. CAHFS must perform a complete reconciliation of all EACL activity in NLIMS to Great Plains and DaFIS on a monthly basis. The reconciliation must be performed by an individual who is not involved in the day to day cashing, billing and accounts receivable management in order to ensure a proper separation of duties.
4. CAHFS should immediately modify its accounting for refunds of VDLS overpayments to stop debiting the DaFIS revenue account (V625INC) and instead debit the accounts receivable account (1126770).

**Management Corrective Actions**

1. CAHFS is currently upgrading Great Plains which will provide better reporting capabilities and help facilitate the ability to perform a complete reconciliation between StarLims, Great Plains and DaFIS. CAHFS will identify a person who is not involved in the cash handling, billing and accounts receivable management functions to perform a complete monthly reconciliation for VDLS. This will be implemented by January 15, 2013.
2. CAHFS will identify the true client balances in Great Plains and correct the DaFIS accounts receivable balances accordingly. This will be implemented by July 15, 2013.
3. CAHFS will identify a person who is not involved in the cash handling, billing and accounts receivable management functions to perform a complete monthly reconciliation for EACL. This will be implemented by January 15, 2013.

4. CAHFS will correct the way it processes overpayments received on customer accounts to affect the receivable account instead of the revenue account. This will be implemented by October 15, 2012.

## **B. Laboratory Management Information Systems**

### **1. The StarLIMS report of non billable tests does not support management oversight of VDLS tests removed from the revenue stream.**

All tests completed at VDLS are recorded within StarLIMS as either billable or non billable. For FY 2011, out of the total possible charges of \$4 million, the non billable group represented approximately \$1.4 million of the activity. The term “non billable” is somewhat of a misnomer, as the largest part of the non billable group (approximately \$983,000) was attributable to tests that were placed into accounts for contractual work and billed based on agreement terms. An additional approximately \$339,000 represented tests performed for quality control or method development where the costs were absorbed by VDLS.

The decision about whether a test is non billable is normally made during the initial test request and performance phase. However, sometimes a test may be changed to non billable during the receivables management phase. For FY 2011, approximately \$50,000 was designated as non billable based on subjective decisions not to bill the client for reasons such as client relations.

A monthly report of non billable activity within StarLIMS is provided to CAHFS management. However, the report does not provide sufficient information to perform an adequate review of non billable charges as it does not include an explanation for changing a charge to a non billable or identify who authorized the change to a non billable. Because of the report limitations, only activity for large dollar amounts is spot checked.

### **Recommendations**

- a. The StarLIMS report of non billable activity should be enhanced to provide the drill down ability to see explanations for the change of a billable test to a non billable test, and also which system user authorized the change.

- b. CAHFS management should perform a comprehensive review of the enhanced report of non billable activity on a monthly basis to ensure non billable tests are appropriate and properly authorized.

### **Management Corrective Actions**

1. The non billable report will be enhanced to add detail justifying charges changed to non billable status and the person responsible for the change. This will be implemented by October 15, 2012.
  2. CAHFS will review the non billable report on a monthly basis. This will be implemented by October 15, 2012.
- 2. EACL processes for tracking and submitting test data to Great Plains are performed manually, increasing the risk of errors and omissions.**

Approximately 56,000 tests are completed annually within EACL, and approximately 52% of these tests are maintained outside of NLIMS within Excel spreadsheets<sup>3</sup>. Excel spreadsheets must be used because the current version of NLIMS is not compatible with parameters of tests associated with the 52%. (The tests measure total carbon dioxide [TCO2] levels in race horses at California racetracks.) EACL has indicated that newer versions of NLIMS and other laboratory information management systems may be able to accommodate the TCO2 tests. Currently, the spreadsheets containing all of the completed TCO2 tests must be manually provided to the Billing Manager for input into Great Plains. The spreadsheets do not contain test results or client history that would be available in NLIMS. Additionally, there is a risk that the Excel spreadsheets could be inaccurate.

The current version of NLIMS is structured such that client information must be manually input to Great Plains for billing purposes as well. This increases the risk of errors and omissions in the data input process, especially when considered in combination with the reconciliation issues noted in observation IV.A above.

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<sup>3</sup> Although this group represents 52% of all tests completed (29k), they only equate to 9% of the EACL total revenue, or approximately \$218k.

### **Recommendation**

CAHFS management should evaluate the business need for a comprehensive laboratory information management system to replace NLIMS. The advantages of having all EACL testing activity within one laboratory management information system and eliminating the risks posed by utilizing a spreadsheet to track such a large amount of testing activity should be weighed against the costs of such an upgrade. Additionally, the advantages of implementing an automated link between a new laboratory information system and Great Plains should be factored into the decision.

### **Management Corrective Action**

This management corrective action has been completed.

The need for a new/upgraded LIMS for EACL has been evaluated, and agreed upon by the Equine Chemist, IT Manager, Associate Director-Admin, and Director.

The new/upgraded system must be able to accommodate new clients, additional workflows such as TCO2, and a rate schedule, so that all testing is entered into LIMS, and billing information can be automatically uploaded from EACL to Great Plains.

A cost/benefit analysis of implementing StarLIMS vs upgrading Nautilus will proceed. Depending on cost, implementation may require submission of Budget Change Proposal to California Horse Racing Board (CHRB) for consideration in the state budget process.

## **C. Rates**

### **CAHFS rates are not up to date and may contain cost components that are inconsistent with the requirements of OMB Circular A-21.**

CAHFS has over 1,200 rates in place for services it provides to internal and external customers. CAHFS has not reviewed and adjusted many of its individual rates since they were initially established. Instead, they have relied upon across the board rate increases.<sup>4</sup> This practice is not consistent with OMB Circular A-21, Cost Principles for Educational Institutions, Section J-47, which requires that rates for specialized service facilities be adjusted at least biennially.

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<sup>4</sup> The Consumer Price Index has been used as the basis for rate increases.

CAHFS has included cost components in its rates that are identified as overhead. However, without a more detailed description of the costs included in the items labeled as overhead, it is uncertain whether they are appropriate for inclusion in rates used in recharging federally funded research projects. UCD Policy and Procedure Manual (PPM) 340-25, *Recharge Rates*, references “Detailed Guidelines for Recharge Activities and Rates”, which provides guidance on the types of direct and indirect costs which can be included in recharge rates.

These rates were reviewed and approved by the CAHFS external advisory board. The rate development and approval process for CAHFS was not carried out in accordance with the requirements of PPM 340-25.<sup>5</sup> The CAHFS rate activity is considered to be medium risk under PPM 340-25 because they have recharges to federal contracts and grants in excess of \$50k<sup>6</sup> per year.

Under CAHFS’ existing accounting structure, all expenditures related to laboratory activities are being accounted for in accounts contained in the OP fund (#18652) set up for the State of California agreement. At the end of the fiscal year the overdraft in this OP fund is transferred to a separate OP fund (#66600), where all of the revenues from external recharge activities have been credited throughout the year. By accounting for CAHFS recharge activities in this manner, the true cost of the activities, any surplus or deficit from the recharge activities, and any subsidy being provided by the State of California agreement, cannot be readily determined.

### **Recommendations**

CAHFS should consult with the Director of Costing Policy in Accounting and Financial Services (A&FS) and the Budget and Institutional Analysis (BIA) Division of Administrative and Resource Management (ARM) to implement the following recommendations:

1. Evaluate the CAHFS account structure and determine the most appropriate way to ensure that the costs, revenues and any subsidies associated with individual or logical groupings of service activities are readily identifiable.

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<sup>5</sup> An exemption from PPM 340-25 was provided to CAHFS by BIA in 2005 because the policy states that it does not apply to rates that are “subject to a review and approval process external to the University”, and because it was represented to BIA that rates were not being charged to internal customers.

<sup>6</sup> FY 2011 charges to federally funded projects, including federal flow thru agreements, totaled approximately \$60k.

2. Develop and implement a plan to update CAHFS rates, focusing on medium risk rates first. Medium risk rates should include, at a minimum, rates being charged to federally funded research projects.
3. Ensure that the rate revision process includes an internal quality control check for compliance with OMB Circular A-21 requirements.
4. Submit revised rates to the Associate Vice Chancellor, BIA for review and approval in accordance with PPM 340-25.
5. Obtain training regarding rate development and OMB Circular A-21 costing requirements for CAHFS personnel involved in implementing these recommendations.

### **Management Corrective Actions**

1. CAHFS will evaluate its current accounting structure with input from the Director of Costing Policy and BIA, and make any necessary changes. This is a long-term issue. It will be given the lowest priority in terms of addressing the non-conformances identified in the audit. This will be implemented by January 15, 2014.
2. Plan to update rates is underway and will be completed by October 15, 2013. To meet CAHFS' business needs and comply with policy, rates will be treated as two separate categories: UC recharge rates, and all other rates. The process will be as follows:
  - a. Create a separate rate schedule for all UC recharge activity, to ensure only allowable costs are included in the rate.
  - b. Provide examples of the proposed rates to Mike Legrand and Chris Carter for review, to ensure our process for establishing these rates is appropriate.
  - c. Develop an SOP that outlines how the biannual review of UC recharge rates will be performed; and how interim additions/changes will be managed through the SVM Dean's office for those rates that require changes between the bi-annual review process.
  - d. External rates (anything not charged to a UC account) will continue to be approved by the CAHFS Advisory Board.

- e. Implementation will require extensive client outreach efforts, training of CAHFS staff, and modification to StarLIMS (and possibly Great Plains).
3. Personnel involved in the rate revision process will receive adequate training on OMB Circular A-21 costing requirements. This will be implemented by October 15, 2012.

#### **D. Separation of Duties**

**The CAHFS Billing Manager's current span of responsibilities does not allow for an appropriate separation of duties.**

(PPM 330-11, *Departmental Financial Administrative Controls and Separation of Duties*, provides general guidelines on separation of duties. It says, "Departmental financial administrative duties shall be separated so that one person's work routinely serves as a complementary check on another's work, and no one person has complete control of a financial transaction." Additionally, PPM 330-55, *Departmental Cashiering Operations*, states "The person collecting cash, issuing cash receipts, and preparing the DaFIS Statement of Cash Collections shall be someone other than the person performing the monthly review of the DaFIS Transaction Log or DaFIS Transaction Listing by Account or the person maintaining accounts receivable records." The Billing Manager's current job responsibilities are such that these policy requirements are being violated.

For EACL, the Billing Manager updates Great Plains client activity from NLIMS and the manual spreadsheets maintained to track TCO2 testing, processes client payments received in the EACL post office box and prepares the related deposits, credits client payments to accounts receivable balances in Great Plains, controls the invoicing for clients, and is responsible for the write-off of uncollectible accounts. EACL revenue was approximately \$2.3 million in FY 2011.

Though the NLIMS activity and the TCO2 spreadsheet is received from a second individual within the EACL, the lack of an effective reconciliation control, as discussed at observation IV.A above, greatly reduces the effectiveness of having this second individual participating in the EACL sales and receivables management activities.

For VDLS, all but a small portion<sup>7</sup> of their payments are remitted to a lock box. For those payments not remitted to the lock box, the process is similar to that described for EACL.

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<sup>7</sup> Approximately \$22k of \$2.9 M in VDLS income was received directly by VDLS.

For both VDLS and EACL, there is no secondary review or approval of the write-offs of uncollectible accounts receivable by the Billing Manager.<sup>8</sup>

Without a proper level of separation of duties within the sales, cash handling and receivables management processes, there is an increased risk of errors and omissions or diversion of CAHFS revenue.

### **Recommendations**

1. The Billing Manager should be removed from the processing of all cash remittances in accordance with the requirements of PPM 330-55.
2. Write-offs of uncollectible accounts receivable should be subject to a secondary review and approval by CAHFS management.

### **Management Corrective Actions**

1. CAHFS will identify a person who is not involved in the accounts receivables processes to prepare all cash deposits. This will be implemented by October 15, 2012 as part of the revision of CAHFS internal policies and procedures.
2. A second person will be identified to perform oversight and approval over the write-off process. This will be implemented by October 15, 2012 as part of the revision of CAHFS internal policies and procedures.

## **E. Cash Handling**

### **CAHFS is not compliant with operational aspects of PPM 340-55, *Departmental Cashiering Operations.***

While reviewing CAHFS procedures for handling client payments, we noted the following issues with cash handling practices:

#### **VDLS Only**

- The transfer of accountability is not documented when payments received at VDLS are provided to the Billing Manager for preparation of the deposit.

#### **VDLS and EACL**

- Mail that may include payment checks is not opened by the receiving units under dual custody, or in view of a camera.
- Receipts are not prepared for payments received via the mail.

<sup>8</sup> Total write-offs for EACL and VDLS in FY 2011 totaled approximately \$31k. A single write off for EACL totaled \$18k; the rest were written off by VDLS totaling \$13k.

- Cash collections are held until month end for processing.

These issues inhibit the ability to establish accountability for cash at the time it is received by VDLS and EACL. Additionally, by holding cash instead of depositing it timely there is an increased risk of cash loss or defalcation.

### **Recommendations**

As noted at observation IV.D above, the Billing Manager should not have a role in cash handling. Other recommendations for improving CAHFS' cash handling procedures are as follows:

1. Consider having EACL payments sent to a lock box thereby eliminating the need for CAHFS to handle all but a small portion of EACL cash activity.
2. Whenever cash changes hands a transfer of accountability document should be completed.
3. Mail that potentially contains cash payments should be opened under dual control or in view of a camera.
4. Receipts should be prepared for all payments received. Receipts do not have to be returned to customers for payments received in the mail unless specifically requested by the customers. Receipt copies serve as supporting documentation for processing of the Cash Receipt<sup>9</sup>.
5. Deposits should be made with the Cashier's Office when collections total more than \$500, or at least once a week.

### **Management Corrective Actions**

1. CAHFS' process was evaluated in late April, 2012, and it was determined that a lock box for EACL client payments was feasible from CAHFS' perspective. A ticket was submitted to DaFIS-OPS; CAHFS will proceed under their direction.
2. Whenever cash changes hands, a transfer of accountability will be performed. This will be implemented by October 15, 2012 as part of the revision of CAHFS internal policies and procedures.

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<sup>9</sup> The Quali Cash Receipt (CR) document replaces the former DaFIS Statement of Cash Collections (SCC) document.

3. CAHFS will open mail with a second person present or in view of a camera. This will be implemented by October 15, 2012 as part of the revision of CAHFS internal policies and procedures.
4. CAHFS is going to explore options to preparing receipts, such as scanning copies of checks received as the mail is opened. Any such exceptions to policy will be submitted for approval to UCD Controller. This will be implemented by October 15, 2012 as part of the revision of CAHFS internal policies and procedures.
5. CAHFS will begin depositing collections at least once a week, or as soon as collections exceed \$500. This will be implemented by October 15, 2012 as part of the revision of CAHFS internal policies and procedures.

**F. Incorrect DaFIS Document Type**

**The recharge feed document type (GLIB) is being used incorrectly for CAHFS revenue generating activities.**

The GLIB document designated by the University to be used for recharge activities is currently used as the mechanism for updating CAHFS accounts receivable balances from Great Plains to DaFIS. Per Accounting and Financial Services (A&FS), this practice is not appropriate and a general ledger journal voucher (GLJV) document type should be used instead.

**Recommendation**

CAHFS should work with A&FS to set up and use the appropriate document type within the feed processes between Great Plains and DaFIS.

**Management Corrective Action**

This management corrective action has been completed. CAHFS has begun using the GLJV document type instead of the GLIB.

**G. Policies and Procedures Not Formalized**

**CAHFS internal policies related to the VDLS revenue cycle are in draft form, with one identified process having no policy in place.**

Seven out of the eleven policies or procedures reviewed for VDLS were provided to IAS in draft form. We also found that the process and authority to change a billable test to a non billable charge, and thresholds for requiring exceptional approvals related to those changes, were not included in the draft policies.

### **Recommendation**

CAHFS should finalize and approve all draft policies. CAHFS should also develop and approve a policy to govern the changing of an invoice or test from a billable charge to a non billable charge.

### **Management Corrective Action**

CAHFS will finalize all draft policies, including a new policy governing the process for changing a billable test to a non billable test, as processes are fixed to comply with policy. This will be implemented by January 15, 2013.