

UC RIVERSIDE: AUDIT & ADVISORY SERVICES

Date: August 10, 2011

To: Millie Garrison, Chief Financial & Administrative Officer
College of Natural and Agricultural Sciences

Subject: Audit of Contracts & Grants – College of Natural and Agricultural Sciences

Ref: R2011-08

We have completed our audit of Contracts & Grants – College of Natural and Agricultural Sciences in accordance with the UC Riverside Audit Plan. Our report is attached for your review.

We will perform audit follow-up procedures in the future to review the status of management action. This follow-up may take the form of a discussion or perhaps a limited review. Audit R2011-08 will remain open until we have evaluated the actions taken.

We appreciate the cooperation and assistance provided by you, as well as your and other departments' staff. Should you have any questions concerning the report, please do not hesitate to contact me.

Michael R. Jenson
Director

xc: Audit Committee Members

UNIVERSITY OF CALIFORNIA AT RIVERSIDE
AUDIT & ADVISORY SERVICES
MEMBER OF ASSOCIATION OF COLLEGE & UNIVERSITY AUDITORS
INTERNAL AUDIT REPORT R2011-08
CONTRACTS & GRANTS
COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES

AUGUST 2011

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**UC RIVERSIDE
CONTRACTS & GRANTS
COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES
INTERNAL AUDIT REPORT R2011-08
AUGUST 2011**

I. MANAGEMENT SUMMARY

Based upon the results of work performed within the scope of the audit, it is our opinion that the system of internal controls over the Contracts & Grants (C&G) – College of Natural and Agricultural Sciences (CNAS), with the exception of the issues noted in the Observations (Section III), is satisfactory and generally in compliance with sponsoring agency requirements and applicable University policies and procedures.

Campus management and CNAS have taken a proactive approach and made progress in enhancing controls as evidenced by the following positive observations:

- 1) CNAS Dean's Office has implemented a monitoring tool over C&G deficits. This tool has been presented to the Financial Officers Group (FOG) and will be presented to the Financial Systems Steering Committee (FSSC) in hopes that it can be automated to benefit other campus units.
- 2) CNAS has developed an internal Full Accounting Unit (FAU) management tool which allows departmental users to enter valid FAU combinations for contracts, and unit users to query the information.
- 3) Campus management has developed a web-based Principal Investigator (Web PI) Reporting System; this includes electronic evidence of Principal Investigator (PI) financial statement review. This is part of a Federal Demonstration Project with Health & Human Services (HHS) to replace the quarterly Personnel Activity Report (PAR) process with an annual payroll certification which we believe will be more accurate and easier for PIs to understand and yield enhanced compliance.
- 4) Campus management has provided and continues to provide enhancements on FAU combination edit checking and edits on expired funds transactions.
- 5) Campus management has implemented an automated preaward request/processing system.

However, we observed some areas that need enhancement to strengthen internal controls and/or effect compliance with sponsoring agency requirements and University Policy. Appropriate campus and CNAS management need to:

- 1) Improve resolution of overdrafts (Observation III.A).
- 2) Monitor cost transfers and journal vouchers for unusual activity (Observation III.B).
- 3) Monitor transactions after the award end date (Observation III.C).
- 4) Require Principal Investigators (PI) to evidence review of monthly financial reports (Observation III.D).
- 5) Refer to the FAU Management System and contract to avoid disallowed expenditures. (Observation III.E).

These items are discussed below. Minor items that were not of a magnitude to warrant inclusion in the report were discussed verbally with management.

II. INTRODUCTION

A. PURPOSE

UC Riverside Audit & Advisory Services (A&AS), as part of its Audit Plan, performed a limited review of selected contracts and grants to evaluate compliance with the sponsoring agencies' requirements and certain University policies and procedures.

Included in the review were consideration and evaluation of significant processes and practices employed in the management of Contracts & Grants – CNAS, specifically addressing the following components:

1. Management philosophy, operating style, and risk assessment practices;
2. Organizational structure, and delegations of authority and responsibility;
3. Positions of accountability for financial and programmatic results;
4. Process strengths (best practices), weaknesses, and mitigating or compensating controls; and
5. Information and communications systems, applications, databases, and electronic interfaces.

B. BACKGROUND

The amounts and volume of CNAS contracts and grants awards have increased from \$48 million to \$65 million; a 35% increase from FY08/09 to FY09/10. There were 25 academic units receiving awards in FY09/10 totaling 542; an increase from 478 awards in FY08/09.

CNAS departments with the highest awards in FY09/10 and FY08/09 are as follows:

	<u>FY09/10</u>		<u>FY08/09</u>	
	<u>Count</u>	<u>Award</u>	<u>Count</u>	<u>Award</u>
Chemistry	59	\$9.8M	42	\$6.7M
Entomology	113	9.2M	80	6.2M
Physics & Astronomy	51	7.5M	59	5.5M
Plant Pathology & Microbiology	56	5.7M	44	5.5M
Botany & Plant Sciences	58	5.5M	69	6.2M

C. SCOPE

We reviewed records supporting transactions for selected CNAS funds that occurred between July 1, 2009 and May 31, 2011.

The review included evaluating whether procedures for the selected contracts comply with University policies and procedures, contract and grant terms and conditions, and good business practice. The review was principally limited to the following areas:

1. **Preliminary Assessment** – Our preliminary assessment included an overview of the following areas:
 - General Overview and Risk Assessment
 - General Control Environment
 - Business Processes
 - Information and Communication Systems
2. **Internal Control Questionnaire (ICQ)** – Completed nine ICQs covering 14 departments. Selected the same CNAS departments covered in R2008-08B – C&G - Post Award Audit audit (e.g. departments with C&G expenditures in FY09/10 greater than \$1M, listed in Section II.C.3, except the Institute of Geophysics and Planetary Physics (IGPP), whose contract ended in FY09/10) and added Mathematics and Agricultural Operations even though their expenditures are under a million each. We also evaluated internal

controls based on management responses to the internal control questionnaires (ICQs) and verification of selected areas.

3. **Analytic Review** – Performed an analytic review of C&G expenditures by department, budget category, and fund type for three fiscal years ended FY09/10. Below are the departments with FY09/10 C&G expenditures over \$1M in descending order:

<u>Department</u>	<u>Expenditures (in Millions)</u>
Chemistry	\$7.2
Entomology	6.8
Physics & Astronomy	6.1
Botany & Plant Sciences	5.2
Plant Pathology & Microbiology	4.9
Biochemistry	2.7
Biology	2.5
Environmental Sciences	2.0
Cell Biology & Neuroscience	2.0
Earth Sciences	1.8
Nematology	1.5
IGPP (discontinued)	1.2
Center for Conservation Biology	1.1
Other	3.8
Total	<u>\$48.8</u>

4. **Overdrafts** – Performed an analysis of C&G overdrafts for CNAS as follows:
- Evaluated overdrafts on federal, state, local, and private contracts and grants as of December 31, 2007 and 2010 by CNAS department to determine the age of the overdrafts and any trends.
 - Verified CNAS Deans office, Accounting Services and APB review, and follow-up process to resolve overdrafts.
 - Looked for pre-award opportunities lost.
 - Inquired with departments having overdrafts as of December 31, 2010 over \$10K, or over \$1K where the fund has expired, for explanations and action plans to resolve.
 - Followed-up with individual departments on ongoing unresolved overdrafts.
5. **Personnel Activity Reports (PARs)** - Judgmentally selected four departments and ten individuals per department and reviewed their Summer 2010 Effort Reports/PARs. Verified proper completion and timely submission to Extramural Fund Accounting (EMF). Verified that all PARS were returned completed to EMF for selected departments for that quarter.

6. **Cost Transfers and Journal Vouchers** – Analyzed two years (FY08/09 and FY09/10) of Non-payroll Federal Cost Transfers (FCTs) by department. Selected three departments with the highest FCT amount/volume for FY09/10. Selected three sets of FCTs per department and obtained departmental explanations for transfers and additional backup as needed to support propriety of transfer. Selected four departments with the highest number of C&G Journal Voucher (JRV) lines for FY09/10 and inquired with EMF the general reasons for the high volume. Performed additional verifications as needed.
7. **Cost Sharing Reporting** – Selected five funds that required cost sharing in FY09/10 to determine compliance with applicable requirements and timely completion.
8. **Financial Statement Reports** - Examined five financial statement reports expiring in FY09/10 to verify authorization and timely completion.
9. **Transactions After Award End Date** – Reviewed all FY09/10 C&G transactions against corresponding award end dates and selected five sets of transactions past the award end date for allowability.
10. **Facilities & Administrative Cost Calculation (F&A)** – Judgmentally selected five C&G funds and verified one month's F&A calculation per contract in FY09/10 for accuracy.
11. **Audit Follow-up Procedures** - Evaluated management action and resolution of previous internal and external audit observations.

D. INTERNAL CONTROLS AND COMPLIANCE

As part of the review, internal controls were examined within the scope of the audit.

Internal control is a process designed to provide reasonable, but not absolute, assurance regarding the achievement of objectives in the following categories:

- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations

Substantive audit procedures were performed from February through May 2011. Accordingly, this evaluation of internal controls is based on our knowledge as of that time and should be read with that understanding.

III. OBSERVATIONS, COMMENTS, AND RECOMMENDATIONS

A. Overdrafts

CNAS departments had 51 funds in overdraft totaling \$319K as of December 31, 2010.

COMMENTS

Below is an analysis of C&G overdrafts for CNAS for December 2007 compared to December 2010:

	CNAS Overdraft % of Total UCR Overdraft Amounts	CNAS Overdraft % of Total UCR Overdraft Count	CNAS Expenditures % of Total UCR Overdraft Amounts
12/31/07	29%	46%	51% (FY07/08)
12/31/10	45%	45%	56% (FY10/11)

An aging analysis (total overdraft amount and percentage of total expenditures) of CNAS C&G overdrafts, as of December 31, 2007 and December 31, 2010 are as follows:

	<u>12/31/2010</u>	<u>12/31/2007</u>
Active funds	\$252K (79%)	\$131K (67%)
<1 year past expiration	21K (7%)	60K (30%)
1-2 years past expiration	7K (2%)	7K (3%)
2+ years past expiration	39K (12%)	- (0%)
Total	\$319K (count 51)	\$198K (count 47)

In addition to a monthly departmental review, the CNAS Dean's Office has implemented a monitoring tool which tracks on a quarterly basis C&G deficits by department and fund to evaluate trends. Explanations and proposed action plans are requested from and provided by the departments regarding the nature of the overdraft. This report is manually generated and cumbersome to create. CNAS presented the report to FOG and received support from other units. CNAS will approach FSSC to request support to automate this report or will look to automate it using internal resources.

Three Physics funds in overdraft at December 31, 2010 continued to have overdraft balances as of March 31, 2011 (Funds 58550, 58705, and 58750 for \$6,579, \$72, and \$5,744 respectively). As of May 31, 2011, only fund 58705 had a remaining deficit balance (\$72); the fund expired on September 30, 2009.

Overdrafts represent unapproved deficit spending placing the University at risk for disallowed expenditures, fines, penalties, and other sanctions. Unresolved and continuing overdrafts could raise a “red flag” to external auditors and sponsoring agencies regarding the University’s ability to properly administer awards. It also may adversely affect EMF’s ability to issue final or interim financial reports, delay final billing, and result in lost interest and uncollectible amounts, penalties and fines as well as future sanctions, financial loss, and embarrassment to the University.

The current financial system, UCRFS, does not completely prevent overdrafts. Accordingly, it is the responsibility of the PI to review financial statements on a monthly basis and, with the assistance of the department Contract & Grant (C&G) Analyst or other responsible party, resolve the overdraft (i.e. through NCTs/FCTs, revision to the budget, etc.).

Although many departments obtain subsequent additional funding, this illustrates that pre-awards are not processed in some cases. We noted concerns about the timeliness of processing pre-award requests. Although an automated system is presently used, processing delays have continued. In the past, the PIs have been hesitant to submit pre-award requests explaining that they would have the award approval by the time the paperwork is processed.

In spite of Budget Establishment & Adjustment (BEA) Journals, Post Audit Notifications (PAN), and annual Academic Planning and Budget reviews of overdraft balances by fund, the volume and amount of some of these overdrafts lead one to believe that detective controls are not always sufficient. Some preventative controls like preventing posting on expired funds and FAU validation have been enabled in some systems and have been implemented. Additional controls are planned and in process.

Central monitoring, escalation, and sanctions related to fund overdrafts were recommended in the R2007-13 Contracts & Grants - Post-Award Audit issued January 18, 2008. Campus management has created an ‘Enhancing Accountability Committee’ with appropriate executive level management to identify areas of risk and to implement enhanced policies, procedures, automated controls and sanctions for non-compliance in the contracts & grants area. As part of this process, a campus overdraft policy will be deployed, and a Roles and Responsibilities matrix will establish institutional oversight to resolve overdrafts. We recommended that this oversight be centralized. Campus management is still working to address this recommendation.

RECOMMENDATIONS

CNAS departments should continue to monitor their C&G fund overdrafts on a monthly basis. The CNAS Dean's Office should continue to monitor unit C&G fund overdrafts on a quarterly basis, and communicate and follow-up with the units until a formal policy is in place to establish centralized institutional oversight to resolve overdrafts. We would encourage the CNAS Dean's Office to work with campus management to try to automate the quarterly deficit report for the benefit of other units. Otherwise, we would encourage them to work towards automating such a report within their organization.

MANAGEMENT RESPONSE

CNAS departments will continue to monitor their C&G fund overdrafts on a monthly basis and the CNAS Dean's Office will continue its quarterly review.

The CNAS Dean's Office is in discussion with Computing and Communication to develop specifications for an automated deficit report – one that can be downloaded to Excel and will have the capability of showing the age of a deficit. We would invite Audit and Advisory Services to help us develop these specifications as well as the best report format. Ultimately we envision that this would be a tool that could be used effectively by both departments and the Dean's Office. CNAS intends to assign the programming responsibility for this report to its Programmer. The planned completion date for this report will be January 1, 2012. The Dean's Office will use it for review starting with the quarter ending on that date.

B. Cost Transfers and Journal Vouchers

The number of CNAS FCT transaction lines decreased by 28% from FY08/09 to FY09/10. However, we noted that the number of CNAS C&G JRV lines increased from 975 in FY08/09 to 1,558 in FY09/10 (583 or 60% increase). The majority of the increase was related to demurrage chargebacks due to incorrect FAUs and one department's disallowed expenditures.

COMMENTS

FCTs – The number of CNAS FCT transaction lines have decreased from 4,229 in FY08/09 to 3,065 in FY09/10 (by 1,164 or 28%). Three departments, having among the highest C&G expenditures, also have the highest number of FCT lines as shown below.

- Physics & Astronomy - 550 in FY09/10 (increased by 147 from FY08/09)

- Chemistry - 577 in FY09/10 (decreased by 62 from FY08/09)
- Botany & Plant Sciences - 384 in FY09/10 (increased by 20 from FY08/09)

Thirty-eight, 188, and eight FCT lines, respectively from the departments stated above were between same funds and budget categories that they can be excluded from the above counts as they are internal reclassifications which sponsoring agencies generally do not scrutinize. We requested explanations for three sets of fund to fund transfers per department based on materiality and number of transactions to determine whether the cost transfers are appropriate.

JRVs - We noted that the number of CNAS C&G JRV lines increased from 975 in FY08/09 to 1,558 in FY09/10 (583 or 60% increase). The departments in the table below were noted to have the highest number of lines. Four hundred and fifty of the 583 (or 77%) line increases are related to demurrage (compared to 12 lines in FY08/09).

CNAS C&G JRVs

FY2009-2010	JRV Sum of Amount	JRV Line Count	Demurrage Line Count	Demurrage Lines as a % of JRV
Stem Cell Center	\$5,153	226	22	10%
Entomology	190,682	220	50	23%
Botany and Plant Sciences	66,080	211	13	6%
Chemistry	45,623	207	147	71%

The departments above (except Stem Cell Center) also had the highest expenditures for FY09/10. The explanation for the large line count for the Stem Cell Center was due to disallowed expenditures.

We noted that the Chemistry C&G JRV transaction lines increased by 68 transactions (or 49%) over the prior year. This is primarily due to chargebacks related to demurrage. Departments are supposed to indicate the FAU to charge for equipment sharing with the Analytic Chemistry Instrumentation Facility (a CNAS operation financially administered by the Chemistry department). The storehouse charges Chemistry for lab cylinders, which in turn recharges the departments for usage (demurrage). Chemistry requests FAUs for department chargebacks in advance. Some departments do not update the FAUs with Chemistry; hence charges are sometimes made to the wrong FAUs. The departments issue chargebacks, and Chemistry recharges them with the correct FAU. These errors and corrections create a lot of extraneous FAU activity.

RECOMMENDATIONS

We recommend that the CNAS Dean's Office implement a process whereby they review the volume of FCT and C&G JRV transaction lines, particularly paper cost transfers on JRVs, on a quarterly basis to

understand the underlying causes for large volumes of transactions, and work towards reducing errors (like those from the demurrage recharge system or unallowed expenditures noted on the Stem Cell Center).

MANAGEMENT RESPONSE

CNAS agrees with your recommendation and will begin a quarterly review of FCTs and JRVs, with the intent to understand the underlying causes and reduce errors. The planned completion date for this report will be January 1, 2012. The Dean's Office will use it for review starting with the quarter ending on that date.

CNAS is in discussions with Computing and Communications to, with the assistance of the CNAS Programmer, develop an automated reporting process to analyze trends for FCT and JRV volume by department, to assist with early diagnosis and intervention.

FCTs – Physics hired a very competent Financial Operations Manager in May, 2010, which had been vacant for slightly more than a year. They have also just filled their Contract & Grant Analyst position, which became open due to a recent retirement. Finally there is a recruitment now open for a new Financial & Administrative Officer IV. These are the three positions most important for ensuring the successful management of Physics' contracts and grants. During FY 2011-12 CNAS expects Physics to be a model of efficiency for the campus.

JRVs – during the period reviewed, demurrage charges presented a challenge for many CNAS departments. Because of the campus-wide impact of the demurrage problem, the Storehouse, in a February 24th email to staff, announced a change in their cylinder return policy, which should largely eliminate the problem of demurrage continuing to be charged after a cylinder has been returned. This practice of charging for returned cylinders was the root of the demurrage cost transfer problem.

C. Transactions After Award End Date

One of five sets of transactions tested after the fund expiration date was not reversed in a timely manner.

COMMENTS

We noted one set of Payroll/Personnel System (PPS) entries (FDR0045636) for Federal Fund Grant 23736- FDP 20073438118190 JOHNSN 6/09 for D01048-Entomology, was made on September 30, 2009, past the June 30, 2009 fund expiration date. The payroll details indicate the entries were for an individual charging payroll to that fund for July and August 2009. We noted that the entries were reversed in June

2011. This left an unresolved overbilling of approximately \$5,000 on the expired fund.

RECOMMENDATIONS

We recommend that the department arrange to return the over billed amount to the agency. We also recommend that the CNAS Dean's Office implement a monitoring process to review transactions made after the fund end date.

MANAGEMENT RESPONSE

Entomology will arrange to return the over billed amount to the agency in the first quarter of FY11/12. As recommended, the CNAS Dean's Office will implement a monitoring process. We intend to automate this process as part of the development of automated deficit report. We envision this tool as being extremely useful for CNAS department managers as well as the CNAS Dean's Office. The planned completion date for this report will be January 1, 2012. The Dean's Office will use it for review starting with the quarter ending on that date.

D. Principal Investigator Evidence of Review of Monthly Reports

Six of nine surveyed respondents (67%) indicated that PIs are not required to provide evidence of their monthly financial statement reviews.

COMMENTS

The PIs maintain primary financial responsibility for the financial condition of their funds. Per Statement on Auditing Standards (SAS) 115, evidence of review of key reports (e.g. PI certification or signoff) is required to prove that a control is operating as designed.

The FSSC has provided a Web PI monthly report and review capability whereby PIs can review monthly fund reports online and the system will record evidence of their review. However, campus management has not made evidence of monthly PI review a campus requirement.

RECOMMENDATIONS

The CNAS control unit should require their respective departments to implement a process that provides evidence of monthly PI review, such as the use of the WebPI Reporting System.

MANAGEMENT RESPONSE

CNAS Dean's Office has reminded departments that PIs must provide evidence of review of their financial statements. Our recommendation is

that departments use the PI Web Reporting System (PIWRS) for that purpose. However, if a department wishes, it may choose another method, but if so, must provide a plan to the Dean's Office of how the review will be evidenced. The Dean's Office will require a statement from each administrative unit as to their planned method by October 1, 2011.

E. Disallowed Expenditures

Some Earth Sciences' foreign travel expenditures were disallowed resulting from an outside agency audit.

COMMENTS

CNAS has implemented an FAU Management System, which is a tool used to avoid posting inappropriate charges to a contract or grant. Sponsoring agencies have different expenditure constraints which are difficult to track. The departments used to track these on files at the department level. These files were difficult to maintain, share, and reference. The FAU Management System was created so that these constraints could be tracked, managed, and queried to identify potential expenditure disallowances.

RECOMMENDATIONS

We recommend that the department review their use of the FAU Management System to avoid unallowed costs.

MANAGEMENT RESPONSE

CNAS departments were reminded that the FAU Management System (FMS) should be used (specifically the Unallowed Cost field) to avoid posting inappropriate charges to a contract or grant. For the FMS to be an effective tool, two things must happen: 1) unallowed costs must be manually entered into the system at the time of a new award, and 2) transactors (Purchasing Assistants, Travel Coordinators, Payroll Transactors, and Petty Cash Custodians) must use the FMS as a reference before posting any expense that could be disallowed by an agency.

The Dean's Office has received feedback that some departments are not using the FMS, but rather still relying on their old systems. The CNAS Financial Operations Managers have agreed to take on a full review of the FAU Management System with the intent of making the system more functional so it can replace current systems. Departments have agreed that, after revisions are made to the FMS, they will again make an effort to use it instead of their current process. The planned completion date for this report will be January 1, 2012. The Dean's Office will use it for review starting with the quarter ending on that date.