

**Final Report
Study Committee
Sponsored Research Administration
University of North Carolina at Chapel Hill**

March 20, 2008

The Final Report from the Study Committee on Sponsored Research Administration at University of North Carolina at Chapel Hill was prepared by Tim Quigg, Study Committee Chair and presented to Tony Waldrop, Vice Chancellor for Research and Economic Development on behalf of the committee. Manuscript preparation services were provided by Donna Boggs and technical editing services by Whitney Vaughan, both from the Computer Science Department, University of North Carolina at Chapel Hill.

Background: Prior to 2002, the administration of sponsored research at UNC-CH was divided between the Office of Research Services and the Office of Contracts and Grants. The Office of Research Services had final signature authority for proposals, awards, and certifications; thus, all proposals were reviewed and approved by their staff prior to submission. All awards were sent to the Office of Research Services for acceptance, and as required, for signature. The Director of the Office of Research Services reported to the Vice Chancellor for Research and Economic Development.

The Office of Contracts and Grants reviewed and signed off on proposal budgets prior to final review and signature by the Office of Research Services. In addition, the Office of Contracts and Grants was responsible for all post-award functions including contract negotiations, account establishment, account maintenance, sponsor communications, accounting, pre-audit, reporting, and final account close-out. The Director of the Office of Contracts and Grants reported to the Vice Chancellor for Business and Administration.

On July 1, 2002, a major reorganization was announced that consolidated the two offices to create the Office of Sponsored Research (OSR) headed by an Associate Vice Chancellor and Director reporting to the Vice Chancellor for Research and Economic Development. Those staff involved in proposal review and award acceptance from the former Office of Research Services were merged with the full Office of Contracts and Grants staff to create the new OSR, which was organized in traditional pre-award and post-award sections.

This reorganization eliminated some duplication of effort between the two offices and provided fertile ground for creating a more efficient system. However, the near doubling in size of the university's research enterprise during the decade from 1997 to 2007, while the number of staff remained relatively constant, has placed an exceptional strain on the ability of OSR to respond to the growing expectations of the UNC-CH research community. And as the university looks to the future, these pressures will only intensify as the faculty and the research community collectively strive to achieve the Chancellor's challenge to grow total sponsored research at UNC-CH to \$1 billion by 2015.

Committee Establishment: In the face of this unprecedented growth, concern about the deteriorating quality of service provided by OSR to faculty and administrators reached an apex in the fall of 2006. Tony Waldrop, Vice Chancellor for Research and Economic Development, appointed a committee broadly representative of various campus constituencies to conduct a thorough review of the problem and make recommendations for potential changes in policy, procedures and staffing levels. He appointed Tim Quigg, Associate Chair for Administration and Finance, Department of Computer Science, to chair the committee. Consisting of senior management within OSR and various school, department and center representatives, the full list of the committee members in alphabetical order follows:

Initial Committee Meeting: The first meeting of the study committee was held on January 11, 2007. Vice Chancellor for Research and Economic Development Waldrop charged the committee with making recommendations for improving research support services to UNC-CH's research community, particularly the research-active members of the faculty, while assuring compliance with all federal and sponsor requirements. He made himself available for consultation but otherwise impressed upon the committee his desire that they function independently. Chair Quigg emphasized the need for openness and candor among committee members. Without it, the committee could not accomplish its important work. He also empathized with the OSR employees serving on the committee and challenged them to objectively receive criticism of OSR without developing defensive attitudes. Instead, he urged them to commit to full participation in seeking operational and policy improvements.

The committee decided to seek broad-based input from campus through public hearings, meetings with various groups, and interviews with key faculty, senior administrators and staff to more fully define the existing problems, and to solicit recommendations for potential improvements in the research support system. In addition, each committee member was asked to seek input from their natural constituencies and report their findings to the committee. Never suspecting that the study process would last fourteen months, the committee decided to meet weekly for 1.5 hours until the task was completed. And the Chair promised to provide coffee and donuts for each meeting!

Problem Statement: The following description defines the problems as they existed in early 2007. However, the presence of senior OSR management staff on the committee and their willingness to implement various committee recommendations before the final report was submitted have resulted in many tangible improvements during the past year, as noted in this report.

Simply stated, in early 2007, there were many problems with the UNC-CH research support system. Many simple transactions took far too long; inefficiencies were widespread; and negotiations with sponsors often languished – all to the detriment of UNC-CH’s research enterprise. Faculty and administrators were dissatisfied with the situation. OSR staff felt incapable of keeping up with the excessive work demands, often feeling like scapegoats for all of the systems problems and feeling criticized regardless of how hard they worked. Some attributed the problems solely to an under-funded OSR, others to a lack of leadership, still others to organizational inertia failing to adapt as sponsored research became far more complex.

While the committee accepted each of these as a partial explanation, simply declaring the system broken and pointing the finger of blame accomplished nothing constructive. What was broken? What didn’t work? And what could be done to remediate years of institutional neglect of this vital support for the university’s sponsored research enterprise?

The committee sought to operationalize the problem statement by focusing on five interrelated issues. Some were symptoms; others were potential causes of the current problem. What unified all five issues was the frequency with which they were mentioned by PIs and research administrators.

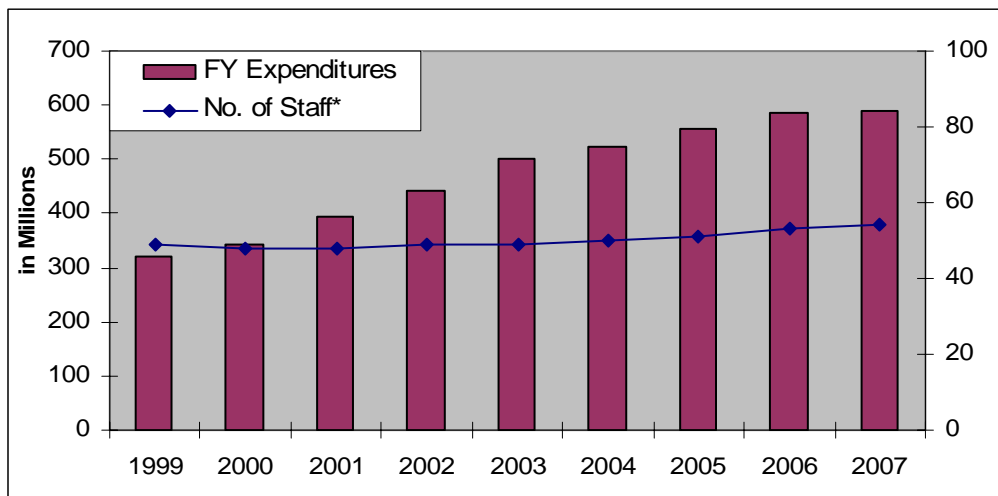
- **Excessive Processing Delays** – Problems existed in many areas including the following:
 - **Account numbers and other account actions, e.g., budget changes, project extensions** – Queues for routine actions were often excessive. Delays severely hampered faculty’s ability to start research projects in a timely fashion, often resulting in unnecessary no-cost extensions at the end of projects. Time-

sensitive personnel actions (including the hiring of post-docs or graduate students to work on projects) and project-critical equipment requisitions were often delayed.

- **Out-going subcontracts** – Project collaborator work was delayed when subcontracts were not issued on time. This prevented UNC-CH investigators from moving forward on critical portions of project research activities. When collaborating institutions had to wait months before they were authorized to begin work, not only was the research delayed, but ill-will with these collaborating institutions was often bred.
 - **Financial reports** – Excessive delays in preparing and submitting periodic (monthly/quarterly) and final financial reports to sponsors often resulted in delayed receipt of new funding increments, and put the institution in significant jeopardy of sanctions from sponsoring agencies.
- **Communication between OSR and Campus** – Since there was no single contact person within OSR to call with inquiries concerning the status of a particular award transaction, department staff often made many unnecessary calls in an attempt to locate the proper person to ask about the status of an action. Frustration and wasted time resulted at both the department and OSR levels. Because OSR processed actions in an assembly-line fashion, with a single item passing from one person to the next, and because there was no transparency in the system allowing campus personnel to know the status of a transaction, these communication inefficiencies consumed an inordinate amount of time for both OSR and campus staff. This systemic problem was exacerbated by the perceived lack of accountability for final outcomes among OSR staff. Finally, slowness in responding to inquiries, the lack of a sense of urgency to solve problems, and the lack of emphasis on customer service were identified as major problems by many campus research administrators and PIs.
 - **Communication within OSR** – The pre-award and post-award sections of OSR operated as semi-autonomous groups with limited effective cross-section communication. Pre-dating the creation of OSR and traceable to historic tensions between these two sections within the Office of Contracts and Grants, this lack of effective communication contributed to the delays in establishing accounts and processing transactions. For example, important financial transactions may have been rejected and returned to the department even when OSR had already received the authorizing documentation (e.g., new funding increment) from the sponsor, but this information had not been shared with the full staff. The lack of an effective automated system for sharing important information among staff enabled this problem. Also, there was ambiguity in determining

organizational responsibility for transactions near the “hand-off” between the pre-award and post-award sections. Not only were campus research administrators confused about when an action moved from pre-award to post-award, many OSR staff were equally confused. Finally, the over-reliance on paper copies of important documents often resulted in them being missing when needed, thus causing important account actions to be delayed.

- Inconsistent Policy Interpretation within OSR** – All OSR staff were subject to the same university and sponsor policies. However, the interpretive range was wide, appeared to be arbitrary, contributed to widespread confusion on campus, and further magnified the feeling that OSR and campus were in an adversarial relationship. Individual proposal reviewers, often emphasized different topics, and department research administrators reported conflicting instructions on how to handle the same issue from different OSR staff. In fact, there were examples of department administrators being instructed to “correct” a transaction in a particular manner by one OSR staff member, only to resubmit it and have it returned from a different OSR staff member instructing that it be “corrected” back to the original submission format. These circumstances created unnecessary work in both OSR and in departments, opened the potential for department staff to “game” the system by discovering who gave the most favorable answer, and ultimately increased the university’s risk of audit exposure. Many of these inconsistent interpretations can be attributed to the absence of a clear, current, written university policy manual.
- OSR Staffing Levels, Position Classifications and Staff Retention** – As previously stated, the university has experienced explosive growth in its sponsored research portfolio over the past decade. While total dollars have nearly doubled during this period, the size of the staff has remained relatively constant as shown on the following chart:



While the failure to increase staff positions within OSR has certainly contributed to the problem, personnel problems at OSR didn't end there. Over many years, positions have been classified inappropriately low, thus depressing the education/experience levels of the pool of applicants. Even in cases where positions were classified appropriately, the dollars budgeted in the positions were often at the low end of the range, thus preventing OSR from considering more qualified applicants already making above the amount budgeted in the position. These circumstances contributed to low morale and high turnover within OSR and, in the opinion of the committee, have resulted in a staff imbalance characterized by far too many lower-classified positions and far too few higher-level experienced research administrators. This issue and recommended strategies for correcting this imbalance will be addressed in considerable detail under Topic 5.

Method for Addressing the Problem Statement: As interstate highways are maintained and expanded while traffic continues to flow, the committee recognized the similar challenge of making changes at OSR as the daily activity of sponsored research continued to flow. And as traffic backs up around highway construction sites, the committee anticipated even greater processing delays as changes were made at OSR.

Cognizant of these facts, the committee adopted an incremental approach to recommending improvements in the system, beginning with a review of the pre-award/post-award organization structure. The goal was to maximize the effective and efficient use of all available staff resources first. The committee then looked to optimize efficiencies in Topics 2-5 listed below before reviewing and recommending the addition of staff positions to OSR.

The following six topics were reviewed by the committee:

1. OSR's organizational structure
2. OSR's use of automation
3. OSR policies, procedures, workflow, work priorities and effort duplication
4. Sharing of responsibility and authority between OSR and schools, centers, institutes and departments
5. OSR staff competency
6. OSR staff capacity

A thorough analysis of important issues/problems within each of these six topics, along with committee recommendations, will provide structure for the remainder of this report. All recommendations were adopted without dissent except #1 and #16, each having just one "no" vote. The committee believes **there is no single "silver bullet" solution!** Significant changes are required in each of the six areas if UNC-CH is to remediate conditions brought on by rapid growth in sponsored research funding and the increasing complexity of its administration.

TOPIC 1 – OSR’s Organizational Structure: As previously stated, at the beginning of the study, OSR was organized into two sections: pre-award and post-award. The pre-award section had primary responsibility for reviewing and authorizing the submission of proposals; negotiating awards with sponsors; drafting and implementing out-going subcontracts; receiving funded awards and initiating the process of assigning account numbers (then handing to post-award for processing); and initiating various important award maintenance actions, e.g., budget revisions, agency approvals, no-cost extensions, processing increments of funding (then handing the actions to post-award for processing). Staff were organized in teams by sponsors, e.g., one team handled all NSF, another all NIH, with each team led by a contract specialist.

The post-award section had primary responsibility for receiving actions from the pre-award section; entering them into the university Financial Records System (FRS); assigning account numbers; reflecting changes in budget, and project or budget end-dates; producing fund authorities for distribution to campus; conducting pre-audits on expenditures to ensure compliance with sponsor rules; producing financial reports/invoices for submission to sponsors; cash management including periodic draw-downs from electronic lines of credit from agencies and accounts receivable; and final account close-outs including the NOTR (notification of termination report) process. The pre-audit and reporting groups were organized by sponsor, mirroring the organization of the pre-award section.

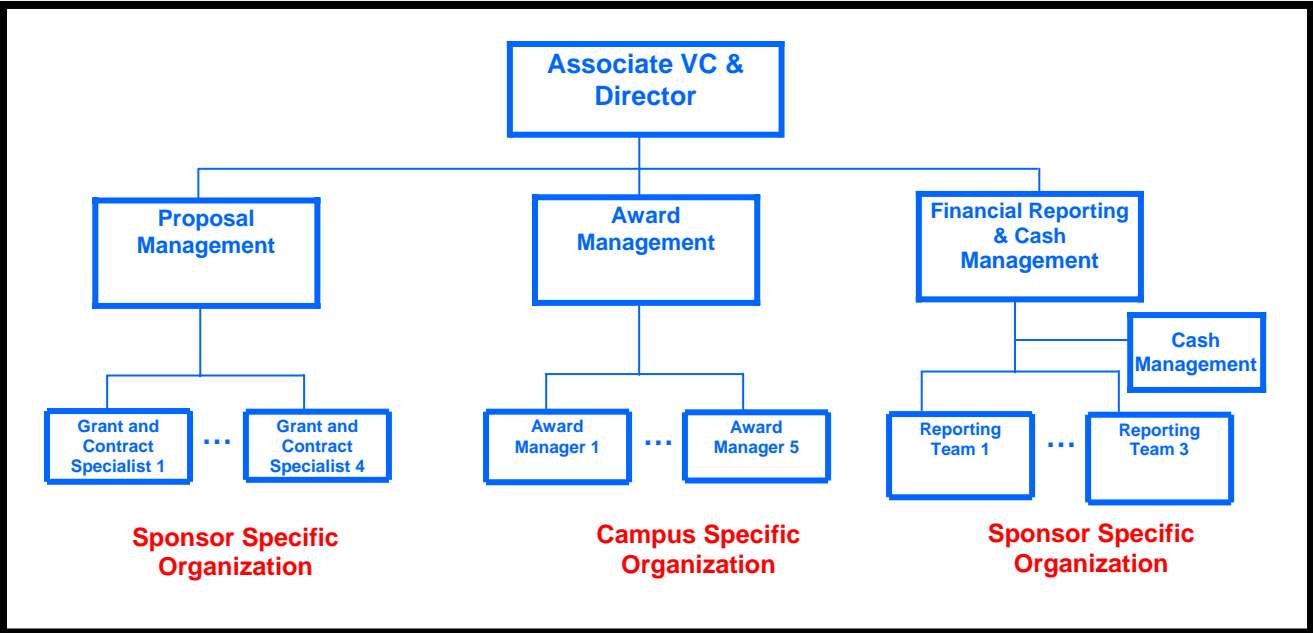
The committee identified the following systemic problems with the existing organizational structure:

- **No single person was responsible for important end products** – For example, no single person was responsible for getting an account number established. It was a shared responsibility involving many people across multiple supervisors; thus, nobody had ultimate ownership of the outcome.
- **Competing priorities: external deadlines trumped internal needs** - Contract specialists had final responsibility for authorizing the submission of proposals (with an external deadline) and responsibility for beginning the process leading to the establishment of account numbers (no external deadline). When pressured by excessive work volume, the contract specialists naturally processed the items with external deadlines first and delayed those with internal deadlines. Over time, the backlog of internal actions, e.g., unassigned account numbers, became substantial.
- **Confusion at the pre-award/post-award hand-off** – The arbitrary division of responsibility between these two groups, coupled with the lack of clear written policy/procedures, resulted in important actions being overlooked or delayed.
- **Multiple hand-offs of a transaction create inefficiencies (and errors)** – With many people involved in processing a single transaction, the

“learning curve” of each, along with the administrative overhead associated with the hand-off, created delays. And because all relevant information may not be communicated at the hand-off, the likelihood of error increased significantly.

- Sponsor-centric organization was convenient for OSR but bad for campus, and it did not promote a commitment to quality customer service** – By organizing both the pre-award and the post-award sections by sponsors, OSR facilitated staff becoming sponsor-specific experts, thus making internal administration easier. However, this organization structure made OSR difficult for campus to navigate; encouraged OSR staff to focus on sponsors first rather than on campus units (both are important OSR customers); and failed to provide a conducive structure for providing quality customer service to campus units.

Recommendation 1: *(Implemented on April 23, 2007)* OSR will be reorganized into three sections (proposal management, award management, and financial reporting and cash management) as shown in the following organization chart, with each headed by an experienced director.



The proposal management section will have sole responsibility for reviewing and authorizing all proposals for submission to sponsors, and will maintain responsibility until the proposal is accepted as complete by the sponsor. They will handle contract negotiations on all bilateral agreements and sign contracts at the point of award. Many key OSR staff members have considerable sponsor-specific training and experience that are particularly valuable in the proposal review process; therefore, in

order to leverage this existing expertise, the proposal management section will continue to be organized by sponsors.

The award management section will be divided into five units, each headed by an award manager and each supporting a group of campus schools, centers or institutes as determined by the OSR Director. Periodic reviews and adjustments will be made to balance workloads among the five units. The section will be staffed from positions transferred from the previous pre-award and post-award sections, as determined by the OSR Director. The section will have sole responsibility for receiving funding notices for grants and cooperative agreements from sponsors, and executed bilateral award documents from the proposal management section; negotiating award terms and conditions for other incoming award documents; assigning account numbers, processing all required actions concerning these awards (e.g., budget changes, changes in period of performance); processing all letters of guarantee; drafting and implementing out-going subcontracts; pre-auditing transactions per policy requirements; and handling all post-award sponsor communications. While campus research administrators may contact the award analysts as needed, the award manager will serve as the central point of contact for all problem resolutions – thus the award manager serves as both the supervisor of the unit and the chief customer service officer for their assigned campus units.

The financial reporting and cash management section will be organized into three reporting teams with responsibility for preparation of sponsor-mandated financial reports/invoices, including final reports and the NOTR process. These teams will be organized around sponsors. In addition, appropriate staff will be assigned to manage all letter of credit draw-downs, accounts receivable and other cash management duties.

Implications of Reorganization: The committee anticipated the potential for considerable short-term disruption from a reorganization of this magnitude. Some staff would be confused about the new structure and their role; many were asked to perform new tasks requiring substantial retraining; and some simply might not be able to adjust to the new structure, thus creating staff turnover. Several existing vacancies further complicated the transition. In addition, since it was not possible to predict with certainty all implications of this reorganization, the committee recommended it proceed in advance of the other changes to allow adjustment as necessary.

The committee firmly believes this reorganization was a **necessary first step** in the broader strategy to improve the administration of sponsored research at UNC-CH. Responsibility is now clearly assigned – proposals to the proposal management section and awards to the award management section. Competing priorities are substantially reduced as individual staff roles are clearly defined. The hand-off between proposal management and award management occurs at the time a proposal is “accepted by the sponsor as complete,” thus clarifying the ambiguity in the previous pre-award/post-award hand-off. Inefficiencies and the potential for error are

reduced as an “assembly line” process is replaced by a “single touch” process whereby transactions are assigned to the person having both the responsibility and the authority to act. The establishment of a new award management section organized and staffed to provide “one-stop, customer-oriented service” for campus units reduces confusion, as both responsibility and authority to act are clearly delegated to specific staff. Finally, the committee anticipated that success during this difficult period of transition to the new organizational structure depended in large part upon the active support of senior management within OSR (the Director and the heads of the three newly created sections). Since all four had been active members of the committee and had participated in crafting these recommended changes, their enthusiastic support for this reorganization has contributed to a smoother than anticipated transition.

TOPIC 2 – OSR’s use of automation: For the past two years, OSR has worked with Andy Johns, Assistant Vice Chancellor for Research and Director, Office of Research Information Systems, to enhance the overall efficiency of UNC-CH’s research management systems. The most visible tool is RAMSeS, a proposal administration system rolled out for general use in July 2006. RAMSeS is a sophisticated system for electronic proposal routing and approval that has completely replaced the old paper process. Prior to RAMSeS, paper copies of Internal Processing Forms (IPFs) along with paper copies of proposals were carried from office to office to obtain the required approvals, e.g., PI, Department Chair, Dean (multiple of each if the proposal involved faculty or staff from more than one department) before the proposal was submitted to OSR for review. Now this process is completely electronic, thus saving substantial administrative time. But the capability of RAMSeS goes far beyond proposal routing, as evidenced by the numerous enhancements that have been added, including the ability to add attachments and notes to proposals, and initiate workflow events, thus creating an electronic record and status report. With these enhancements, proposal management at UNC-CH has become fully transparent to department staff and PIs. Future planned enhancements include additional refinements to the award management and financial reporting and cash management modules.

OSR has also developed an internal tracking system linked to RAMSeS that allows OSR staff to track work items. The system is called the Document Workflow Management System, or “Workflow,” for short. A document (paper or electronic) can be linked to a proposal, an investigator and an account number, and then assigned to one or more staff for appropriate action. Workflow inboxes are assigned to most OSR staff, and tasks are sent to their inbox for action. Supervisors and work groups can see what is in each others inbox. Notes and attachments can be linked to the workflow item, and cover sheets can be produced with barcodes to help track paper items as needed. OSR staff can search for open (pending) and closed (completed) work items, and for documents by sponsor, PI, due date, department, document type and keyword. The committee believes this system substantially mitigates the problems previously associated with internal communication and the inability to get important documents to the “right” person within OSR.

The committee strongly endorses the work completed to date. With RAMSeS as the tool for facilitating communication between OSR and campus and Workflow as the tool for facilitating communication within OSR, the foundation for electronic research administration at UNC-CH has been laid. The task now is to add additional functionality to extend the benefits of automation to many processes currently dominated by staff-intensive paper processing systems. Finally, the committee believes automation and staffing levels are inextricably linked; thus, the recommendations presented under Topic 6 for targeted staff additions assume the implementation of the following recommendations to accelerate work on key systems projects.

Recommendation 2: Modify RAMSeS to add a “Pending Award Module” to allow PIs and department staff to electronically track the status of awards. (Work has already been initiated by OSR).

Implication: Much information is already available to OSR staff in the Workflow system, but Workflow is (and should remain) an internal system designed to facilitate communication and document management within OSR. The lack of transparency concerning award status generates numerous inquiries via telephone or email, thus creating an enormous burden on the award managers to respond. This unproductive communication will be eliminated by placing award status information into RAMSeS and making it accessible to both PIs and department staff.

Recommendation 3: Modify RAMSeS to add the first phase of an electronic “Subcontract Development Module” for out-going subcontracts to allow department staff to enter key information, e.g., scope of work and budgets. Further development of this important tool within RAMSeS will allow department staff to assist in the drafting of subcontract documents by selecting from pre-approved clauses and templates. (Work has already been initiated by OSR).

Implication: The drafting of out-going subcontracts is a cooperative process involving both OSR award management staff and department personnel (PIs and administrative staff). The award manager is responsible for ensuring compliance with both institutional and sponsor policy, while the department is the locus for key information concerning budgets, scope of work, PI-determined reporting requirements and occasionally, even special intellectual property provisions. The current system for communicating this information is cumbersome and prone to error and delay. By building a user-friendly Subcontract Development Module, each party can, in parallel, work on their portion of the draft subcontract. This will allow each party to bring their expertise and information to the task, allow campus research administrators and PIs to track the status of a subcontract and will reduce the time required to execute subcontracts with our collaborators, thus allowing inter-institutional research activities to begin promptly.

Recommendation 4: Modify RAMSeS to add an electronic Notification of Termination Report (NOTR) system. (Work has already been initiated by OSR).

Implication: The NOTR allows department research administrators to provide information concerning outstanding financial obligations for terminated accounts that have not yet appeared in the FRS accounting system. The current paper system is inefficient, cumbersome, and prone to error and misinterpretation. Furthermore, the requirement for certifying authorities to sign a paper form often delays its submission. An electronic system will allow all of the required information to be available for viewing and action in RAMSeS, and allow expenses to be certified electronically, even when the certifying authority is traveling. Minimizing delays in the NOTR process will positively impact another major objective – timely submission of final financial reports to sponsors. This major institutional problem putting the university at risk of both audit exposure and potential sanctions from sponsors will be discussed in detail on page 29.

Recommendation 5: Modify RAMSeS to add an electronic capability for departments to submit requests for no-cost extensions for NIH grants and to receive notice of approval.

Implication: The current system requires the preparation and submission of paper copies of an Institution Prior Approval System (IPAS) form to award managers for review, approval and subsequent entry into eRA Commons. This system is both time consuming and inefficient. In some cases, these paper forms have been lost, thus requiring the PI to write the agency requesting the extension. By using the existing pathway in RAMSeS (similar to the process currently used for electronic submission of letters of guarantee), the requests will be routed to the appropriate award manager, a tracking number will be assigned for submission and approval, and a copy will be automatically sent back to the department.

Recommendation 6: Modify RAMSeS to provide salary access to designated department research administrators.

Implication: A great strength of the UNC-CH research community is its spirit of collaboration. With multidisciplinary research increasingly valued by researchers and by sponsors, grant applications frequently include personnel from multiple academic units. To budget accurately for these projects, research administrators spend significant time seeking and verifying salary information from other departments, usually by phone. This is an inefficient and unreliable means of retrieving current base salary, fringe benefit category and appointment type data when it is available electronically.

Reasonable control over employment information should always be exercised to ensure that only those who have a “need to know” are granted access. However, providing direct access to salary (base and supplemental), appointment type (9-month

or 12-month) and fringe benefit (standard or P&A Practice Plan) information to approved administrative staff will greatly increase their ability to correctly prepare budgets before submitting them to OSR and SPO for final review. Errors in all of these categories must now be caught by personnel in OSR or SPO, who have access to campus-wide salary information. When errors are found, making adjustments at the final stage of proposal review requires significant reworking of complex budgets at a time when deadlines are near and applications have already been approved by collaborating units.

The committee recommends access through RAMSeS for the following reasons:

- All personnel preparing grant and contract applications already use RAMSeS
- Access can be controlled
- Salary information for selected individuals can be suppressed
- Ability to include guidelines for responsible use
- Ability to post “Help” text, qualifiers and disclaimers

Recommendation 7: Implement the first phase of an electronic sponsor invoicing system, with additional features being added in the future. This system will begin with periodic (monthly and quarterly) invoices/reports and will later add more complex final invoices/reports. (Work has already been initiated by OSR).

Implication: The variety of report formats required by sponsors and the variety of definitions used by sponsors to categorize expenses creates a complex and challenging task for financial reporters as they prepare invoices. Most of this work is completed manually; therefore, the potential for significant savings of staff time through automation is great. The first phase of this system will target monthly/quarterly invoices/reports to sponsors using standard formats and standard expense-code definitions with no special conditions.

The task becomes more challenging as sponsors with more complex reporting rules are added to the electronic invoicing system. The unique reporting requirements from some sponsors may necessitate custom programming for a particular sponsor or group of sponsors. As OSR considers each of these circumstances, cost-benefit analyses will guide decisions about when it is worth the effort to automate, and when it may be better to keep the production of certain sponsor reports/invoices fully manual. It is beyond the scope of the committee to offer sponsor-specific guidance on this matter. However, the committee encourages the goal of increasing efficiency in the financial reporting and cash management section by automating all functions that have a positive cost-benefit outcome.

The task of automating final reports is even more challenging because it involves the complexities enumerated above plus the need to integrate data from the NOTR with FRS data. Improvements in the NOTR process discussed in Recommendation 4 will help; however, the uniqueness of many reports may always require a level of human intervention. The goal is not to eliminate required human review and modification of reports. Rather, by interjecting automation in the areas where it is useful, draft invoices can be provided to reporters for their review, modification and approval before they are submitted to sponsors.

In conclusion, the committee believes the financial reporting and cash management section can be made more efficient through the careful application of automation. Due to the variety of sponsor requirements and the complexity discussed above, it is not possible to fully automate all aspects of the process. However, the committee urges the OSR Director to continue to seek additional cost savings through automation of work better suited to computers.

Recommendation 8: Implement a central electronic filing system to replace OSR's current paper account files. (*Work has already been initiated by OSR*).

Implication: Currently OSR uses a central paper filing system for all active accounts. Staff members are instructed to use a card checkout system when removing files, but missing files remain problematic. Furthermore, the paper system obviously allows only one person to use a file at a time, thus creating delays when multiple staff need access to the same account information simultaneously. An electronic system will eliminate both problems and reduce the need for physical storage space, thus freeing limited space resources for higher priority uses.

Recommendation 9: Implement an electronic personnel activity reporting system (PARS).

Implication: This recommendation to replace the current paper-based personnel activity reporting system with an electronic system is independent of Recommendation 19, which recommends substantial changes in the policy regarding effort reporting. The elimination of paper will reduce preparation, distribution and turn around time; provide more accurate results; and reduce delays inherent in the current PARS system caused when faculty or other certifying authorities are traveling or otherwise unable to sign paper forms.

Recommendation 10: Implement an electronic system designed to interface between RAMSeS and Grants.gov.

Implication: To maximize the leverage gained from the successful electronic routing of proposals through RAMSeS, the logical next step is to provide a seamless interface between RAMSeS and Grants.gov. This system will minimize error, eliminate duplicate entry, improve processing and save staff time at all levels. The system

should allow for the administratively approved sections of the proposal, e.g. budget, coversheet, and budget justification, to be locked after approval, giving investigators more time to finalize the research plan.

Recommendation 11: Secure funding for an additional staff programmer within the Office of Research Information Systems, assigned on a full-time basis to support the automation recommendations contained in this report and future automation projects in OSR.

Implications: This is perhaps the most important of the recommendations pertaining to Topic 2 because it enables the other recommendations. Without adequate ongoing support from the Office of Research Information Systems, it will not be possible to complete Recommendations 2-9 before further growth forces performance to deteriorate. Without this resource, the ultimate goal of maximizing efficiency and effectiveness through increased automation may be compromised.

TOPIC 3 – OSR policies, procedures, workflow, work priorities and effort duplication: The committee has reviewed and analyzed numerous OSR policies and procedures to identify those that negatively impact the research administration support system. The committee’s operating principle has been to look for easier ways to accomplish important tasks and to recommend the elimination or substantial de-emphasis of less important tasks. The “single touch” approach (limiting personal interaction or “touching” a transaction to one person whenever possible), the introduction of focused strategies to direct transactions to the person having both the responsibility and authority to act, and the elimination of duplicate effort have guided the following recommendations.

Recommendation 12: (*Implemented on April 23, 2007*) Streamline the proposal review process for School of Medicine (SOM) proposals by negotiating and implementing an expanded delegation of authority to the Sponsored Programs Office (SPO). This will eliminate the duplicate review of proposals coming from the SOM. Specifically, the SPO will review and approve all electronic IPFs administered by a SOM department for:

- NIH grants and cooperative agreements (excluding contracts and STTR/SBIR which will be routed to OSR)
- Foundations (excluding Kate B. Reynolds, Z. Smith Reynolds, The Duke Endowment, Robert Wood Johnson, Kauffman Foundation and Andrew W. Mellon which will be routed to OSR)
- Non-profit organizations.

Non-medical school proposals which include SOM personnel will not be routed to SPO for authorization. They will go directly to OSR.

Implications: All SOM proposals are now reviewed by one and only one office (either OSR or SPO), thus eliminating duplicate reviews. Time and effort are saved in OSR, in SPO and in departments. Proposal review is assigned to the office having both university signature and submission authority for the proposal; thus, responsibility for ensuring accuracy and having the authority to commit the university are always aligned in the same office.

Recommendation 13: *(Implemented on February 20, 2008)* OSR will develop and implement policies eliminating the requirement for presenting detailed budgets for internal review and approval when submitting proposals for NIH modular grants.

Implications: NIH modular applications and awards do not require detailed, itemized, categorical budgets. Instead, budgets are evaluated on the basis of a general, expert estimate of the total effort and resources needed to carry out the proposed research. To streamline the review of modular proposals and, in particular, the budgets that accompany them, and to eliminate extra requirements at the campus level, OSR and SPO have introduced new, standardized modular budget templates that departments may opt to use (instead of detailed budgets) for modular applications. These templates have auto-calculating features to allow OSR and SPO to quickly confirm the general reasonableness and allowability of the direct and F&A costs being proposed.

Recommendation 14: *(Implemented in June 2007)* OSR will develop and implement policies allowing newly funded modular grants to be established under the ABR4 protocol, thus allowing immediate account establishment and maximum budget flexibility.

Implications: Allowing budgets to be established using the ABR4 protocol speeds up the process of assigning account numbers because it pools the entire budget in the 1000 object code. This approach eliminates unnecessary complexity and extra requirements at the campus level, while maintaining full compliance with all federal requirements.

Recommendation 15: *(Implemented in June 2007)* OSR will discontinue the pre-audit of domestic travel charges except in cases where there are sponsor-imposed travel restrictions.

Implications: OSR pre-audit of these transactions duplicated the review conducted by the university travel accounting office. This recommendation puts the responsibility for compliance with university/state travel policy solely with the travel accounting office, thus eliminating duplicate review.

Recommendation 16: OSR will develop and implement policies allowing all new accounts that do not have a current budget on file to be established using the proposal budget. This approach will expedite account setup.

Implications: Many projects are awarded at levels lower than the proposal budget. Since close consultation between the PI and the department research administrator may be required for the new budget to be prepared, and since the project has already been officially awarded, there is no prohibition against assigning an account number using the proposal budget. This revised procedure will eliminate delay in account establishment and allow the PI to begin the project while a final budget is prepared. OSR will collaborate with departments on final setup as needed.

Recommendation 17: OSR will develop and promulgate a comprehensive policy/procedures manual for sponsored research to replace the currently outdated sections of the university business manual and appoint a Policy Advisory Committee with broad representation from the campus research community (including both faculty and staff) to advise the Director on policy development matters. *(Work has already been initiated by OSR).*

Implications: The absence of comprehensive written policy creates much confusion at all levels of the university. The new manual will clearly articulate UNC-CH research administration policy, specify the basis for the policy, e.g., federal or state requirements, and enumerate the responsibilities of OSR, the department and the PI in fulfilling the policy. Incorrect implementation of important policy and inconsistent policy interpretation increase the university's risk of audit exposure. It is vitally important for staff at all levels of the university to understand their responsibilities for compliance with federal, state, university and sponsor policies. A good compliance program is not one that is solely implemented at the central institutional level; rather, it involves staff at all levels who understand their responsibilities and act appropriately. The policy/procedures manual will contribute significantly to the smooth operation of UNC-CH's sponsored programs and will facilitate an increase in compliance at all levels of the university.

Just as faculty and staff from all levels of the university should be involved in implementing policy, faculty and staff from all levels of the university should also be involved in the policy review process. Staff in schools, centers, institutes and departments may have a perspective different from staff in central offices. And faculty members often have a perspective different from administrative staff. All are important and all need to be represented on the Policy Advisory Committee.

Recommendation 18: OSR will streamline the contracting process (including incoming and out-going subcontracts) by pre-negotiating standard terms and conditions for frequent research contract partners and obtaining clarification of OSR authority to negotiate and accept non-standard terms and conditions.

Implications: UNC-CH has many repeat contracting and subcontracting relationships with a finite set of universities, foundations, industry sponsors and other research collaborators. Often, each new contract is viewed separately, and terms and conditions are separately negotiated. This creates unnecessary work for each party. As staff turn-over occurs at either end, previous informal understandings are lost. In order to streamline this process, OSR will proactively negotiate Master Agreements with these sponsors and research partners to pre-establish the terms and conditions for contract relationships with UNC-CH. This will reduce the time required to implement future agreements.

As the university continues to expand its contractual relationships with for-profit companies, OSR increasingly must determine when and under what circumstances proposals and contracts from these sponsors should be reviewed and approved by the Office of Technology Development (OTD) and the Office of University Counsel (OUC). The complexities of these contracts usually involve non-standard intellectual property provisions and publication rights clauses. In order to streamline this process and prevent unnecessary delays, the committee recommends OSR, OTD and OUC negotiate and implement a written understanding detailing the specific role each party will play in reviewing these issues, and to the extent possible, grant OSR the maximum discretion in negotiating these terms.

Recommendation 19: Changes in PARS – Recommendation 9 concerns automating the PARS system, independent of the policies and procedures in effect. This recommendation concerns substantive changes in the policies and procedures guiding the operation of UNC-CH’s personnel activity reporting system. The revised system must adequately address the differing needs of 9-month and 12-month faculty, as well as SPA and EPA non-faculty staff. The committee offers the following recommendations.

19A- PARS forms for SPA staff, graduate students, post-docs and temporary employees may at the Principal Investigator’s discretion be signed and certified by the Principal Investigator or supervisor. PIs assign work to their staff and determine the division of labor between projects. Often, research staff work on multiple projects and may not be aware of the relationship between their work and a particular research project. It is PIs who have the most direct knowledge of the relationship between staff effort and specific research projects. Therefore, the PI will determine if she has sufficient information to sign the forms or if she would prefer the forms be signed by the staff members themselves. If an employee is not available to sign, the PI may sign on the employee’s behalf. The current policy requiring the PI or Department Chair to write an explanation if an employee does not sign a form would be discontinued.

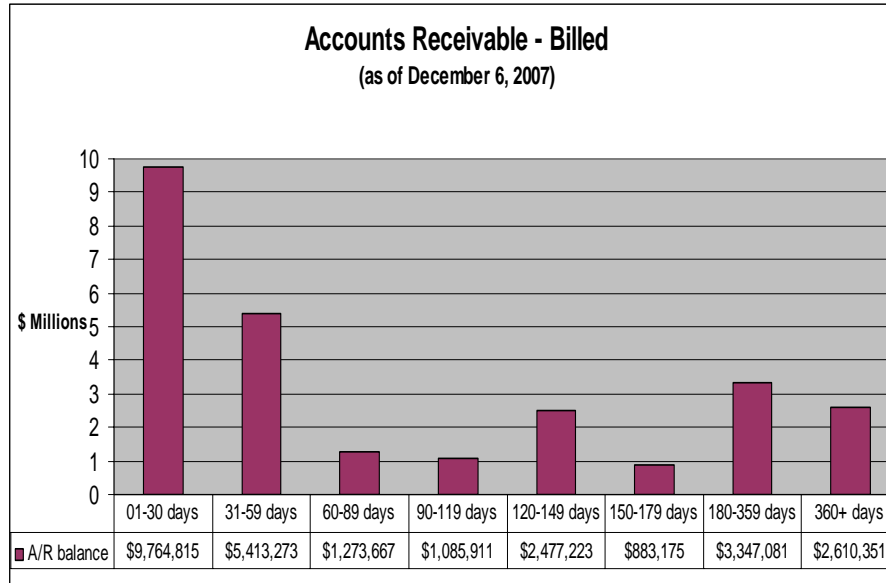
In addition, the PI listed on the top of an employee's PARS form is not always the person for whom the employee works. In these cases, the PARS policy will allow the PI to designate a supervisor who has direct knowledge of the work performed as the responsible certifier of effort. Faculty will always sign their own PARS forms, as will EPA non-faculty.

19B – The current requirement to review, certify and return PARS forms within ten (10) days will be changed to thirty (30) days. PARS forms are currently due ten days after receipt at the department level, primarily to allow payroll salary source changes to be made automatically from the revisions displayed on the PARS form. By requiring all salary source changes to be initiated at the department level, the ten day requirement is no longer necessary. This extended period will allow source changes to be submitted and reflected accurately on the PARS reports without justification since the closing of the PARS cycle will no longer be dictated by the payroll deadline.

Recommendation 20: OSR will develop and implement a comprehensive plan to adequately manage and collect outstanding accounts receivable from research sponsors. This plan will include:

- **Monthly provision of aged accounts receivable reports to the OSR Director**
- **Assignment of a full-time staff person with appropriate education and experience to manage the accounts receivable function (a separate recommendation will be made under Topic 6)**
- **Develop and implement, in cooperation with other university business and finance offices, an interim plan for maximizing the collection of all outstanding unpaid invoices**
- **Develop written policies to be included in the policy manual (mentioned in Recommendation 17) detailing procedures for charging the home departments of PIs who have not properly submitted progress/final reports, thus causing invoices to go unpaid.**

Implications: As the following chart demonstrates, uncollected accounts receivable are a significant problem for the university.



As of December 2007, accounts receivable totaled \$26,855,497, with \$5,957,432 over 180 days old and \$2,610,351 over a year old. In fact, some of the oldest unpaid invoices go back as far as fiscal year 2001. From July 2006 through January 2008, the university actually wrote off \$142,613 in bad debt. Responsibility for accounts receivable management and collection is divided among various staff within the financial reporting and cash management section. Reporters prepare and send collection letters to research sponsors when invoices are past due, but the task of collecting is incorporated, along with several additional tasks, into one accountant's job description. No routine aged accounts receivable reports are provided to the Director, and more concerted effort is required to aggressively collect bad debt. The part-time efforts of the accountant assigned this task are manifestly insufficient for this important financial function.

This problem is complex, multi-faceted and requiring of immediate attention. Some invoices are not paid because PIs have not properly submitted periodic or final progress reports. Some invoices are not paid because the sponsor has gone out of business, declared bankruptcy, or been acquired by another company. Some invoices are not paid because they are lost, misdirected to the wrong address, filed on the wrong forms or include unallowable expenses. And some invoices are not paid because they have been submitted too late, and the sponsor denies payment.

Recommendation 21: The Vice Chancellor for Research and Economic Development will accept an addendum to this report with recommendations for modification in policy and procedures used to review and approve Recharge Centers.

Implications: Recharge centers are an essential component of the research environment at UNC-CH. They save the university a considerable amount of money, as services can often be provided internally at a lower cost than would be charged by an external vendor, and they provide rich resources to investigators who need specialized expertise outside their own area of research.

Departments report waiting periods of up to one year for the establishment of new recharge centers, a situation incompatible with the needs of many large research projects. Because the university is highly decentralized, those filling out the forms to establish new recharge centers or to change rates for existing recharge centers have a wide range of experience with the process and often find it confusing. A lack of clear written policy contributes to this confusion.

Since the committee has already invested considerable time in its review but was not able to finalize recommendations before the required submission of this report, the committee requests permission to complete this single task and include recommendations as an addendum to this report no later than May 1, 2008.

TOPIC 4 – Sharing of responsibility and authority between OSR and schools, centers, institutes and departments: Many efficiencies can and already have been obtained through appropriate use of automation; streamlining policies and procedures to eliminate duplication; emphasizing the important and either de-emphasizing or eliminating the unimportant tasks; and through the effective grouping of staff into logical work teams. Another area the committee examined for increasing efficiency and effectiveness is the use of strategic partnerships for sharing work through carefully considered delegation of central institutional authority to campus sub-units.

Schools, centers, institutes and departments at UNC-CH vary in size and sophistication. There is no single approach to delegation that would be appropriate to all. However, the least sophisticated should not be used as a reason to ignore potentially successful delegation to the most sophisticated.

Sponsored research dollars will continue to grow at UNC-CH. The growth will bring more work and greater complexity through more inter-institutional projects, international projects, projects funded by for-profit companies, and more projects funded by new sponsors with which the university has limited experience. The committee recommends that OSR look for every reasonable opportunity to delegate the easier, less risky tasks to schools, centers, institutes and departments, while maintaining full responsibility at the OSR level for the more complex, greater risk tasks.

The following two recommendations provide specific guidance on ways to initiate potential delegation agreements. However, while the committee endorses these

specific approaches, the broader recommendation is for **OSR to adopt reasonable and targeted delegation as a deliberate strategy for dealing with growth!**

Recommendation 22: Following the model already implemented between OSR and the School of Medicine, OSR will seek opportunities for additional delegation of responsibility and authority to other schools, centers and institutes willing to assume responsibility and willing to assign qualified staff for the review, approval and submission of proposals from their units.

Implications: There are a few large schools, centers and institutes on campus that may be willing and capable to assume this responsibility. The delegation of this authority has worked exceedingly well in the SOM, and there is no reason to believe, if planned and implemented properly, that this model could not be successful elsewhere on campus. In a climate of limited resources, it is important to look for all reasonable methods for expanding the resource base beyond the budget of a single office. While the committee endorses this concept of expanded delegation, it makes no recommendation about specific campus sub-units for consideration. Furthermore, full authority to establish standards and to negotiate and approve all delegation agreements rests exclusively with the OSR Director.

Recommendation 23: OSR will develop and implement a comprehensive, multi-level department research administrator certification program to include rigorous training, written tests and mentoring systems that grant to participants, upon successful completion of the training, delegated authority to perform tasks previously assigned solely to OSR. (*Work has begun by OSR with the first Level 1 class offered in the fall of 2007 with 54 graduates, and several Level 2 modules planned for the spring of 2008*).

Implications: For the past three years, the Tar Heel Certificate Program in Research Administration (THCP) has been a popular program, with 166 department research administrators completing the requirements for receiving their certificate. This program provided broad-based training in research administration fundamentals and in the UNC-CH approach to administering sponsored research. However, it was a certificate program only, with participants obtaining a certificate based upon attendance and completion of a few homework assignments. No formal evaluation, i.e., testing, was included. Updating training content and adding evaluation tools were determined by the committee to be essential steps for increasing overall competency among campus research administrators and OSR employees.

The committee recommends a **paradigm switch** in OSR's approach to training from one that views training as only a tool for increasing the knowledge level of department staff to one that uses training and certification as a strategic tool for developing and evaluating individual department research administrator competencies for performing important tasks otherwise reserved exclusively for OSR staff. As previously stated, the work associated with administering an ever growing sponsored

research portfolio will continue to increase, and OSR should consider multiple approaches to “get the job done.” One contribution to expanding available resources is to better utilize a previously untapped resource – senior department research administrators – by granting targeted authority, if and only if, their competency is verified through training, testing and ongoing observation.

As an initial step in implementing this new strategic initiative, OSR will – with input from SPO and various campus research administrators – develop and implement a new research administration certification program. The program will begin with Level 1, a comprehensive overview of UNC-CH research administration policies and procedures, followed by a series of Level 2 modules with in-depth training in specific areas.

Level 1 training classes will be offered in both classroom and on-line format. The curricula will focus on research administration fundamentals in five distinct modules:

- Introduction to Research Administration
- Rules/Regulations & UNC-CH’s Compliance Program
- Proposal Preparation and Submission
- Award Management
- Award Monitoring and Accountability

To receive credit for the Level 1 program, participants must complete and pass a competency test of the materials presented. While “grandfathering” will not be allowed, experienced research administrators can “test out” without attending the classes by passing an on-line exam. To maintain Level 1 certification, graduates must stay abreast of significant changes in research administration. The OSR Director may require mandatory attendance at classes dealing with new and updated policies, and the passing of associated tests, as he may deem necessary. Level 1 testing must be completed before any Level 2 classes are taken.

The contents of the more rigorous Level 2 training modules will focus on participants’ ability to interpret complex case studies and provide written justification for the administrative decisions they make. Participants will master universally accepted research administration standards and applicable UNC-CH policies for that particular module, and demonstrate their ability to consistently apply these standards. Final exams will be based on review and appropriate resolution of complex case studies. Certification will remain valid for two years, with a recertification test required to retain delegated authorities. In addition, OSR will conduct periodic audits of decisions made by certified department research administrators. Excessive error rates may be cause for limiting delegated authority or, in extreme cases, terminating certification. A partial listing of Level 2 modules and their concomitant benefits follow. The committee recommends these six modules as a modest start for this new program. As time passes and OSR gains more experience and confidence in this

approach for sharing work through targeted delegation, many new and expanded modules should be developed.

- Module 1 - Federal Government Forms (NIH, NSF, DoD)
Delegated Authority - Submission of eSNAPs.
- Module 2 - Contracts
Delegated Authority - Authority to pre-negotiate, subject to final approval by OSR, defined terms and conditions for industry and international sponsors and task orders under master agreements.
- Module 3 - Budget/Budget Justification
Delegated Authority - Submission of proposals to OSR/SPO will be shortened to a minimum of three (rather than five) days prior to sponsor deadline.
- Module 4 - Award Terms and Conditions
Delegated Authority - OSR will perform only a brief review of JIT and carryover requests. The certified research administrator can prepare simple contracts and amendments under FDP, subject to final approval by OSR.
- Module 5 - Award Transactions
Delegated Authority – Certified research administrators will be able to process budget revisions and IPAS actions directly into RAMSeS, to be received and processed directly by the data management group without being pre-audited. These actions will have a post review. This will allow a quick turnaround for payments (and journal entries).
- Module 6 - Reporting Sponsored Agencies
Delegated Authority - Certified research administrator accounts can be closed faster, which will eliminate receiving FB090, and funds will be received more promptly.

Recommendation 24: OSR will appoint a Training Advisory Committee consisting of experienced campus research administrators and others with expertise in research and/or training to provide ongoing feedback and advice concerning additions and modifications to the overall training and certification program.

Implications: Any new program, particularly one that involves the delegation of authorities to campus research administrators, will require thoughtful review and adjustment. Furthermore, as this new program was initially envisioned jointly by OSR staff and department research administrators, it is vitally important there be

balanced input from both groups as it is implemented. This committee will be broadly representative of the campus research community and will be charged with providing input on all aspects of the program to both the OSR Director and the OSR training staff.

TOPIC 5 - OSR staff competencies – Measuring the overall qualifications of any administrative staff is difficult and inevitably must rely upon multiple metrics, some objective and some subjective. Education and experience are two commonly used objective measures. The following chart displays the OSR staff by highest degree obtained.

- High School 34.6%
- Associates Degree 16.4%
- Bachelors 43.6%
- Masters/Doctorate 5.4%

The average number of years worked in OSR (or one of its predecessors, i.e., Office of Research Services or the Office of Contracts and Grants) is relatively low, which is largely attributable to the high turnover rate previously discussed. As the following chart shows, 20% have been in their jobs for less than a year, over 36% for less than two years, and more than two out of three have been in their jobs for less than 5 years.

- < 1 Year 20.0%
- < 2 Years 16.4%
- 2 - 5 Years 30.9%
- 5 - 10 Years 9.1%
- >10 Years 23.6%

Some key members of the management team have considerable experience at other universities, e.g., the Director has only four (4) years experience at UNC-CH, but he has nineteen total years experience in research administration. Furthermore, some other senior managers have additional experience working in research administration in the federal government or at the department level at UNC-CH.

The committee wanted to compare OSR staff with those from peer institutions on these education and experience measures. However, reliable comparable data were not available. Salary budgets (exclusive of fringe benefits which vary widely) for sponsored programs administrative offices and total FTEs were provided from peer institutions, so average salaries per sponsored program administrative staff could be calculated. While not perfect, the committee believes these data to indicate the extent to which a sponsored research administrative staff is weighted toward lower-level versus higher-level position classifications (and presumably lower education/experience levels compared with higher education/experience levels). The results are presented below:

School	FTE	Salary Budget in millions	Salary Budget/FTE
University of Illinois	57	3.04	\$53,333
University of Florida	45	3.035	\$67,444
University of Texas	49	2.8	\$57,143
University of California at Los Angeles	75	4.075	\$54,333
University of Michigan	95	5.923	\$62,347
University of Wisconsin	46	2.635	\$57,283
University of Washington	81	5.449	\$67,272
University of North Carolina at Chapel Hill	54	2.33	\$43,148
		Peer Average	\$59,879

UNC-CH is last on the list – \$16,731 below the average per FTE. Even when salaries were adjusted for variation in local cost-of-living indices, UNC-CH remained at the bottom. The committee believes these data support the observation that OSR is heavily weighted toward lower position classifications, with considerably fewer-than-average experienced senior research administrators. While education, experience and position classifications do not guarantee having the right people in the right jobs, the disincentive to applicants with superior qualifications from applying, due to low position classifications and salary levels, almost guarantees you will not! In support of this assumption, OSR management offered considerable evidence of frequently having to offer jobs to lower-qualified applicants due to salary limitations.

The committee recommends OSR adopt a dual strategy to upgrade its current workforce through a series of training and enrichment experiences for current employees, and the use of attrition as a tool to elevate the education and experience levels of new hires. The following specific recommendations are offered to assist in this process.

Recommendation 25: OSR will initiate a monthly “Faculty Science Seminar” series for OSR staff.

Implications: Research administrators at all levels of the university benefit when they have a better understanding of the projects they enable. Department staff, being in closer proximity to labs, faculty and research activities, have an advantage over central institutional staff in understanding the projects they support. This seminar series will introduce OSR staff to important sponsored research projects by inviting UNC-CH faculty well-known for both the quality of their science and their ability to effectively communicate ideas to non-technical audiences, to present a monthly

seminar on their research. These seminars will be held at the Administrative Office Building. All OSR staff will be invited, and OSR management will encourage attendance as an expected part of normal work duties. The result will be a growing awareness among OSR staff of the exciting research occurring at UNC-CH and the important role they play enabling this research.

Recommendation 26: Based upon their job duties and, as designated by the Director, OSR staff will be required to complete Level 1 certification and, where applicable, Level 2 training modules (*Work has already been initiated by OSR*).

Implications: The committee has recommended substantially greater emphasis on training as a methodology for increasing overall competency among both campus research administrators and OSR employees. As staff in both OSR and in the departments experience the same training and testing requirements, teamwork and mutual confidence will be encouraged and enriched. The same rules will apply as follows from Recommendation 23:

To receive credit for the Level 1 program, participants must complete and pass a competency test of the materials presented. While “grandfathering” will not be allowed, experienced research administrators can “test out” without attending the classes by passing an on-line exam. To maintain Level 1 status, graduates must stay abreast of significant changes in research administration. The Director of OSR may require mandatory attendance at classes dealing with new and updated policies and the passing of associated tests, as he may deem necessary. Level 1 testing must be completed before any Level 2 classes are taken.

All existing staff designated by the OSR Director to be subject to this requirement, will complete Level 1 certification by October 1, 2008. Once the on-line instruction and testing modules are available, all new hires will complete the Level 1 requirements within 90 days of their date of employment.

Recommendation 27: The OSR Director will use attrition in key staff positions to increase education/experience credentials.

Implications: As vacancies occur in key OSR positions, e.g., the proposal management director, award management director, financial reporting and cash management director, award managers and other key positions as designated by the OSR Director, education and experience requirements will be revised before the position is advertised. These new requirements will not apply to incumbents; only when vacancies occur will they be activated. The OSR Director will identify these

key positions and define the new education and experience requirements by the end of 2008. The education/experience recommendations for the new director of financial reporting and cash management and the new award manager presented in Topic 6 of this report will be used as guidelines. The committee acknowledges the likely need for additional funds and the potential for position equity issues with this approach.

TOPIC 6 - OSR staff capacity: As previously stated in this report, total sponsored program dollars at UNC-CH have doubled during the past ten years, while the number of staff positions in OSR has remained relatively constant. This fact alone suggests the likelihood OSR is currently understaffed. To gain a broader comparative perspective, the committee surveyed peer institutions to evaluate the appropriateness of current OSR staffing levels. Responses were obtained from eight (including UNC-CH) schools. Many staffing-related questions were asked; however, because many schools count and track sponsored research metrics differently, many comparisons were not possible. Therefore, the committee selected a single metric: total sponsored program expenditures compared with total staff committed to administering these expenditures. Both dollars and staff associated with administering clinical drug trials and activities such as F&A rate negotiations were excluded. In other words, the committee focused on those staff involved in the core administrative functions of proposal management, award management and financial reporting and cash management. The results of this comparison with peer universities presented below show average FTEs per \$100 million in sponsored program expenditures among our peer institutions of 10.58, 1.4 higher than in OSR. With \$600 million total expenditures, these data suggest UNC-CH is approximately 9 positions below average.

<u>School</u>	<u>FTE</u>	<u>Expenditures in \$ Millions</u>	<u>FTEs per \$100 Million in expenditures</u>
University of Illinois	57	3.98	14.32
University of Florida	45	4.5	10.00
University of Texas	49	4.76	10.29
University of California at Los Angeles	75	8.03	9.34
University of Michigan	95	8.05	11.80
University of Wisconsin	46	4.7	9.79
University of Washington	81	9.54	8.49
University of North Carolina at Chapel Hill	54	5.89	9.17
		Peer Average	10.58

The committee sought recommendations from OSR management for adding new staff positions, and fifteen positions were requested. After careful analysis of these requests, along with committee suggestions for potential positions not requested by OSR management, and detailed observation of ongoing problem areas within OSR, the committee offers the following targeted staffing recommendations divided into two phases. Phase One recommendations include positions considered critical to addressing current problems within OSR. The committee set as a ceiling for this phase the nine positions required to lift OSR to the average of our peers, and the positions are presented below in the order of priority for funding. Phase Two includes positions designed to prepare the university for the future. These include high level professionals with particular experience in areas such as operations, international contracts, for-profit sponsors, and high-level research administration problem-solving.

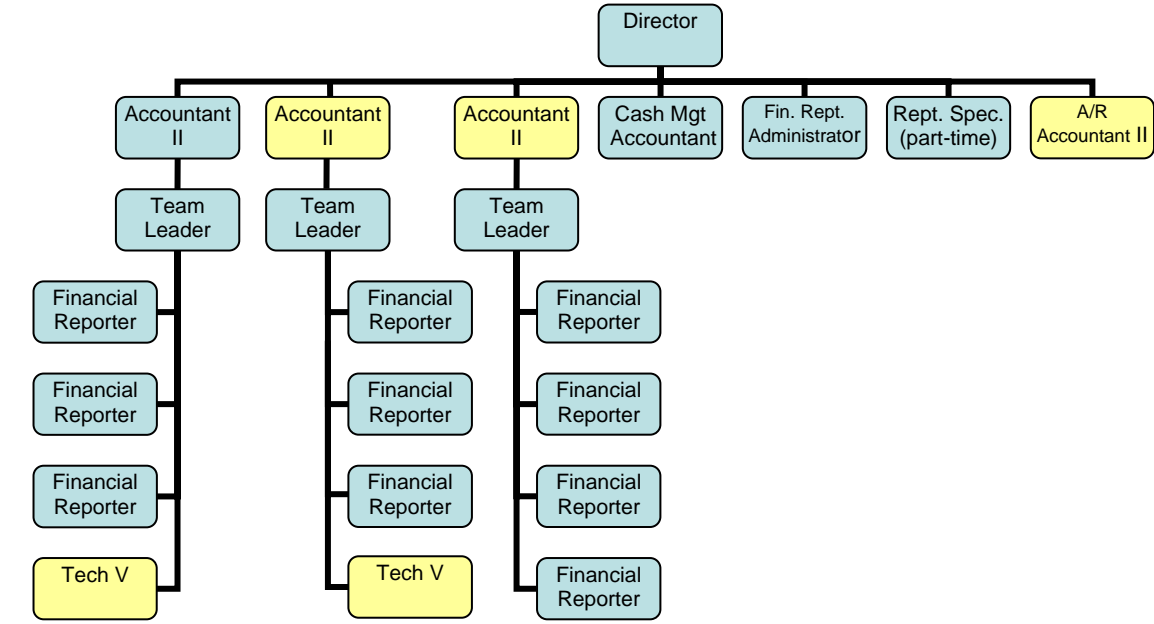
Recommendation 28: Secure funding for the following Phase 1 positions in OSR (presented in priority order). Copies of organization charts for both the award management section and the financial reporting and cash management section (with the new positions highlighted in yellow) follow the recommendations.

- **Senior Accountant to manage accounts receivable** – As stated in Recommendation 23, accounts receivable collections are a major problem at UNC-CH. With over \$2.6 million in accounts receivable over one year old and over \$140,000 written off as bad debt between July 2006 and January 2008, this accountant level position should pay for itself in a brief time period. Recruitment should be limited to candidates having considerable experience managing and collecting accounts receivable in a university, government or not-for-profit setting.
- **Two Accountant II positions in the financial reporting and cash management section** – This section is divided into three reporting teams with responsibility for preparation of sponsor mandated financial reports/invoices, including final reports and the NOTR process. Each team has a leader and either 3 or 4 reporters. Substantial backlogs in this area have placed the university in jeopardy with sponsors, increased audit exposure and delayed reimbursements. One Accountant II currently provides high level accounting assistance to all three teams; however, she is stretched far too thin. As many of the reporting problems require a high level of expertise to resolve, two additional Accountant II positions are recommended, thus providing an Accountant II for each team.
- **Award Manager and one Award Analyst** – Satisfaction with the quality of service currently provided to campus by the award management section is uneven. This is partially explained by the differing levels of experience among the award managers; however, the overall work load clearly suggests the need for a sixth unit (there are currently five) and the subsequent redistribution of work among the units. At present, one award

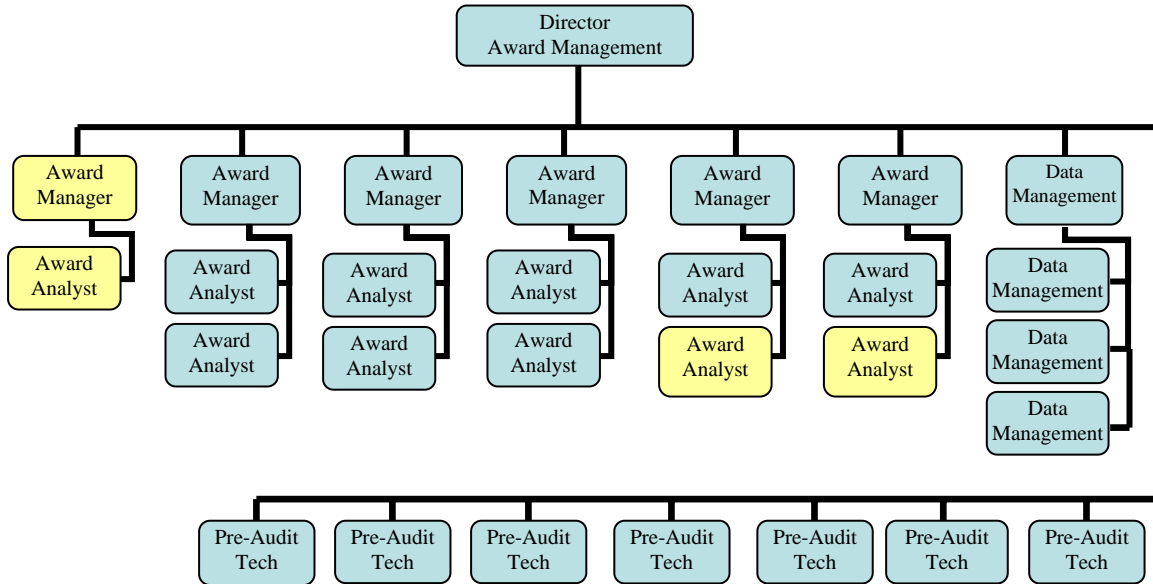
manager supports 98 campus departments and units. Another supports 69. These numbers are simply too high to provide the level of customer service demanded by campus and promised by the “customer-oriented reorganization” already implemented. The establishment of this new unit and the subsequent redistribution of work will dramatically improve customer satisfaction on campus. In addition, the committee recommends the award manager position be established with significantly higher education and experience requirements, e.g., a Masters degree and 2 years relevant experience, or a Bachelors degree and five years relevant experience.

- **Two Temporary Award Analyst positions be converted to permanent positions** – It is not wise to staff these important units within the award management section with temporary positions. Stability is essential.
- **Two Accounting Tech V positions for the financial reporting and cash management section** – These positions will assist with the backlog of delinquent reports and will be assigned to the two teams currently having only three reporters.

Financial Reporting and Cash Management Section



Award Management Section



Recommendation 29: Secure funding for the following Phase 2 positions (listed in priority order).

- Deputy Director as the Chief Operating Officer** – Many universities with large sponsored program offices are staffed with a Director who focuses on planning, policy and campus relations, and a Deputy Director who focuses on internal operational issues. The committee believes this model is both appropriate and desirable for UNC-CH to better enable OSR to prepare for and manage ongoing growth and complexity. This new position will be responsible for integrating and improving operations within the proposal, award and financial reporting/cash management sections, and for resolving operational issues with campus customers. The heads of these three sections will report to the Deputy Director.

When this position is established, the role of the Director will be focused less on operations and more on policy, training, compliance and campus relations. The Cost Analysis and Compliance Unit (responsible for the F&A rate study, the PARS process and Recharge Centers) will still report to the Director, as will the training staff.

There are many important challenges in each of these areas, and they currently compete with daily operational issues for attention. The Director

will be more able to focus on enhancing working relationships with the Office of Technology Development and the Office of University Counsel; negotiating effective delegation agreements with schools, centers and institutes; meeting regularly with faculty and campus research administration groups; guiding the continuing automation of OSR; addressing state and sponsor audit issues; and, perhaps most important of all, engaging in long term planning for successfully administering UNC-CH's growing sponsored research portfolio to prevent a return to the circumstances documented in the problem statement of this report.

At one point during the committee's deliberations, the Deputy Director position was the top Phase 1 recommendation for staff increases. However, upon the request of the Director, the committee agreed to move this position to the top priority for Phase 2 staff additions for the following reasons. First, it is an expensive position and, given a finite budget, it was decided to use available money to fund multiple positions in Phase 1 instead. Second, the reorganization, various ongoing automation projects, and many changes in policy and procedure have created an unsettled environment within OSR. The Director felt the need to let things settle down before a new person is brought into the mix. The committee believes the appropriate time to add this important position will be in SFY 2009-10.

- **Contract and Grant Specialist with expertise in industry-sponsored and non-traditional international research contracts** – As our campus research community strives to attain the \$1 billion funding target articulated by the Chancellor, many faculty will look beyond their traditional funding sources. Two potential sources which seem ready for expansion are industry-sponsored projects and international projects sponsored by non-traditional international funding agencies. Based upon 2005 NSF statistics, UNC-CH ranks 97th in industry-sponsored research (Duke is 1st and NCSU is 8th). So there is substantial room for growth. On the international front, UNC-CH has not held a contract with the World Bank or the World AIDS Foundation for the past decade. Many other agencies including the Pan American Health Organization and various European Union funding agencies are potential future sponsors. The common elements in negotiating research contracts with industry and international sponsors are the time, expertise and negotiating skill required. The committee recognizes the complexities involved in these specialized contract environments which will only become more challenging as volume increases. And to an extent, the volume cannot increase unless the university is properly staffed in this important area for potentially significant growth.

- **Additional Trainer** – The committee has recommended substantially greater emphasis on training as a methodology for increasing overall competency among both campus research administrators and OSR employees. In addition, the committee has recommended that training be used as a strategic tool for targeting the delegation of authority to research administrators who have proven their competency through training and testing. This important strategic initiative will be inhibited unless OSR has additional qualified training staff to develop and manage new Level 2 modules. Therefore, the committee recommends one additional trainer.
- **Additional Reporters (Accounting Tech Vs)** – Based upon the interaction of automation and the growing workload, additional reporters may be needed in the financial reporting and cash management sections.

Recommendation 30: The following personnel actions are recommended.

- **Upgrade and appoint one of the seven current pre-audit technicians as pre-audit team leader** – Currently all seven pre-audit technicians report directly to the director of the award management section. These seven, plus the five award managers, plus the data management supervisor for a total of thirteen direct reports, far exceeds any reasonable span of supervisory authority. In addition, a team leader in the pre-audit group will contribute to greater consistency in applying pre-audit rules. The director of the award management section will determine which position to select for this upgrade.
- **Convert the director of the financial reporting and cash management section from SPA to EPA** – The current director of this section has publicly announced her intent to retire in the fall of 2008. Before filling this position, it should be converted from SPA to EPA, with a minimum education requirement of either a CPA or a Master's degree in accounting, and at least 5 years relevant experience.
- **Upgrade and appoint one of the two receptionist positions as the award administrator in the award management section.** Awards (paper and electronic) arrive and must be matched with the PI's home department, and then with the proper award manager. The award administrator will perform this important function, follow up with PIs and departments concerning late progress reports, and manage the distribution of subcontracts for signature and then scan them into RAMSeS.
- **Upgrade the financial reporting administrator to assume responsibility for the submission of all electronic invoices to sponsors.**

The committee recommends a scheduled, formal review of both staffing requirements and performance (with particular emphasis on senior management) no less frequent than every two years. As sponsored research expenditures continue to grow, the

pressure of increased workload may require periodic adjustments in both OSR staffing levels and in the distribution of OSR staff among the three sections, e.g., automation may have a disproportionate impact on the sections, thus reducing the need for staff in some areas, allowing them to be reassigned to address growth in other areas. Lack of such planning in the past has contributed to the issues now being reviewed. A commitment to long-range planning is essential for the maintenance of an effective research infrastructure and the required flexibility to meet new challenges in the future!

Conclusion and a personal word from the Chair: During the past 14 months, the committee has met with few exceptions on a weekly basis with the goal of producing the analysis and recommendations contained in this report. There have been times when the perspective and perceived interests of OSR staff committee members and committee members from various campus units have been at odds. However, each committee member has managed to “see beyond their personal interests” and reach common ground on what is best for the university. While the decision was viewed by some as risky to include on the committee senior management from OSR and many serious critics of OSR from campus units when it was established in the fall of 2006, that decision has proven to be successful. The five recommendations that have been fully implemented and the nine that are in the process of being implemented simply would all still be the list of “action required”, if it had not been for the close cooperation of senior OSR management throughout the committee’s deliberations. Furthermore, the quality and depth of the recommendations have been enhanced dramatically by the inter-play of perspectives from “both sides”!

This final report probably is not exactly what any member would have written alone. But in the end, the committee was able to compromise and reach **unanimous agreement to support the recommendations contained herein.**

With the submission of this report, the committee’s work is completed; however, the Chair offers these closing comments. Never in my 37 year career have I had the privilege of working with a finer, more focused, more committed group of people than those serving on this committee. Each has a special love for this university and the important role sponsored research plays in contributing to UNC-CH’s world class status. And each believes that our world class faculty-led research enterprise deserves and requires a world class administrative support system.

I thank each member of the committee for their devotion to this important task and am confident I speak for each when I say our reward will be in the improved research administration support system that we **already see emerging** at UNC-CH!

Addendum – Recommendations by Status

Fully Implemented (5):

Recommendation 1: (*Implemented on April 23, 2007*) OSR will be reorganized into three sections (proposal management, award management, and financial reporting and cash management) as shown in the following organization chart, with each headed by an experienced director.

Recommendation 12: (*Implemented on April 23, 2007*) Streamline the proposal review process for School of Medicine (SOM) proposals by negotiating and implementing an expanded delegation of authority to the Sponsored Programs Office (SPO). This will eliminate the duplicate review of proposals coming from the SOM. Specifically, the SPO will review and approve all electronic IPFs administered by a SOM department for:

- NIH grants and cooperative agreements (excluding contracts and STTR/SBIR, which will be routed to OSR)
- Foundations (excluding Kate B. Reynolds, Z. Smith Reynolds, The Duke Endowment, Robert Wood Johnson, Kauffman Foundation and Andrew W. Mellon which will be routed to OSR)
- Non-profit organizations.

Non-medical school proposals which include SOM personnel will not be routed to SPO for authorization. They will go directly to OSR.

Recommendation 13: (*Implemented on February 20, 2008*) OSR will develop and implement policies eliminating the requirement for presenting detailed budgets for internal review and approval when submitting proposals for NIH modular grants.

Recommendation 14: (*Implemented in June 2007*) OSR will develop and implement policies allowing newly funded modular grants to be established under the ABR4 protocol, thus allowing immediate account establishment and maximum budget flexibility.

Recommendation 15: (*Implemented in June 2007*) OSR will discontinue the pre-audit of domestic travel charges, except in cases where there are sponsor-imposed travel restrictions.

In Process (9):

Recommendation 2: Modify RAMSeS to add a “Pending Award Module” to allow PIs and department staff to electronically track the status of awards.

Recommendation 3: Modify RAMSeS to add the first phase of an electronic “Subcontract Development Module” for out-going subcontracts to allow department staff to enter key information, e.g., scope of work and budgets. Further development of this important tool within RAMSeS will allow department staff to assist in the drafting of subcontract documents by selecting from pre-approved clauses and templates.

Recommendation 4: Modify RAMSeS to add an electronic Notification of Termination Report (NOTR) system.

Recommendation 7: Implement the first phase of an electronic sponsor invoicing system, with additional features being added in the future. This system will begin with periodic (monthly and quarterly) invoices/reports and will later add more complex final invoices/reports.

Recommendation 8: Implement a central electronic filing system to replace OSR’s current paper account files.

Recommendation 16: OSR will develop and implement policies allowing all new accounts that do not have a current budget on file to be established using the proposal budget. This approach will expedite account setup.

Recommendation 17: OSR will develop and promulgate a comprehensive policy/procedures manual for sponsored research to replace the currently outdated sections of the university business manual and appoint a Policy Advisory Committee with broad representation from the campus research community (including both faculty and staff) to advise the Director on policy development matters.

Recommendation 23: OSR will develop and implement a comprehensive, multi-level department research administrator certification program to include rigorous training, written tests and mentoring systems that grant to participants, upon successful completion of the training, delegated authority to perform tasks previously assigned solely to OSR.

Recommendation 26: Based upon their job duties and, as designated by the Director, OSR staff will be required to complete Level 1 certification and, where applicable, Level 2 training modules.

Action Required (16):

Recommendation 5: Modify RAMSeS to add an electronic capability for departments to submit requests for approval of no cost extensions for NIH grants and receive notice of approval.

Recommendation 6: Modify RAMSeS to provide salary access to designated department research administrators.

Recommendation 9: Implement an electronic personnel activity reporting system (PARS).

Recommendation 10: Implement an electronic system designed to interface between RAMSeS and Grants.gov.

Recommendation 11: Secure funding for an additional staff programmer within the Office of Research Information Systems assigned on a full-time basis to support the automation recommendations contained in this report and future automation projects in OSR.

Recommendation 18: OSR will streamline the contracting process (including incoming and out-going subcontracts) by pre-negotiating standard terms and conditions for frequent research contract partners and obtaining clarification of OSR authority to negotiate and accept non-standard terms and conditions.

Recommendation 19A: PARS forms for SPA staff, graduate students, post-docs and temporary employees may at the Principal Investigator's discretion be signed and certified by the Principal Investigator or supervisor.

Recommendation 19B: The current requirement to review, certify and return PARS forms within ten (10) days will be changed to thirty (30) days.

Recommendation 20: OSR will develop and implement a comprehensive plan to adequately manage and collect outstanding accounts receivable from research sponsors. This plan will include:

- Monthly provision of aged accounts receivable reports to the OSR Director
- Assignment of a full-time staff person with appropriate education and experience to manage the accounts receivable function (a separate recommendation will be made under Topic 6)
- Develop and implement, in cooperation with other university business and finance offices, an interim plan for maximizing the collection of all outstanding unpaid invoices

- Develop written policies to be included in the policy manual (mentioned in Recommendation 17) detailing procedures for charging the home departments of PIs who have not properly submitted progress/final reports, thus causing invoices to go unpaid

Recommendation 21: The Vice Chancellor for Research and Economic Development will accept an addendum to this report with recommendations for modification in policy and procedures used to review and approve Recharge Centers.

Recommendation 22: Following the model already implemented between OSR and the School of Medicine, OSR will seek opportunities for additional delegation of responsibility and authority to other schools, centers and institutes willing to assume responsibility and willing to assign qualified staff for the review, approval and submission of proposals from their school units.

Recommendation 24: OSR will appoint a Training Advisory Committee consisting of experienced campus research administrators and others with expertise in research and/or training to provide ongoing feedback and advice concerning additions and modifications to the overall training and certification program.

Recommendation 25: OSR will initiate a monthly “Faculty Science Seminar” series for OSR staff.

Recommendation 27: The OSR Director will use attrition in key staff positions to increase education/experience credentials.

Recommendation 28: Secure funding for the following Phase 1 positions in OSR (presented in priority order). Copies of organization charts for both the award management section and the financial reporting and cash management section (with the new positions highlighted in yellow) follow the recommendations.

- Senior Accountant to manage accounts receivable
- Two Accountant II positions in the financial reporting and cash management section
- Award Manager and one Award Analyst
- Two Temporary Award Analyst positions be converted to permanent positions
- Two Accounting Tech V for the financial reporting and cash management

Recommendation 29: Secure funding for the following Phase 2 positions (listed in priority order).

- Deputy Director operating as the Chief Operating Officer
- Contract and Grant Specialist with expertise in industry-sponsored and non-traditional international research contracts
- Additional Trainer
- Additional Reporters (Accounting Tech Vs)

Recommendation 30: The following personnel actions are recommended.

- Upgrade and appoint one of the seven current pre-audit technicians as pre-audit team leader.
- Convert the director of the financial reporting and cash management section from SPA to EPA.
- Upgrade and appoint one of the two receptionist positions as the award administrator in the award management section. Awards (paper and electronic) arrive and must be matched with the PI's home department and then with the proper award manager. The award administrator will perform this important function, follow up with PIs and departments concerning late progress reports, and manage the distribution of subcontracts for signature and scan them into RAMSeS.
- Upgrade the financial reporting administrator to assume responsibility for the submission of all electronic invoices to sponsors.