

UNIVERSITY OF MICHIGAN

REGENTS COMMUNICATION

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Item for Information

Subject: Report of University Internal Audits
October through November 2009

Background:

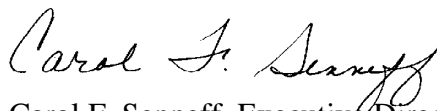
This is the report of the Office of University Audits activities for the period **October through November 2009**. The summaries of audits contained in this report were previously reported to members of the Regents' Finance, Audit and Investment Committee and included in discussions at Committee meetings.

Included in this report:

- Summaries of each audit report issued during the period, including Management's Plan to enhance specific control processes discussed with the audit client and presented in the report.
- Summaries of follow-up review reports issued during the period, including the actions taken by Management. Follow-up reviews are designed to give assurance that Management's Plan for corrective action has been implemented and controls are working appropriately.
- A report on the status of follow-up reviews as of **November 30, 2009**.

If you have any questions or would like additional information, please contact me at 647-7500 or by e-mail at csenneff@umich.edu.

Respectfully submitted,



Carol F. Senneff, Executive Director
University Audits

ORIGINAL REPORTS

Campus Audits

[U-M Dearborn Grade Changes](#)

#2009-109

Report Issued November 5, 2009

UM-Dearborn Office of Registration and Records (ORR) processed approximately 2,250 grade changes for the 2009 academic year. The UM-Dearborn graduate and undergraduate catalogs indicate reasons for grade changes. Examples include:

- Fulfillment of an incomplete grade contract to finish work after term end
- Student-requested review of a grade within a four-month period after term end
- Completion of a missed final exam within a five-week period due to extenuating circumstances and with documented instructor approval
- Instructor identification and correction to miscalculated grade
- Replacement of a “Y” original grade which indicates special course requirements that extend beyond a term such as capstone projects.

Supplemental Grade Change (SGC) paper forms, each with three carbonless copies, are used to make authorized requests to the ORR. The blank forms are maintained and distributed from the ORR, where staff record distribution of the sequentially numbered forms on a log. The forms are logged, processed, and signed by administrative staff in the individual academic units. Units return completed forms to the ORR either through campus mail or hand-delivery. The grade changes are recorded in the system by ORR staff directly through Banner System Term Course Maintenance screens. The original grade and all grade changes remain part of the student’s academic history. The original copy of the completed form is scanned into the student’s file in the online image repository, the second copy is sent to the student, and the third and fourth copies are returned to the administrative staff that submitted them to the Registrar’s Office. It is the unit’s responsibility to provide a copy to the faculty member or instructor that originated the change. Faculty, instructors, and students can access and view final grades for their courses online.

The audit objectives were to:

- Evaluate controls for ensuring that grade changes are authorized and confirmed by the accountable faculty and instructors.
- Assess Banner and Oracle access procedures that restrict grade changes to only authorized individuals.
- Determine if system logging and reporting are sufficient to monitor that only authorized grade changes have been made.
- Review system and manual controls that support accurate grade changes.

SUMMARY

Standard forms are used to collect all information and authorizations required for a grade change request. The forms are logged and distribution is tracked to individuals in the ORR and in the four schools and colleges. During the audit, ORR management improved confirmation of grade changes to faculty, and reviewed and modified access to system grade change forms. Seventy-six percent of the faculty and instructors asked to verify the authorization and accuracy of a sample of their grade changes responded.

All responses were positive confirmations. ORR and unit administrative management and staff were engaged and collaborative during the audit and are invested in maintaining well-managed processes.

Discussion of control improvement opportunities, including recommendations and Records and Registration Office management action plans follow.

Control Issues:

1. Faculty Grade Change Notification - Administrative units obtain Student Grade Report (SGR) forms for grade change authorizations by instructors, process them after they have been authorized, and forward them to the ORR to be recorded in the Banner system. After the grades are recorded, the ORR returns two carbonless copies of the SGRs to the academic unit's administrative office: the unit's copy and the instructor's copy. This practice does not ensure notice to faculty of grade changes that is independent of the individuals in the administrative unit who could also initiate an SGR. It is unlikely that instructors would check for individual grade changes throughout the term that they did not initiate.

Management Plan - Effective immediately, the instructor's copy of the processed SGR will be mailed directly to the instructor in an envelope marked confidential. This change is seen as an improvement to the current process and has been accepted as part of the Grade Change Guideline currently under development. It is possible to implement this change immediately since it is not a change in policy, but simply a codification for clarity on standard practices and procedures. It should also be noted that future research will focus on automated system reports of grade changes.

2. Access to Supplemental Grade Reports and the Grade Change System - The Supplemental Grade Reports used to authorize grade changes are stored in an unlocked file cabinet in the ORR. Approximately twenty people who work in the office can access the SGRs. Included in this number are nine individuals who also have access to the Banner System Term Course Maintenance screens for making grade changes in the system. Providing access to both the authorization forms and the system grade change application increases the risk that unauthorized grade changes could be made.

Management Plan - Effective immediately, SGR forms and the distribution logs will be stored in a locking file cabinet. We will also explore moving the locked cabinet inside the locked office storage room, which will provide additional security.

Every effort will be made to address the concern regarding separation of responsibilities. The small size of the office staff and the multiple assignments of duties and responsibilities to individuals will make this challenging. A group of staff will be assembled to draft a recommendation for addressing this issue with instructions to submit the recommendation no later than December 18, 2009. Any approved plan would then become effective no later than January 31, 2010.

3. Management Review of System Access Reports - A report listing access to the Banner system grade change forms was obtained from UM-Dearborn Information Technology Services (ITS) and provided to the interim Registrar for review. The Registrar indicated that four individuals listed on the report should not have access to the Banner grade change forms. The practice for removing individuals' access is to send an e-mail notice to the ITS Database Administrator. There is no return confirmation of the change to the Registrar's Office.

The access report also indicates three individuals in the Registration Office have access to the Oracle tables that contain the grade changes data. This access allows insert, update, and delete transactions against grades records that could remove and change existing grades and historical grade data. Logs of activity for this access are not reviewed at routine intervals by ORR management.

Management Plan - Registration and Records management will work with ITS to design and implement a system for confirmation of employee access termination when notification of employee terminations or transfers are sent to ITS. With agreement from ITS, it should be possible to implement this change effective winter 2010 since it is not a change in policy, but simply a codification for clarity on standard practices and procedures. In addition, Registration and Records management will review, on a quarterly basis at minimum, logs of activity against the grade tables.

Due to staffing limitations and the University's decision to move more ITS functions to the department/unit level, removing the three employees' access to Oracle tables is not feasible at this time. Registration and Records management and the ITS database manager will work together to identify specific tables required to perform their duties and eliminate access to all other tables.

4. Registration and Records Policy and Procedures - The Office of Registration and Records has not developed and ensured performance of written policies and procedures for their grade change processes.

Management Plan - A complete Operating Principles Guideline for handling grade changes that is written and distributed widely among academic units does not exist. Therefore, we see this recommendation as an improvement to the process and will establish a date to have guidelines available. Since the guidelines will be a codification of already approved policies and procedures, no further approval is required beyond Registration and Records management.

5. Baseline Controls in Units - Interviews with the four schools and colleges at UM-Dearborn indicate a variance in grade change process control practices.
 - Some of the units secure SGR forms within locking drawers or cabinets in restricted access offices while others permit access by all administrative staff in the office.
 - Three schools and colleges restrict distribution of SGR forms to their own faculty and instructors and the fourth unit provides them to individuals from other units.
 - Three of the four schools and colleges require identification from student assistants or instructors they do not know, a fourth did not.
 - Written procedures for grade change processing are not documented in all administrative units.

The risk of unauthorized or erroneous grade changes may be reduced when consistently addressed with a common, baseline set of control practices.

Management Plan - The recommendation as presented is seen as an improvement to the current grade change processes. The lack of a written and distributed Operating Principles Guide for Processing Grade Changes likely contributes to the differences identified among the academic units. As recommended, to strengthen the grade change process controls throughout the academic units, Registration and Records management in conjunction with academic unit advisors (all members of the Registration, Advising, Records, and Admissions Committee) will

develop and disseminate information for consistency in grade change processing. The Registration, Advising, Records, and Admissions Committee as recommended, will serve as a collaborative forum for this effort and will work to bring together all of the best practices from each academic unit to develop a consistent set of grade change process control practices.

A follow-up review will be conducted in the fourth quarter of fiscal year 2010.

University Housing Fiscal Responsibilities

#2009-814

Report Issued November 9, 2009

The University of Michigan-Ann Arbor University Housing (Housing) system is the sixth largest in the United States. Each year, over 9,000 students take residence in one of 5,524 rooms in sixteen residence halls across campus.

Housing, a unit within the Division of Student Affairs (Student Affairs), is responsible for the welfare and care of these buildings, as well as the students that live within their walls. Housing is comprised of numerous departments with responsibilities ranging from residence education to facilities maintenance. To further Housing's mission to "create and sustain diverse learning-centered residential communities that further the goals of the University," numerous programs are offered to students with the aim of enriching and broadening their academic experience. For example, undergraduates benefit from four-year living-learning communities like the Residential College, while graduate students with families have access to programs like the Child Development Center. In fiscal year 2009, the cost of providing and maintaining so many diverse services and resources was \$105M.

Housing leadership has recently changed with the retirement of a number of long-term, lead administrators. Student Affairs management requested a transition audit of Housing with the goal of providing direction for new leadership.

Due to the substantial number of complex operational processes within Housing and the recent transition in administrative leadership, University Audit's initial review focused on central administrative fiscal responsibilities to determine if the policies, procedures, and internal control structure established are adequate to support the mission of Student Affairs and Housing, and comply with University guidelines. To that end, the review focused on internal controls in the Business and Finance, Human Resources, and Facilities departments. Some limited testing of transactions within other departments such as Dining Services, Residential Education, and Information Technology were included to assess departmental compliance with central Housing policy and procedure. However, in-depth reviews of the control environments in Dining Services, Managed Operations, Conference Services, Residential Education, and the Northwood Community Apartments were out of scope for this review, but will be considered for future audits. The Housing Information Technology Office was recently the focus of a separate information technology audit.

University Audit's review focused on:

- Documentation of departmental policies and procedures
- Payroll and special compensation
- Purchasing
- Cash handling and imprest funds
- Financial reporting and monitoring
- Disbursement and authorization of discretionary funds
- Gift stewardship
- Delegated authority

- Conflict of interest policy and procedure
- Student and temporary employee management

Audit observations were regularly communicated to management throughout the course of the audit. Housing leadership was responsive and took immediate action to begin to address many of these issues before the audit was concluded. Actions taken and plans developed by Housing leadership can be found in the Management's Response section of this report.

As Housing has grown to become one of the largest University housing systems in the United States, its business operations have necessarily expanded. For a variety of reasons, these operations have become decentralized, both functionally and geographically. The need for increasingly sophisticated management oversight and standardization of policies and procedures has grown in parallel with this decentralization. Control weaknesses observed during the audit indicate that increased and improved management oversight is needed to strengthen the Housing control environment.

Opportunities to strengthen the internal control environment were shared in detail with Student Affairs and Housing management. The following recommendations address the most critical control weaknesses identified. Implementation of all recommendations should encompass all Housing operations, not just the departments reviewed.

Control Issues:

- Centralized Business Processes - Various Housing central business offices such as Payroll, Billing, and Purchasing, along with some smaller departmental business offices with the same responsibilities, are located in several different buildings on central and north campuses. Management should consider centralizing Housing's business operations and relocating personnel in outlying offices to a central area to improve communication. If a centralized business office model is not feasible, establish key administrative groups including representatives from each department to convene regularly to discuss best practices.
- Purchasing Management - The control environment around Housing purchasing activity could be immediately strengthened by:
 - Reviewing overall purchasing roles and responsibilities throughout Housing and limiting purchasing authority where appropriate
 - Requiring reconciliation to source documentation
 - Training staff on proper account reconciliation procedures
 - Verifying adequate segregation of duties
 - Increasing use of controlled spend vendors
 - Working with Procurement Services to routinely analyze spend and set-up contracts as appropriate
 - Continuing to limit and track use of gift cards
 - Organizing in-house training on procurement best practices
 - Coordinating with Plant procurement to leverage potential economies of scale and operational efficiencies
 - Conducting an inventory of all warehouses, maintenance shops, and work vehicles
 - Investing in an inventory control system or expanding use of Construction Services work order system, FMAX, to include the inventory maintenance module
 - Assigning centralized responsibility for oversight and management of the entire Housing business vehicle fleet within the unit

- Developing and analyzing vehicle use logs that detail purpose for use, length of time reserved, mileage, and related gas purchases to determine how many vehicles are needed and where
- Standardized Policy and Procedure Repository - The Division of Student Affairs has formed a policy workgroup and charged the workgroup with developing standardized policies and procedures for all units within the Division. Housing is represented in this workgroup; however, an end product is not expected for some time. In the interim, Housing is encouraged to utilize the policy and procedure templates available through the Office of Internal Controls. Many of the recommendations outlined in this report should be included in a central repository of policies and procedures. At minimum, include guidance on best practices related to:
 - Account reconciliation
 - Segregation of duties
 - Documentation of clear business purpose
- Comprehensive Financial Reporting and Analysis - In absence of guidance from the Housing Budget and Finance Office, at least two department administrators have developed their own financial shadow systems to track encumbrances and expenditures. University Audits observed significant duplication of effort and potential for error related to shadow systems during the review. In addition, various reporting formats that have developed from the different ways departments have used M-Pathways and shadow systems have prevented roll-up of transactional information into high-level oversight and analytical reports. As a result, management is not receiving adequate information to sufficiently support budget discussions and business decisions.

As an interim solution, University Audits recommends that the Housing central business office regularly provide senior Housing management with M-Pathways financial reports including, but not limited to:

- Trend of FTEs for Funding Department Group
- Vendor Utilization for Department or Department Group
- Pay Overtime Analysis for Department Group and Fiscal Year
- Pay Temporary Analysis for Funding Department or Department Group
- Total Staff Earnings by Department Group
- Total Faculty Earnings by Department Group, if appropriate

In the long term, require all departments to use a standardized reporting structure and format so that valid comparisons and projections can be made across the unit. Housing could eliminate the use of financial shadow systems by leveraging the capability of M-Pathways to accommodate complex chartfield combinations and encumber expenditures. Advanced M-Pathways and Business Objects training may be needed to facilitate this level of reporting and analysis.

- Discretionary Funds - Although Housing does not have many discretionary funds, it is important that the intended use of Housing's Student Operations Reserve Fund, along with any other discretionary fund, be clarified and documented. Require prior authorization for use of these funds by senior Housing management.
- Payroll and Time Reporting - Review overtime limits and remind department supervisors of their responsibility for monitoring employees' actual time worked. Training may be needed to help supervisors develop strategies to better manage this responsibility. Examples of recommended procedures and controls include:
 - Requiring prior authorization of overtime where possible

- Using the Kronos scheduling feature to track weekly workloads
- Increasing unannounced site visits
- Working a flexible schedule to more easily monitor all shifts
- Requiring employees to complete daily work logs

In addition, the Housing Director of Human Resources is encouraged to periodically assess workloads for part-time staff to ensure employees are not being asked to work full-time hours without the associated benefits. The reporting expertise of the Payroll staff could also be leveraged to assist Human Resources in better monitoring temporary appointments for compliance with University policy.

- Management of Cash Operations - Opportunities to strengthen cash handling internal controls include:
 - Requiring deposit training and certification for any employee with responsibility for reconciling cash deposits
 - Depositing cash operation revenues daily
 - Training staff on reconciliation and documentation best practices
 - Restrictively endorsing checks immediately upon receipt
 - Regularly reviewing imprest fund custodian roles and responsibilities
 - Conducting unannounced cash counts annually, at minimum.
 - Ensuring proper segregation of duties.
 - Limiting access to imprest funds
 - Clarifying job duties and responsibilities for staff supervisors to ensure student employees receive adequate oversight and support

- Comprehensive Internal Control Gap Analysis - It is important that all of Housing's financial processes are reviewed to determine if sufficient internal controls exist to mitigate the associated risks. Management is encouraged to partner with the Office of Internal Controls (OIC) to better utilize the internal control gap analyses tools developed as part of the Annual Certification process. Some of the gaps noted in the audit may have been self-identified had the implementation of the OIC employment and P-Card internal controls gap analyses been implemented in a more formalized, comprehensive manner with included input from departments. At a minimum, revisit or complete the internal control gap analyses for the following processes:
 - Employment
 - P-Card
 - Journal Entry
 - Cash Handling

Based on the results of the gap analyses, the OIC can assist management in creating plans to address any gaps, including the development of in-house training and education programs. Continue to use new internal control gap analyses tools as they are developed and rolled out to the University community to identify control gaps and further strengthen Housing's internal control environment.

- Travel and Hosting Management - Revise and finalize Housing travel and hosting policies to ensure they are comprehensive in nature and specifically address proper documentation requirements. As an additional preventative control, consider requiring employees to certify that they have read and understand the policy before being allowed to travel or manage special events. New Housing leadership has the opportunity to set the correct "tone at the top" by consistently enforcing policy limits and requirements.

- Fundraising and Gift Management - Although Housing does not have many endowed funds, distributions could be spent more efficiently if funding plans were developed to ensure efficient use of existing expendable balances and future distributions. Distribution use and monitoring can be simplified by pooling distributions with similar restrictions. Assistance in restructuring donor agreements is available through the Office of University Development, if necessary.
- Business Continuity and Disaster Recovery Plans - Housing has already self-identified many crucial business processes, and developed disaster preparedness and continuity plans to address these items. Work with Occupational Safety and Environmental Health to ensure plans are comprehensive, up-to-date, tested, and reviewed regularly. It is important to identify not only those processes that are critical to doing business, but also the non-critical processes that could be suspended, if necessary. Additionally, it is crucial that both business continuity and disaster recovery plans are periodically tested to ensure viability.
- Conflict of Interest/Commitment (COI/COC) - Housing is compliant with Student Affairs policy on COI/COC. Controls could be strengthened by distributing the policy to all employees and developing management plans for all conflicts disclosed. It is a best practice to require staff to review the policy annually, and provide the policy to all new hires as a part of employee orientation efforts.

Management Plan - Housing management concurs with the audit findings and has worked with University Audits throughout the audit to identify, plan, and in many cases, initiate corrective actions in all key areas of concern. The Director of University Housing and the Housing Leadership Team will be responsible for implementation of all action plans. The status of all corrective action plans is noted below along with a target date for completion.

- Centralized Business Processes - Plans have been developed to centralize business operations and relocate business personnel to one area. We are working with HRD to identify ways to help staff transition smoothly to new roles and/or locations and implement the plan effectively.
- Purchasing Management - Housing will be implementing a complete restructuring of our purchasing infrastructure including the establishment of a central warehouse and the elimination of individual supply rooms in residence and dining halls to the extent possible. We will work closely with Central Procurement Services to analyze spend and identify opportunities for improvement and assure best practices are being used to the fullest extent. In-house training is being developed to educate staff on procurement issues and we have eliminated the use of gift cards. Housing Facilities staff members have already initiated discussion with the Office of Construction Services about expanding our current use of FMAX to include the inventory control module. Regardless of what system is ultimately selected, we plan to implement an inventory maintenance and control system this fiscal year. We will work to strengthen relationships with Plant Procurement staff and identify ways to take advantage of economies of scale. We have already reduced the number of P-Cards by 40%, which reduces the manual processing, reconciliation, number of transactions, and risk. Responsibility for oversight of our fleet of business and service vehicles has been assigned to the Director of Housing Business and Finance. We will work with Procurement Services and Transportation Services to identify opportunities to increase efficiencies and lower costs in this area.
- Standardized Policy and Procedure Repository - As we complete our gap analyses, we will use the policy and procedure templates on the Office of Internal Control website to develop interim guidelines for use until the Student Affairs policy work group (Financial Management Team)

concludes its efforts. We are in the process of developing training for account reconciliation and it will emphasize proper segregation of duties and adequate documentation of business purpose.

- Comprehensive Financial Reporting and Analysis - The Director of Housing Business and Finance is working with Housing leadership to restructure our core reporting structure and develop oversight reports in the areas of budget, purchasing, employment, and fundraising. We will utilize the Project Grants functionality within M-Pathways to encumber expenses and provide meaningful reports that will create greater transparency for Housing Leadership. In addition, an overall review of the reporting is underway and any and all “shadow systems” will be eliminated, to the extent they can be, and replaced by M-Pathways.
- Discretionary Funds - Housing’s Reserve Funds will be dedicated to large-scale renovation and renewal projects and priority deferred maintenance needs. Housing Business and Finance has worked closely with Housing Facilities to develop a project request process that includes review and approval by Housing leadership prior to the project being started. This will give transparency and insight into the nature and scope of the projects, as well as a mechanism to prioritize these projects and assure that discretionary funds are used for the greatest need.
- Payroll and Time Reporting - An analysis of part-time workloads is already in process to ensure that part-time employees are not being asked to work more hours than appropriate for their classification. Interim overtime limits introduced during the third quarter of fiscal year 2009 have reduced annual overtime costs 24% compared to the historical average. Policies and procedures related to overtime and time reporting are under review. Revised guidelines will be distributed to staff and will emphasize pre-authorization of overtime and verification of actual time worked. The Payroll Office will be assigned to the Director of Housing Human Resources, which will assist her in better monitoring temporary employment appointments for compliance with University guidelines.
- Management of Cash Operations - The Housing Billing Office is developing training and documentation on proper cash handling and imprest fund management based on University guidelines and Housing departmental best practices. Proper segregation of duties, daily deposits, prompt endorsement of checks, and limited access to imprest funds will be emphasized. We will conduct unannounced cash counts on at least an annual basis. Job duties and responsibilities for managers of student employees will be revisited and revised as necessary to make sure students receive adequate supervision.
- Comprehensive Internal Control Gap Analysis - We are working with the Office of Internal Controls to implement comprehensive internal control gap analyses as part of our Annual Financial Certification. We plan to roll-out the gap analysis to departmental employees with responsibilities for controls to improve the accuracy of our gap analyses. Plans for gaps will be promptly developed and implemented.
- Travel and Hosting Management - Travel and hosting guidelines are being revised based on recent changes in University policy. Pre-authorization by senior Housing management will be required for all travel and hosting until the policy has been implemented. All staff will be required to review travel policy prior to making any travel arrangements. Employees with responsibility for authorizing travel and hosting will receive in-house training to ensure compliance with Housing and University guidelines.

- Fundraising and Gift Management - Housing is working with the new Student Affairs Development Officer to identify fundraising opportunities and develop strategies. The Housing Business and Finance Director is in the process of developing funding plans for Housing endowment distributions to ensure the proper and efficient use of existing balances and future distributions.
- Business Continuity and Disaster Recovery Plans - We will work with Occupational Safety and Environmental Health to identify critical and non-critical processes, and review current business continuity and disaster recovery plans to ensure that all critical processes are addressed. Once the review is complete, we will test both plans to ensure that they are adequate, well documented, and consistent with progress made elsewhere institutionally. We will continue to review and test both plans on an annual basis, at minimum.
- Conflict of Interest/Commitment (COI/COC) - The Student Affairs COI/COC policy is currently being rolled-out to all staff as part of our annual performance evaluation process. Management plans will be promptly developed for all disclosures made by staff. Review of the COI/COC policy will also be added to new employee orientation procedures.

Summary - New Housing leadership has demonstrated its understanding of and commitment to building a robust internal control environment by initiating many of the action plans describe above prior to the conclusion of the audit. Significant challenges related to policy and procedural concerns, as well as organizational opportunities, will require divisional and University support. To that end, University Audits encourages Housing management to further develop and utilize relationships with University Business and Finance offices.

[Center for Human Growth and Development Key Processes](#)
Report Issued November 17, 2009

#2009-206

The Vice President for Research requested a transitional audit of the Center for Human Growth and Development (CHGD) after the Assistant Director retired in January 2008 with over twenty years at CHGD. A new Director was hired in January 2009. CHGD was established by the Regents of the University of Michigan in 1964. Reporting to the Vice President for Research, the Center currently has twenty-eight faculty members, who also hold tenure appointments in one of the University's schools or colleges, five faculty associates who hold research appointments at CHGD, and two adjunct faculty members. CHGD is also in the process of hiring four new faculty effective December 2009.

The objectives of the Center are to:

- coordinate, integrate, and conduct research on normal and abnormal human growth and development, including its biological, intellectual, behavioral, and social aspects;
- identify and address unsolved research problems with a multi-disciplinary approach;
- provide new types of training programs for developmental scientists, and
- provide for constant communication of ideas among scientists within the Center and the University, and to create a means by which knowledge gained from the research activities of the Center can be disseminated rapidly for the good of the public.

CHGD also coordinates the Minority Health and Health Disparities International Research Training (MHIRT) Program, funded in 1994 by the Fogarty International Center and the National Institute of Health, with funding recently renewed for an additional five years. CHGD's MHIRT program is a collaborative effort between researchers at the University of Michigan and several distinguished foreign research institutes to provide intensive, active research experience in child health and development in developing countries. A total of 302 trainees have participated during the fifteen years of this program:

221 undergraduates, 26 medical students, 55 graduate students, and nine faculty members. Trainees have come from the Schools of Medicine, Nursing, Public Health, and Social Work and from several departments within the College of Literature, Science and the Arts. Students conduct onsite research for about twelve weeks at foreign sites in Chile, China, Ghana, Jamaica, and South Africa.

The objectives of this audit were to review CHGD internal control procedures and business practices, and to provide suggestions to improve processes in place to monitor the following:

- Federal grants management
 - Appropriate approval for research involving human and animal subjects
 - Expenditures appropriate and consistent with U-M and grant requirements
 - Effective management procedures for indirect costs, including allocation of the cost recovery pool
 - Adequate management of research subject fees according to University policy
 - Appropriate management of subrecipient contracts
- Financial transactions and reporting
- Effort reporting
- International travel
- Conflict of interest/commitment
- Business continuity and disaster recovery planning
- Payroll processing

Opportunities to improve procedures and strengthen internal controls are detailed below.

Control Issues:

- Security/Maintenance of Sensitive Data - Responsibility for managing and securing sensitive data is decentralized at CHGD. There are no documented guidelines for appropriately handling sensitive data. CHGD has approximately 35 researchers that establish their own processes for management and use of sensitive data. The human subject module within PEERS includes a section on privacy and confidentiality. Principle investigators (PIs) at CHGD have all completed this training.

University Audits reviewed the processes for two researchers. One researcher had good procedures for protecting sensitive information and the other did not. Subject Fee Payment forms for the PI's research subjects, which include social security numbers, are copied three times and maintained in unlocked cabinets. For the same PI, demographic information about research participants that may be considered sensitive is maintained electronically on a desktop computer, which does not require a user name and password for log-in. While this information was not linked to research data, it is still sensitive in nature and should be appropriately secured.

Management Plan - We have officially moved all subject fee payments to the new Human Subject Incentives Program (HSIP) system; this eliminates the need to keep forms at CHGD. We will inform research faculty and staff to appropriately discard these forms once they have been scanned and sent to HSIP. We will locate and appropriately discard all copies of Subject Fee Payment forms from the previous process that were not secured properly; the originals are now secured.

The Institutional Review Board approval process and PEERS training certification that PIs and their research staff are required to have include information about securing sensitive data. A major staff reorganization, which will reduce the number of staff dealing with sensitive research data, is in process. Administrative staff that may handle sensitive data will be required to obtain

PEERRS certification. This requirement will be added to the new employee checklist for research staff and affected administrative staff. Social security numbers will be eliminated from records wherever possible. We will establish and document guidelines for storing information on computers, which will include best practices for securing and restricting access to sensitive data and the requirement to obtain PEERRS certification. We have a network clean-up day scheduled in January 2010. This time will be used to review all documents currently stored on the network and desktops, delete any old documents that may still contain social security numbers, and discuss how to handle sensitive data that may need to be stored electronically. A new business process will be written at that time.

- Monitoring Grant Budgets - The process for monitoring grant budgets at CHGD could be improved:
 - A shadow system is used to provide monthly reports to faculty for monitoring their grant budgets. Shadow systems increase the risk for inaccuracies and inefficiencies and should only be used when the University's system cannot accomplish the Center's objectives.
 - In the past several months, CHGD has fallen behind in distributing the monthly budget reports for some of their grants. Since the American Recovery and Reinvestment Act passed in February 2009, the number of grant submissions increased significantly taking priority over some of the monthly budget reports. Therefore, for some grants, PIs have not had the tools to effectively monitor their budgets.
 - CHGD does not consistently submit Form 7471 to Financial Operations for Federal Grants. Form 7471 is the form departments can use to communicate desired budget allocation for sponsored projects. For some projects, if this form is not completed, all of the funds remain in the "unallocated" budget category, which makes University system-generated reports less useful.

Management Plan - With the American Recovery and Reinvestment Act, management decided to focus resources on grant submission. During 2009, we submitted 27 grants, which is three times what would normally be submitted in any given year. While the monthly budget reports were not consistently distributed to PIs during this time period, we continued to reconcile the Statements of Activity to supporting documentation.

We currently have a very small, easy to use shadow system that allows our grant manager and PIs to monitor grant budgets with ease and accuracy. We are in the process of setting up a meeting with Information and Technology Services to have them review our current processes and recommend possible efficiencies. If possible, we will move toward utilizing the University's system for monitoring our grant budgets; otherwise, procedures will be established to ensure the shadow system is adequately controlled.

We will work to submit Form 7471 for grants that have funds in the unallocated category, and will continue to encourage faculty to utilize M-Reports as much as possible. Once the staff reorganization is complete, we plan to train employees as necessary to start using eReconciliation.

- Imprest Cash Fund Management/Subject Fee Payments - Most of the faculty at CHGD use P-Card ATM withdrawals to pay their subject fees. Support documentation was available for the sample of subject fees paid using this method. CHGD also has one imprest cash fund used to pay research subject fees. Procedures for managing this fund need improvement. Securing and reconciling the fund on a regular basis will help prevent and detect any misappropriations of federal funds.

Management Plan - We have eliminated the one imprest cash fund that resided in CHGD for over 20 years. We use the new HSIP program exclusively and currently have three faculty using the system, including the faculty that held the imprest cash fund.

Auditor's Comment - University Audits confirmed the imprest cash fund was closed and the shortage charged to an appropriate account within CHGD. **This issue has been adequately addressed and is closed.**

- Disaster Recovery/Business Continuity Planning - CHGD has a detailed business continuity plan addressing a pandemic; however, there is no general Emergency Action Plan that covers emergencies other than pandemics from infectious hazards. CHGD does not have a disaster recovery plan specific to information technology resources. Standard Practice Guide Section 601.27, *Information Security Policy*, states that each University unit will develop, maintain, and implement an information security plan. Without a disaster recovery plan, CHGD is at risk of losing important research data or having significant delays in research projects, which could have a negative impact on CHGD's reputation and future funding.

Management Plan - We investigated central University back-up services available. CHGD now uses ITS' Institutional File System for all servers and relies on them for complete backup and disaster recovery. We will start working on a business continuity plan that covers our departments' use of information technology resources.

We understand the University is working to establish a framework for all hazards planning. We will work within this framework and timeline to efficiently and effectively develop our own plan. In the meantime, we will identify the highest risk areas for CHGD and address them accordingly. A large amount of research data is housed at CHGD and it is unknown how much imperative data would be lost in the event of a disaster. We will work with each PI to determine risk and take proper action. In support of our Business Continuity Plan, we are investigating staff ability to work from home when necessary and will continue to develop our plan.

- Statement of Activity Reconciliation/Segregation of Duties - The process for reconciling the Statements of Activity appears adequate; however, the reconcilers have system access to initiate and approve transactions. While initiating transactions is not one of their primary responsibilities, this access provides the opportunity to control a purchasing transaction from start to finish. Funds, including those from federal grants, may be used inappropriately without detection if procurement duties are not appropriately segregated. In addition, the Statement of Activity reconcilers do not initial and date the statements once the reconciliation is complete.

Management Plan - We are currently going through a staff reorganization. Through this processes we will evaluate existing procurement access for all employees and if possible reassign roles and delete access so that one individual does not have the ability to control a transaction from start to finish. If this is not possible due to the small size of our staff, CHGD upper management and/or OVPR will review additional management reports to help mitigate this potential risk. eReconciliation will be used to complete and document monthly Statement of Activity reconciliations. Adding and removing system access will be included on the new employee checklist and termination checklist.

- Procurement Process - P-Card transactions made by or on behalf of the CHGD Director are reviewed by OVPR. The final approval authority for non P-Card transactions made by the CHGD Director, including expenses from the Director's discretionary funds, is an individual who reports to the Director.

Management Plan - Large expenses that are made by or on behalf of the Director are now sent to OVPR for review.

- **Payroll** - Payroll time reports for temporary and permanent employees that report to a faculty are not approved before entry into the University's system. Many of these staff are paid from federal funds. This increases the potential for inefficiencies due to retroactive changes to salary expenses. Standard Practice Guide Section 518.01, *Payroll Controls*, states that time data must be approved by an individual with direct knowledge that hours reported are true and accurate prior to the hours being used in the payroll process. Additionally, Gross Pay Register reconciliations are not initialed and dated by the reconciler.

Management Plan - We will eventually be moving to the self-entry time reporting system and using eReconciliation for the Gross Pay Register reconciliations, which will address the issue of initialing and dating the reconciliations. We feel strongly that requiring faculty to approve time reports before entry into the system will cause many issues, including employees not being paid timely. Faculty are often out of the office and do not always have access to email or the internet. The person responsible for entering and reviewing time is aware of how many hours each individual should be working and asks questions when there are variances.

We do not consider this a high risk and will continue to have faculty approve time after it is entered in the system. To help ensure appropriate time reporting, we will periodically communicate to faculty the importance of comparing productivity with hours worked, particularly when there are situations when they are not able to actually confirm the accuracy of the time, such as working off-site.

Best Practice Recommendations

The following provides best practice recommendations that did not stem from any specific exceptions.

- **Registration with International Travel Oversight Committee - Insurance Requirements** - CHGD requires students traveling internationally for the Minority Health and Health Disparities International Research Training program to register their travel with the International Travel and Oversight Committee (ITOC) and obtain the University's Travel Abroad Health Insurance. CHGD does not, however, advocate these same requirements for faculty and staff for other international travel, whether they are alone or with students. CHGD therefore may not be able to contact faculty, staff, or student traveling overseas in the event of an emergency. The University requires undergraduate students traveling abroad to register with the ITOC and obtain the Travel Abroad Insurance and strongly encourages these practices for all international travel.

Management Plan - The Director discussed registering travel with the ITOC and obtaining the Travel Abroad Health Insurance with the faculty at a recent general CHGD membership meeting. A link to the ITOC registration website will be included on CHGD's new website. Documented procedures will include a statement that international travel should be registered with the ITOC and appropriate insurance be obtained. Additionally, faculty and staff will periodically be reminded of this process either through emails or the general CHGD membership meetings.

- **Documented Procedures** - While OVPR has some documented guidelines that apply to CHGD such as P-Card processing and employment controls, CHGD does not have a procedures manual for key processes specific to their operations. Documented procedures provide a standard source of information for reference and training; job aids and checklists can assist staff in performing daily duties consistently. Since the positions of CHGD Director and OVPR Associate Vice

President with CHGD oversight are term specific, documented procedures will help ensure business continuity through turnover in high-level positions.

CHGD does not have a new employee checklist to ensure appropriate steps are taken when employees are hired. The terminated employee checklist is not consistently used and does not include key items such as completing an as-needed effort report.

Documented formal procedures for the key processes and activities of CHGD should be developed. Procedures should include timeframes for meeting critical deadlines, as well as a process for reviewing and updating documented procedures to keep them current.

Management Plan - We will create a new employee checklist and update the terminated employee checklist to ensure that both include all important elements. These checklists will be used to help facilitate employee orientation and termination processes. We will establish a procedures manual that includes important steps, timeframes, and policies for the key processes at the Center. The procedures manual will be shared with all staff and placed on a shared drive so it is easily accessible. The procedures manual will be periodically reviewed to ensure it remains up-to-date and useful. Additional procedures will be added as they are identified. Creating our procedures manual will be a continuous process; we will document our processes in coordination with the staff reorganization and development of new job descriptions, prioritizing the most critical processes.

Follow-up to assess progress made toward making improvements will be performed during the fourth quarter of fiscal year 2010.

[Taubman College of Architecture and Urban Planning](#)

#2009-202

Report Issued November 20, 2009

The Taubman College of Architecture and Urban Planning (Taubman College) has a long educational tradition that combines design and technology. Academic programs offered by the college foster a broad view of architecture and urban and regional planning in the context of a major research university where interdisciplinary initiatives are encouraged and supported.

Architecture was recognized as a formal course of study at the University of Michigan in 1906 when a program was established in the Department of Engineering. In 1913, the program received its departmental status. In 1999, the College of Architecture and Urban Planning received a gift of \$30 million from A. Alfred Taubman and was renamed as A. Alfred Taubman College of Architecture and Urban Planning.

Taubman College has three programs:

1. Architecture
2. Urban and Regional Planning
3. Urban Design

With over 600 students in the three programs, Taubman College currently offers various degrees including bachelor, master, and doctoral degrees. The college also offers dual master's degrees and a graduate certificate in real estate development.

Audit procedures focused on evaluating the financial and operational internal control structure at Taubman College. Our primary objective was to determine the adequacy of policies and procedures to monitor and control the following processes:

- Safety and security
- International studios and semester abroad courses
- Grants, gifts, and endowments
- Media Center operations
- Financial reporting and budget monitoring
- Financial aid, recruiting, and admissions
- Degree audits
- Procurement
- Information technology
- Effort reporting
- Management of conflicts of interest and commitment
- Employment and payroll
- Discretionary funds
- Equipment

Control Issues:

1. **Study Abroad Program**

International Program Administration - Taubman College management considers the graduate students enrolled in these international studio courses have opportunities to travel and study abroad for an entire semester. Studios are selected, organized, and directed by individual faculty members with an academic interest in a particular country, region, or city. Taubman College arranged a total of fourteen studios during 2008 and 2009. In addition, non-studio courses offer one to two week international travel opportunities. In 2009, four non-studio international trips were arranged. Such travel is integrated into the curriculum. Studio structure, travel and lodging arrangements, and level of detailed information provided to students vary considerably among these programs. University Audits reviewed selected international programs and noted the following observations:

- Policies and procedures related to international travel are not documented. Specifically:
 - There are no formal emergency plans, aside from those services provided through the Travel Abroad Health Insurance coverage.
 - Student safety guidelines (specific to the locale being visited), pre-departure requirements and travel guidelines (e.g., visa requirements), and student code of conduct are not adequately documented.
- Formal budgets to support sound fiscal responsibility and accountability are not established for these programs. The type of expenses incurred varies significantly among the programs based on the purpose, location, duration, facilities used, and curriculum. The Dean, Program Chair, Budget Director, and Program Instructor estimate total costs for a program; however, these estimates are usually not documented. Instructors receive informal guidelines from Taubman College management about what are considered acceptable expenditures for their particular programs. All expenses are charged to a specific Taubman College account. U-M Procurement Travel and Hosting Guidelines are used to determine if the expenditures are appropriate.

Management Plan - A committee to develop and document policies and procedures for international programs has been formed. The committee is charged with addressing all issues noted in the audit report. To date, materials from other units with similar programs have been gathered. Travel insurance (HTH), travel liability waivers as approved by the Office of the General Counsel, and registration with International Travel Oversight Committee are already standard for every trip. The Interim Chair of Architecture will oversee this initiative.

2. Safety and Security - University Audits reviewed physical safety procedures for the Art and Architecture building, as well as the Taubman College labs and workshops. Because the Art and Architecture building accommodates one of the ITS Campus Computing Sites, all University students, faculty, and staff have 24/7 access to the building. This access is restricted using M-Card readers. To further strengthen safety and security, Taubman College management has installed security cameras throughout the building. The procedures in place for the building, woodshop, and student workspaces reasonably address safety and security concerns. Because some labs are currently under construction, University Audits was unable to assess the security levels at this time. An additional suggestion to improve security for one of the Taubman College labs are noted below:

- Access Control - The Fab Lab is part of the third floor open space and can be accessed at any time by anyone with access to the building. This lab provides Taubman College students access to a 3-D printer, rapid prototyping machines (one of the machines is shared with the School of Art & Design), laser cutter, etc. These machines can be operated only by logging in the computer attached to the machines. Because of the security concerns and high operating costs for the lab, Taubman College management controls access to the equipment. Taubman College students pay fees to access the lab as a part of their regular tuition. After successful completion of required training, the Lab Coordinator adds students to the active directory of people who can access these machines. The active directory is managed by the Lab Coordinator and Taubman College's Information Technology (IT) staff. At the time of the audit, no process was in place to monitor the active directory and remove access as necessary (e.g., remove access for graduated students).

Management Plan - Policy has been developed to monitor access to the Fab Lab. Membership in the Fab Lab active directory will be reviewed by the Taubman College's Sr. Computer Systems Specialist and the Lab Coordinator within one month following graduation. Access will be removed for students who have graduated or are no longer with the program. The policy will be implemented during the Fall Term 2009.

3. Information Technology

- Shared Access - Taubman College Administrative Offices, including the Development Office, Student Services, and Business Office, employ students to assist with administrative and financial duties. These student employees are not granted permission to access the Taubman College admin server or M-Pathways data. Occasionally, when a student's job requires access to the College server or M-Pathways data, the supervisor's access is shared with the student. Supervisors typically log in and allow the student employees to use their access under supervision. By using the supervisor's access, student employees could gain inappropriate access to sensitive Taubman College and University data. Management would be unable to establish accountability if the student employee changes any sensitive data.

Management Plan

- The IT staff has developed a policy to ensure that the supervisors are not sharing their access with student employees. Per new policy, IT staff will create a separate profile for student employees and supervisors will provide the students the data files to which they need access. This policy has been communicated to all Taubman College staff.

- Taubman College Management will work with ITS to determine how to provide temporary employees with access to M-Pathways data.
- Faculty Data Backup - Taubman College provides each faculty member, except lecturers, with their own computer. Faculty members typically store research, instructional, and administrative data on their local machines only, and not on the College server. Taubman College computers used by the faculty are not actively backed up by their IT department. Taubman College currently makes the Connected Network Backup (CNB) service available for all staff and faculty members using Windows operating system. The CNB service from ITS provides scheduled, automatic, secure backup and disaster recovery. Several faculty members use the Mac operating system, and they are responsible for backing up their own machines using removable storage devices (i.e., USB hard drives, thumb drives). Mac users usually do not receive guidance on backup procedures from the Taubman College IT staff. Inappropriate backup procedures increase the risk of data loss due to hard drive crashes or loss of laptops.

Management Plan - All faculty members using Mac will be provided with CNB service. Taubman College IT staff will provide either a reference manual or web links to ITS developed CNB reference material to faculty at orientation. Updated materials will be provided to all faculty members during the first college faculty meeting each year.

4. Media Center Operations - Taubman College Media Center produces and sells course packs and college publications. Copy cards, supplies that are special or unique to the needs of the College, and selected food items are also available for purchase. Gross sales for the Media Center during fiscal year 2009 totaled over \$500,000. University Audits reviewed the Media Center operation and noted the following issues and recommendations:
 - Cash Management
 - The Media Center has cash funds used to make change for customer sales. Management currently holds back a portion of sale proceeds from the daily deposit and uses it as the change fund. This practice is not in accordance with Standard Practice Guide (SPG) Section 501.2-1, *Imprest Cash Funds*. Taubman College management never established an imprest change fund for making change for sales as suggested by the SPG.
 - Media Center sale proceeds are not deposited daily (or within one business day if the deposit is less than \$500) as suggested by SPG Section 519.03, *Cash Management Policies*. Only the Media Center supervisor is authorized and trained to prepare funds for deposit. Therefore, when the supervisor is not present at the office for weekends, vacations, and sick days, funds are not deposited in the bank. While the Media Center often operates seven days per week, cash was deposited only three times during the month of July 2009.
 - Staff responsible for cash and check deposits also reconciles the related Statement of Activity, which consequently fails to ensure appropriate segregation of duties and increases the risk of loss or theft of funds.
 - The Media Center has one cash register and at the time of the audit testing, individual login IDs were not used to access the cash drawer. Most often, more than one employee has access to the cash register, and the register is not counted during the shift change. As a result, when more than one person operates the cash register during the day, if overage or shortage is noted at the end of the day

when the register is counted, management is unable to determine accountability for the discrepancy noted.

- For credit card sales, the Media Center does not always provide customers with a printed receipt. For returns, customers usually bring back the item without a receipt and inform the cashier which payment method (i.e., cash, check, or credit card) was used for the purchase and the return is processed accordingly. Management has no way of ensuring that cash is not returned for sales where other payment methods were used.

Management Plan

- Business Office staff will work with Procurement Services to prepare a request for an imprest cash fund. Director of Budget and Administrative Services will approve the request.
 - Management has updated the policy for cash and checks deposit to ensure funds are deposited daily. New deposit policy will be implemented no later than October 15, 2009. Media Center Buyer and Media Center Manager are documenting related policies and procedure.
 - Change in practice to segregate deposit preparer from statement reconciler role will be implemented no later than October 30, 2009. Media Center Manager will oversee deposit preparation and Media Center Buyer will oversee reconciliation activities.
 - Change in practice to ensure only one cashier is using a cash drawer per shift will be implemented effective September 30, 2009. Media Center Manager is responsible for the implementation of this procedure.
 - Return policy will be posted and manuals will be updated to reflect changes in procedure. Media Center will offer receipts for all purchases. Media Center Manager and Graphics Assistant are responsible for overseeing the implementation of this change.
 - Director of Budget and Administrative Services will oversee the implementation of all Media Center related policies and procedures.
- **Inventory Management** - The Media Center does not keep a high level of inventory for the items they sell. Using a just-in-time inventory approach, the staff regularly purchases inventory based on periodic forecasts. The staff often use P-Cards to acquire inventory. In fiscal year 2009, over \$100,000 worth of inventory was purchased using P-Cards. QuickBooks software is used to track the inventory. The store manager responsible for purchasing inventory for the Media Center sometimes receives the inventory and reconciles the quantity received with the packing slip. The manager also enters the quantity ordered and receipt related information into QuickBooks. Inappropriate segregation of ordering, receiving, and inventory information system entry duties increases the risk of asset misappropriation.

Management Plan - Management has implemented changes to the inventory management process to ensure proper segregate duties. Per new policy, retail manager will place inventory orders, other Media Center or Business Office staff will verify order upon receipt, and retail manager will update the inventory records in the QuickBooks system. Business Office staff responsible for reconciliation of Media Center's Statement of Activities will verify to ensure that inventory is recorded accurately in the QuickBooks system. This policy is being documented.

- Recharge Rates - To ensure the University's compliance with the Office of Management and Budget Circular A-21, "Cost Principles for Educational Institutions," U-M SPG Section 507.1, *General Policy and Procedure*, suggests that each U-M unit that charges other University units or various activities within its own unit for services they provide should have their recharge rate approved by the Office of Financial Analysis.

Taubman College Media Center charges other University units and clients within their own unit, including sponsored grants/projects, for various printing related services (e.g., plotting, one-sided and two-sided black and white printing, stapling). The Media Center has their recharge rates for some services reviewed and approved on a regular basis. However, some of the recharge rates have not been reviewed or approved by the Office of Financial Analysis.

Management Plan - Media Center Buyer is currently preparing the documentation required to obtain approval of internal recharge rates for activities stated in the audit report. Director of Budget and Administrative Services will submit these documents to the Office of Financial Analysis for approval.

5. Procurement Observations - While testing procurement and hosting related samples, University Audits identified a few examples of noncompliance with University guidelines:
 - An exception memo signed by authorized personnel was not attached to the Hosting Expense report justifying departure from the dollar limitation recommended by SPG Section 501.4-1, *Travel and Business Hosting Expense Policies and Procedures*.
 - The Business Manager is responsible for approving over thirty P-Cards, which is not in compliance with P-Card approver guidelines established by Procurement Services.
 - Other items noted were inappropriate classification of hosting expenses and unallowable expenses (i.e., software) charged to a P-Card.

Management Plan

- Management has already established adequate policies and procedure to ensure compliance with University procurement guidelines. Increased awareness and attention from Business Manager will improve compliance with existing policies.
- Business Manager will provide staff with periodic updates regarding University procurement guidelines and retrain staff as necessary.
- Director of Budget and Administrative Services and Business Manager will work with Procurement Services to redistribute some of the Business Manager's P-Card approval responsibilities. Request for redistribution will be submitted to Procurement Services by September 30, 2009. Director of Budget and Administrative Services and Business Manager is overseeing the redistribution initiative.

Based on the audit work conducted, University Audits determined that fundamental internal controls exist in many of Taubman College's business practices. University Audits will conduct a follow-up review in the third quarter of fiscal year 2010.

Information Technology Audits

Telecommunications, Network, and Data Center Operations Fiber Plant Report Issued November 13, 2009

#2009-308

The University of Michigan has an extensive voice and data network comprised of a large amount of fiber optic cabling interconnecting the entire Ann Arbor campus. This fiber optic cabling (commonly just called “fiber”) carries all voice, video, and data traffic traveling to, from, and within campus. This infrastructure (referred to as the “fiber plant”) makes up the network backbone, and reaches into every building. The fiber plant is administered by Telecommunications, Network, and Data Center Operations (TNDC, formerly ITCOM). University Audits performed a review of the U-M Fiber Plant.

TNDC staff manage the entire fiber plant including each building’s connection to the U-M backbone and the University’s connection to the Internet. They are responsible for installation, changes, fixes, upgrades, and ongoing maintenance. In some cases, departments contract with TNDC to administer the network within the building as well. The Network Operations Center (NOC) monitors traffic flows on the network to ensure proper performance levels.

The fiber backbone for the Ann Arbor campus is set up as a mesh¹ network. Nearly every node (a point of connectivity, usually where a building connects to the backbone) is connected to two other nodes. These connections are made over independent strands of fiber, through physically different paths. This connection diversity makes the network resilient to outages.

The fiber plant connection for each building is a circuit made up of a number of fiber optic cables. The number of cables varies depending on the amount and type of traffic traversing the circuit. Each cable is comprised of a number of individual strands over which the traffic travels. The mesh network topology used by TNDC adds significantly to the reliability of the network. It also adds to the amount of fiber needed and overall complexity of the network. To keep track of all of the circuits, cables, and strands of fiber on campus, TNDC uses a specially designed software package called Pinnacle. Using Pinnacle, TNDC staff are able to quickly and easily retrieve information on any cable, strand, circuit, and connection in the fiber plant.

The objective of the audit was to ensure the security, availability, documentation, and proper planning for the University’s fiber infrastructure by assessing the following:

- Processes and procedures relating to physical security of the fiber network
- Processes and procedures for managing the hardware that interacts with the fiber network
- Documentation related to the fiber network
- The planning being performed for the future of the fiber network

Failure to effectively manage risk for the fiber network could result in:

- Major network outages
- Damage to expensive equipment and resources
- Units being unable to function efficiently
- Loss of Internet and telephone connection
- Loss of time to research and business units

¹ Mesh is a network topology in which devices are connected with many redundant interconnections between network nodes. In a true mesh topology every node has a connection to every other node in the network.

A network is successfully managed when the users of the network do not notice it. Generally, networks only draw the attention of their users when there is a problem. The last problem TNDC had with the fiber plant was in July 2008 when a circuit was inadvertently cut during a construction project. Despite this, users experienced no loss of service. There has not been a problem that caused any outages with the fiber network since the summer of 2007. Considering the size, complexity, and amount of traffic on the fiber plant, this reliability is a significant accomplishment. TNDC is able to provide this level of service because of their attention to detail and consciousness of controls.

TNDC demonstrated consciousness of controls through rigorous naming and labeling conventions, cataloging of hardware, and strict change and upgrade procedures. TNDC also demonstrated appropriate foresight, planning each network node for easy expansion and upgrade.

TNDC operates in environments that change significantly from one location to the next. While they do a good job working within the spaces and conditions they occupy, further work with local facility managers could help to improve the security and environmental conditions for their equipment.

Overall, the U-M fiber plant is well documented and managed and is well positioned for future growth.

No follow up to this audit will be performed.

[Information and Technology Services Virtual Firewall Service](#)
Report Issued November 20, 2009

#2009-307

University Audits completed an audit of the U-M Virtual Firewall Service provided by Information and Technology Services (ITS). The Virtual Firewall provides Ann Arbor campus units an efficient and effective option for protecting their networks and information systems. ITCom, the University's primary network provider, hosts and manages the service, which is owned and funded by Information and Infrastructure Assurance (IIA).

The Virtual Firewall Service is offered to units at no cost, apart from standard charges for initial re-routing of the customer network. This eliminates the barrier to entry for units seeking to add a robust firewall to their network. By facilitating the adoption of firewalls, the Virtual Firewall Service provides valuable support to the University's security posture.

The Virtual Firewall (VFW) serves as a key control for customer units against the interruptions and security lapses that could pose significant risk to those units and their data. University Audits' primary objective was to determine whether the Virtual Firewall Service is being operated in a well controlled manner that provides assurance of stability and integrity.

Based on risk analysis, University Audits evaluated the following processes and internal controls:

- Monitoring and management of firewall usage and performance
- Contingency planning, backup, and recovery
- Physical security
- Segregation of customer systems and activities
- Authentication of access requests
- Management of administrative access
- Management of system changes and problems
- Security logs and log management

Technology

Virtual Firewall clusters consisting of standard Dell servers are installed at key network switching centers around campus. Customers route their networks through the nearest cluster. Each cluster has hardware in two different buildings to reduce the risk of a firewall outage. If one member of the cluster goes down, the other is designed to seamlessly take over.

The Check Point firewall software allows the virtualization of firewall functionality. Each firewall has its own security policy that can be administered independently by ITCOM or directly by the customer. From the customer's perspective, the firewall functions as if it were a dedicated standalone unit. In reality, it resides on the same hardware as nine or more other customers' firewalls.

Virtualization provides two main benefits. It reduces cost by eliminating the hardware units would need if installing or operating their own dedicated firewall. It also narrows considerably the customers' firewall management duties. They are relieved of any system-level maintenance, while retaining the ability to define their unit's firewall policy such as which traffic to allow or block on their network.

Service Management and Performance

The Virtual Firewall Service (VFW) is operated and managed by a skilled team led by a Senior Firewall Engineer, ensuring continuity of service management and support. The VFW team provides basic training in use of the Check Point product to customers. To date, VFW implementation has created more than 60 trained Check Point firewall administrators throughout the campus. Management has begun to convene VFW user meetings, and has surveyed customers on VFW functionality, service, and support.

Customers who manage their own firewall rules can now request a review of their firewall policy by the VFW team to identify weaknesses and inefficiencies, and help customers increase the effectiveness of their firewalls. The first of these reviews was still underway during the audit. This process will serve as an important control ensuring the Virtual Firewall's overall effectiveness in securing University resources.

The Virtual Firewall operates in a high demand environment, processing over 1 billion connections per month. The service has stabilized. Initial problems with localized network failures were corrected through software upgrades, and the service has operated with no outages since mid-2008. Part of the stability can be attributed to the system's highly available design. Using server clusters and locating the members in separate buildings ensures operations can be maintained through VFW maintenance, facility maintenance, and localized disasters.

Control Issues:

1. **Security and Contingency Planning** - The clustered design of critical Virtual Firewall (VFW) components provides redundancy to support business continuity. One compromised cluster member could be replaced relatively quickly, and the likelihood of both cluster members failing is extremely low. Nonetheless, the VFW service has not been included in comprehensive contingency planning, and formal procedures for responding to security incidents within or involving the VFW have not been established. If a data center or network room relied on by the VFW were to close due to facilities issues or a security incident, the VFW team does not have a response plan. In addition, security assessments of the VFW systems have not been performed.

Inadequate planning and undocumented processes can impair ITCOM's ability to respond to major facilities issues and security incidents involving the Virtual Firewall service. Security assessments are necessary to ensure that significant security risks have been identified and addressed. Serious incidents should continue to be treated as required by SPG Section 601.25, *Information Security Incident Reporting Policy* (i.e., customers should report them first to IIA).

Management Plan - ITS is committed to contingency planning/disaster recovery planning for all mission critical services, including the VFW. The VFW will be incorporated into ITS contingency/disaster recovery plans for the UM backbone network and/or data centers.

ITS will enhance the VFW service agreement to clearly define ITS's obligation to assist customers with security incident management from the perspective of the VFW. While customers are expected to follow SPG Section 601.25 when dealing with security incidents, they may call upon the VFW team for assistance in gathering data, and reviewing and updating VFW configurations.

2. **Data Backups Testing** - VFW server configurations and data are backed up effectively to diverse locations and retained for reasonable periods. Processes and tools used for backup are well documented and robust, automatically notifying the VFW team of potential backup failures. The VFW team has discontinued its practice of testing these backups once a month, verifying that one backup set could be restored to a test lab server.

Untested backups could be corrupt, which could make it impossible to restore VFW servers to the desired state after hardware loss or failure.

Management Plan - The VFW team will resume monthly testing of VFW management backups utilizing lab infrastructure. Automated preventive maintenance tickets are now generated via UMfirewall Mrequest (Footprints) on a monthly basis specifying testing of backups. The first ticket was assigned the first week of November. Completion of the backup testing will be documented via these maintenance tickets.

3. **Change Control** - The procedures for executing and verifying software upgrades on the VFW components are well documented. However, a broader change management process that includes how changes are proposed, tested prior to deployment, approved by the Business Owner (IIA), and scheduled for deployment has not been established. The VFW team is considering using MRequest (FootPrints) to record the details of changes implemented.

The absence of strong change management decreases assurance that system changes will preserve service stability, performance, and supportability through testing, approval, and documentation.

Management Plan - System level change management for the VFW is currently provided in a manner consistent with the UM backbone network, while user request change management is handled using Mrequest (Footprints). The VFW team will review the change management tools and processes available via the MAIS/ITS service management methodology and migrate to the solution adopted for the UM backbone infrastructure and other network related services.

Based on the audit work conducted, effective controls are in place to ensure the availability and integrity of the Virtual Firewall Service. Access is appropriately controlled, and backups are regular and well planned. Significant risks of outages and ineffective filtering are both being mitigated through technical or process controls.

A formal follow-up to the outstanding issues will be conducted in the third quarter of fiscal year 2010.

University Audits performed a review of the AECtion system, an integrated project management information system developed internally by AEC (Architecture, Engineering and Construction) as a tool for managing the data requirements of projects and services undertaken by the department. AECtion replaces three separate database systems, shadow systems, and numerous stand alone databases and spreadsheets by combining these data sources into one integrated data repository.

AECtion is intended to assist management by coordinating information, and making the data related to all services provided to the University by AEC accessible to AECtion users. This include a variety of planning, design, and construction management services; as well as the financial, contractual, commissioning, and inspection requirements associated with four main AEC organizational work areas:

- Project management
- Contracts and accounting
- Operations
- Support

The primary focus of AECtion is to generate and maintain project scope, budget, and schedule data. It has an approval tracking system that tracks the flow of key project documents that require a variety of review and signature approvals. AECtion also captures and tracks supplemental project information, such as capital projects reporting to the Regents and the State of Michigan, code inspections, and master planning programs.

Many internal AEC operations are managed with AECtion, including internal recharges, direct billing, and service level agreements. Data for time tracking, resource management, and time and materials billing reside in the AECtion system. The system maintains and allows access to a variety of important support data including vendor records, contractor qualification (evaluations), building name and number, and UM departments and personnel.

AECtion provides several standard reports and is designed to give the user the ability to query data in support of performance metrics and for comparisons of active and historical AEC project data. The AECtion system includes a data warehouse that is refreshed on a daily basis.

Development of AECtion v2 began in April 2005. Version two replaced the first version of AECtion and added new functionality. AECtion v2 has been in production for non-accounting processes since October 2008. The goal is for AECtion v2 to replace all remaining PEXT² functionality, including accounting functions within the next year.

AECtion is currently in the final PEXT replacement phase. The deployment timetable is driven by the testing and validation of AECtion against the components of PEXT that it will be replacing, including the funding, commitment, and change management screens. Because of the importance, complexity, and the time required of AEC subject matter experts to perform testing, the deployment schedule remains flexible until validation is complete. The final PEXT replacement deployment is expected to occur within the next year.

This audit included an examination of the AECtion system's security, access, and functionality. It focused on the processes in place to ensure that:

² PEXT is a project encumbrance and accounting system.

- Physical controls over the server room are adequate to secure the servers hosting the AECtion application
- The AECtion system is kept current to maintain usability and security
- Data is classified according to its sensitivity and protected accordingly
- Roles are properly segregated between those with access to the development and testing environment and the production environment
- Existing training adequately addresses use of the data warehouse and the generation of queries and output reports
- Changes made to the system are appropriately logged, tracked, tested, and approved
- Business continuity, contingency, and disaster recovery plans are sufficiently detailed and adequately tested to successfully recover the application in a timely manner
- The process for documenting and addressing user requests is properly controlled and systematically managed
- Users are consistently trained and educated in the use of the system

Control Issues:

- AECtion Business Continuity Planning - Business continuity planning is a process designed to reduce the department's business risk arising from an unexpected disruption of the critical functions or operations (manual or automated) necessary for the survival of the department. This includes human and material resources supporting these critical functions and operations, and assurances of the continuity of at least the minimal level of services necessary for critical operations. University Audits reviewed the current business continuity plan, which is currently in process of being developed, and discovered the following gaps:
 - The AEC IT Staff Contact Info section was missing.
 - The business continuity plan does not clearly address business continuity planning or disaster recovery of IT infrastructure.
 - AEC executives have not reviewed the plan.
 - Staff members have not yet been trained on the plan.
 - The plan has not yet been tested.

Management Plan - Work continues on the AEC-IT business continuity plan. The next draft, which will address the issues raised above, will be available for AEC management review in December 2009.

- AECtion Paper Tracking Sheet - There are three employees in AEC with direct access to the AECtion production database using SQL Server Management Studio; the two AECtion Project Managers and the AEC - IT Database Administrator. These are the only people that have the ability to make changes directly to the AECtion database. All other changes are made using functionality within the AECtion system. There are times when bugs and data entry errors may require such direct access changes to data.

Changes made directly to the database do not automatically add data into the following fields: Created On, Created By, Updated On, and Updated By used to track changes. It is critical that a method be provided to track direct changes made to data by the three designated individuals.

When the above issue was discovered during the audit, AEC created a Production Data Tracking Sheet to document such changes. The newly-implemented form includes required entry of these fields: Date, Table, Column, Description of Change, Performed By, Requested By, and Authorized By. These Production Data Tracking Sheets will be stored on the AECtion Project

SharePoint site. A repository, containing the completed forms has been created to store these changes.

This new process for tracking changes has been reviewed by University Audits. Based on the review, University Audits agrees that this tracking sheet adequately addresses the issues raised. **This issue has been satisfactory addressed.**

Based on the audit work conducted, the security, access, and functionality of the AECtion system enable AEC to efficiently coordinate projects by creating, managing, and sharing important project-based information while providing effective controls over critical data. The AECtion system was developed in-house to most effectively meet the specialized need of Architecture, Engineering, and Construction. The AECtion system is effectively meeting these needs.

The AEC IT group has set a goal of implementing quarterly deployments of AECtion. Since AECtion is still in development, upgrades are done only on an as-needed basis. AEC IT is currently implementing a standard schedule for enhancements and bug fixes as they are reported by users.

AECtion is a dynamic system. Its functions are being expanded to more effectively strengthen the existing control environment related to AEC processes. Within the next year, AECtion will have the capacity to:

- Create commitments and track changes to them
- Manage the funding, project accounting, and payment processes for all AEC projects
- Leverage technology to communicate and perform integrated processes with other university information systems such as M-Pathways for accounting, contractual, and payment processes and FMAX for plant operations commitment and payments

As evidenced by observation and testing by University Audits, AEC Management is committed to strong controls within their processes resulting in an environment in which:

- The server room is well controlled and physically secure
- Strong processes are in place to ensure that the AECtion system is kept current and effectively addresses user needs
- Changes to the system are effectively logged, tracked, tested, and approved
- Data is being effectively protected
- User requests are properly controlled and systematically managed
- Users are consistently trained and educated in the use of the system

A follow-up to the outstanding issue will be conducted during the third quarter of fiscal year 2010.

Health System Audits

[University of Michigan Medical School, Otolaryngology Departmental Review](#)
Report Issued October 30, 2009

#2009-843

The Department of Otolaryngology specializes in the diagnosis and treatment of disease and disorders of the ear, nose, throat, head, and neck. The department's mission is to:

- Conduct educational programs that provide excellent training in research and clinical care, and encourage the pursuit of academic careers and lifelong scholarship;
- Enhance knowledge through relevant, effective research of the highest quality and integrity; and

- Provide superior and compassionate state-of-the-art patient care in an efficient and supportive environment.

In fiscal year 2009, there were approximately 61,000 Otolaryngology visits. These visits include outpatient physician visits, auxiliary visits (e.g., audiology, speech, and vestibular testing) and inpatient and outpatient visits associated with operating room cases. Operating revenue was approximately \$20 million during the same period (approximately \$14 million in unrestricted funds and \$4 million in restricted funds).

The Department of Otolaryngology also manages the Kresge Hearing Research Institute. The Institute's mission is to:

- Advance scientific knowledge of the development, function, and pathology of hearing and balance.
- Translate today's scientific discoveries into tomorrow's clinical treatment.
- Train the next generation of scientists and clinician-scientists from the USA and worldwide.
- Promote diversity in academia and facilitate integration of persons with special needs into the research community.
- Educate the general public about hearing health and the benefits of biomedical research.

University Audits evaluated the adequacy and effectiveness of fiscal controls governing the following processes within the Department of Otolaryngology and the Kresge Hearing Research Institute:

- Purchasing
- Financial reporting and budgetary functions
- Payroll functions, including supplementary pay and bonuses
- Compliance with federal and/or sponsored programs policies
- Effort reporting, including tracking, certification, and notice of effort changes
- Compliance with gift and endowment policies, including donor intent
- Compliance with annual financial results and internal control certifications

Control Issues:

1. Grant Management - A review of five grants and associated Statement of Activity reconciliations identified two grants that had unallowable purchases of computer equipment and general office supplies such as pens, pencils, notepads, binders, and calendars. These types of expenditures do not conform to the federal government Office of Management and Budget Circular A-21, *Cost Principles for Educational Institutions*, and are considered unallowable. There was also evidence of retroactive grant adjustments for technical core personnel effort. These retroactive effort adjustments are due to a lack of real-time effort tracking for technical core personnel and other research staff working on multiple grants.

Management Plan - Department management will present an overview of A-21 rules, audit results, and department audit practices at the November 2, 2009 Otolaryngology "Full Faculty" meeting. Unallowable expenditures will be transferred off grants on a timely basis. Also, a spreadsheet will be created to track effort of technical core personnel. It will be reviewed quarterly and effort adjustments will be made accordingly within the 90-day window allowed for retroactive adjustments.

2. Non-Certified Effort Reporting - The federal government (Office of Management and Budget Circular A-21, *Cost Principles for Educational Institutions*) requires annual effort certification for all employees on federally sponsored research. A review of effort certification for fiscal year 2008 identified two Kresge Hearing Research Institute employees who had not certified their

effort on sponsored projects. The two individuals were no longer employed and attempts were made to contact with no response. The review also identified two Otolaryngology Department employees who had not certified. One individual was no longer employed and the other is an active employee. If an employee is no longer available due to termination, a supervisor may certify the effort.

Management Plan - The department will develop a termination checklist to reduce the likelihood that employees will leave without certifying their effort prior to departure. The effort of current and former employees identified during the audit as uncertified has now been certified. On an annual basis, effort certification status reports will be monitored for timely completion of the annual effort certification requirement.

3. Financial Results and Internal Control Assessment Certification - Each year, University management is required to assess and certify to the level of departmental compliance with University stewardship and fiscal responsibilities policies. This annual certification process is known as the "Financial Results and Internal Controls Assessment." It is designed to provide reasonable assurance regarding the achievement of specified objectives in three categories, as described in Standard Practices Guide Section 500.1-*Fiscal Responsibilities*:
- Effectiveness and efficiency of operations
 - Compliance with laws and regulations
 - Reliability of financial reporting

An important and required part of the internal control assessment process is the completion of internal controls gap assessments. The gap assessments must be completed between January and September of each year. Based on the assessments, a certification form is completed and submitted to the Office of Internal Controls on an annual basis by the end of September.

The Otolaryngology Department's Certification of Financial Results and Internal Control Assessment for fiscal year 2008 was completed, indicated no gaps, and is on file with the Internal Control Department. The required gap assessment tools used to support the conclusions were not available for review and based on discussions with current and former management were not completed.

Management needs to complete internal control matrices and gap assessments and implement corrective actions (if needed) for the following processes:

- Employment (due September 30, 2007)
- P-Card (due September 30, 2008)
- Journal entry (due September 30, 2008)
- Cash handling (due September 30, 2009)

Going forward, all existing gap assessments should be reviewed and updated on at least an annual basis. For further assistance or additional training with the annual internal control assessment process, please contact the Office of Internal Controls.

Management Plan - The gap analysis for fiscal year 2009 has been performed, documented, and will be retained to support the department's Certification of Financial Results and Internal Control. Going forward, all existing gap assessments will be reviewed and updated on at least an annual basis.

Controls over most business processes generally conform to University standards. Gift and endowment fund expenditures, payroll, and procurement are in accordance with University policy. Statements of Activity are reviewed and reconciled on a timely basis. University Audits will conduct a follow-up review in the third quarter of fiscal year 2010 to assess progress on the management action plans.

[University of Michigan Health System Office of the Executive Vice President for Medical Affairs
Operational Review](#)

#2009-205

Report Issued November 17, 2009

University Audits performed an operational review of the University of Michigan Health System (UMHS) Office of the Executive Vice President for Medical Affairs (EVPMA). The Office of the EVPMA oversees all components of the University Health System, which includes University of Michigan Hospitals and Health Centers, the Medical School and Faculty Group Practice, the School of Nursing, and the Michigan Health Corporation. A new EVPMA assumed this role in May 2009. This audit is a standard review performed as part of the transition in EVPMA leadership.

Units that administratively report to the EVPMA include Strategic Planning and Business Development, Health Systems Facility Planning, UMHS Government Relations Office, UMHS Compliance Office, and UMHS Office of Medical Development and Alumni Relations. The primary objective of the audit was to review key operational processes in the Office of the EVPMA to determine if policies, procedures, and the internal control structure adequately protect University assets, and comply with U-M and UMHS policies and procedures. To achieve this objective, University Audits:

- Reviewed and tested controls governing travel activities to determine if expenditures are appropriately documented, reviewed and approved, and support U-M and UMHS business purposes
- Assessed the adequacy of internal controls over the purchasing/P-Card function
- Evaluated procedures that ensure payroll data is properly approved, reported, reviewed, and reconciled
- Assessed controls associated with financial monitoring and reporting:
 - Prepare and monitor the departmental budget
 - Classify costs
 - Perform Statement of Activity (SOA) reconciliations
- Reviewed and tested joint venture activities to assess sufficiency of controls over expenditures, invoicing, and cash management
- Reviewed management of Conflicts of Interest and Conflicts of Commitment (COI/COC)

Audit Observations

- **Management of Travel Expenditures and Procurement Controls** – The EVPMA Office follows U-M policies regarding travel expenditures and purchases. A review of transactions indicated most expenditures are supported by adequate documentation. However, University Audits noted instances in which documentation could be improved for some transactions. University Audits recommends staff periodically complete Procurement Office courses to update staff understanding of current University procurement practices.
- **Management of Payroll Expenditures** – EVPMA timekeepers enter pay data for a combination of bi-weekly and monthly employees who are on the health system's PTO (Paid Time Off) benefit plan or the University's vacation/sick plan. Timekeepers follow U-M and UMHS guidelines regarding processing payroll and reviewing Gross Payroll Register reports and maintain documentation supporting supplemental bonuses, merit increases, and other special payments.

However, timekeepers could benefit from attending updated payroll classes to improve awareness of currently available tools and reports that facilitate timekeeping functions.

- Financial Monitoring and Reporting – Controls governing the preparation and management of the department budgets are strong. Budget variances are reviewed and explained by management on a periodic basis. Minor discrepancies in the classification of costs are being corrected. Timely reconciliations of the Statement of Activities and additional management oversight will improve financial monitoring and reporting.
- Management of Joint Ventures – UMHS is involved in numerous joint ventures, most of which are handled through MHC (Michigan Health Corporation) and are outside the scope of this audit. The Office of the EVPMA currently manages two joint ventures: CHRT (Center for Healthcare Research and Transformation) and PTIM (Particle Therapy Institute of Michigan). CHRT is a joint venture with Blue Cross Blue Shield of Michigan that focuses on improving the quality of Michigan’s health care system and how patient care is delivered. Particle therapy is a form of radiotherapy used to treat cancer. In fiscal year 2009, UMHS began assessing the possibility of partnering with the Karmanos Cancer Institute, St. John/Ascension Health, and Henry Ford Health System to develop PTIM, a state-of-the-art particle therapy cancer center that will be located in Michigan. Based on discussions with EVPMA personnel and reviews of transactions, the Office of the EVPMA has adequate controls over expenditures, invoicing, and cash management functions related to the joint ventures.
- Management of Conflicts of Interest/Conflicts of Commitment – All known management conflicts of interests have been appropriately disclosed and are managed independently by the Medical School Office of Regulatory Affairs. The Office of the EVPMA has effective controls for collecting and maintaining code of conduct disclosures for EVPMA non-management staff.

Opportunities for Improvement

The following improvement opportunities were discussed with EVPMA administrators:

- Ensure employees responsible for procurement and payroll functions are adequately trained on current practices and understand their responsibilities
- Review procedures for classifying and monitoring expenses to ensure excluded costs are properly classified in the University’s accounting system
- Monitor individuals assigned the responsibility of approving transactions to ensure there is an adequate segregation of duties over the procurement and reconciliation functions
- Strengthen reconciliation practices to ensure they are sufficient to verify transactions are appropriately approved and recorded

Management Plan

EVPMA management appreciated this review as an opportunity to improve its operations. Management will develop an individual learning plan for each person to identify needs and gaps across the various areas identified in the audit. This will include highlighting the general concepts of separation of procurement/payroll submission and approvals for such transactions. Additionally, management will ensure there is additional education around the complicated accounting rules for excluded costs.

University Audits will conduct a follow-up review in the fourth quarter of fiscal year 2010.

Report issued November 30, 2009

The Regents of the University of Michigan created the Michigan Institute for Clinical and Health Research (MICHR) in November 2006. MICHR provides a comprehensive institutional source of support and infrastructure for clinical and translational researchers. The mission of MICHR is to increase the quality, quantity, and positive impact of clinical and translational research at the University, and to the communities it seeks to serve.

MICHR houses the Clinical and Translational Science Award (CTSA), a five-year \$55 million National Institutes for Health (NIH) grant awarded in 2007. At the time of this report, NIH has made similar clinical translational research awards at forty-six institutions and plans to support a total of sixty locations across the nation. This initiative assists institutions in creating uniquely transformative, novel, and integrative academic home for Clinical and Translational Science. The purpose of the grant is to train and advance a cadre of well-trained multi- and inter-disciplinary investigators and research teams to promote the application of new knowledge and techniques in patient care. CTSA grants are enabling researchers to work in unprecedented ways to advance medical research across many disease areas and conditions including cancer, neurological diseases, cardiovascular disease, diabetes, and obesity.

The CTSA grant is the third-largest NIH award in the University's history and the largest NIH award ever to the Medical School. This grant builds on previous NIH investments to expand innovative programs and services in clinical research infrastructure and education. Key participants include faculty and staff from many schools across the University.

University Audits evaluated the adequacy and effectiveness of MICHR business processes and controls governing the following:

- Effort reporting including tracking and certification
- Grant financial reporting and monitoring
- NIH effort and training requirements
- Business continuity planning
- Procurement activities, including P-Cards
- Payroll and timekeeping

Control Issues:

Grant Management

1. **Non-Certified Effort Reporting** - The federal government (Office of Management and Budget Circular A-21, *Cost Principles for Educational Institutions*) requires annual effort certification for all applicable University employees. Effort certification is an essential tool in demonstrating and documenting University compliance with federal grant timekeeping requirements. A review of effort certification for all key personnel and a sample of staff supported by the CTSA grant identified five faculty members who have not certified their effort for fiscal year 2009, although University procedures require certification by August 15, 2009. Faculty certification requirements are managed within their academic departments and are not managed by MICHR. All staff certifications under the management of MICHR were identified as certified at time of review.

Management Plan - Best practices around managing the effort certification process, including a suggested timeline, online training, and follow-up, are already provided to campus units by the

Cost Reimbursement office. The distribution of these tools reaches human resource administrators campus-wide and the effort reporting specialists specifically within the Medical School. Additionally, within the Medical School, management already works with Financial Operations as issues escalate. School management will address the responsibility and oversight the chief department administrators have in the effort reporting process through previous presentations that will be reinforced. Medical School management will work with human resource administrators and effort reporting specialists to ensure there is appropriate effort reporting follow-up.

2. Grant Adjustments - Standard Practice Guide (SPG) Section 501.9, *Policy on Retroactive Salary Distribution Changes*, states that routine transfers of sponsored funds must be requested within 120 days to comply with federal regulations. Retroactive grant adjustments were made to move personnel effort from cost-share funds to the grant. Although the proper procedures were followed to process the changes, the changes were not made within the 120-day guideline. Late adjustments require rework and involvement from other departments. Also, some late adjustments are not allowed if the grant has ended.

Management Plan - We are aware of the importance of timely financial management throughout the grant year. In grant year two, an internal miscommunication led to late adjustments for grant spending. We took the following steps at that time:

- First, we wrote a memo to Sponsored Programs, explaining the oversight and requesting permission to make these late adjustments. Permission was granted and the adjustments were made.
- Secondly, we made significant changes to our financial processes to avoid such oversights in the future.

Prior to this time, we had two finance teams, one primarily responsible for MCRU (Michigan Clinical Research Unit) and the other primarily responsible for the rest of MICHHR. The two teams were housed in different physical locations and reported to different people. Effective May 18, 2009, we merged the two teams, including physically re-locating one finance staff member, changing reporting lines to ensure all finance functions report to the same individual, and re-adjusting responsibilities within the finance team to align with our newly-formed working groups, allowing finance staff to have the 'big picture' of a group's activities and minimizing handoffs. We have been conscious of maintaining proper oversight and accounting controls during the reorganization. We feel confident that this substantial re-organization will help us avoid such oversights in the future.

3. Veterans Administration Hospital Appointments - The CTSA grant terms requires NIH program director notification when CTSA scholars have a joint Veterans Administration Hospital (VA) appointment. One scholar was identified as having a VA appointment but NIH was not notified. Notification consistent with grant terms improves communication with grant sponsor.

Management Plan - All current scholar appointments have now been reviewed; no other scholars with a VA appointment were identified. Corrective action has been taken to notify NIH of the one scholar with a VA appointment. Our Education Working Group has posted two new staff positions. As these individuals are hired, we will use this opportunity to conduct an in-house training for both finance and education staff on NRSA (National Research Service Award) grant requirements.

4. Expense Classification - An equipment purchase of \$5,500 was incorrectly charged to lab supplies. SPG Section 520.1, *Business and Financial Services*, states that all movable equipment

Management Plan - As noted above, a corrective journal entry has been processed. We believe this was an isolated incident, and have verified that all finance staff understand requirements for classification of items as capital equipment. We will continue to strive for vigilance as we review SOAs for incorrect classifications.

Program Operations

1. **Compliance with P-Card Guidelines** - SPG Section 507.1, *Purchasing*, states that P-Card statements must be approved by someone with a higher administrative authority. University Audits identified one exception where the approver reported to the cardholder. Three cardholders were identified who could also reconcile their own P-Cards. The University P-Card procedures strongly recommend that the cardholder should not also be the reconciler, to maintain proper separation of duties in the procurement process.

Management Plan - MICHR Interim Managing Director has contacted Medical School Administration to request guidance in identifying an appropriate administrative authority for the employee. We also reviewed our P-Card approval process. Currently, after a P-Card holder reconciles the account, the reconciliation is reviewed by a second party, and then given a final review and sign-off by a higher administrative authority. We believe this is an appropriate level of control to ensure proper P-Card use, but will continue to evaluate and monitor our practices in this area.

2. **Business Continuity Plans** - MICHR is in the process of developing business continuity plans. They are working with Medical School Administration to ensure plans are comprehensive, up-to-date, tested, and reviewed regularly.

Management Plan - We agree and will continue our efforts, in conjunction with the department of Medical School Administration, to finalize, implement, and test our Business Continuity Plans by the target date.

Overall, processes to manage the CTSA grant are sound. Operational controls over procurement, payroll and timekeeping are consistent with University policies and procedures. Grant expenditures are effectively tracked and monitored. University Audits will follow up on the status of action plans during the first quarter of fiscal year 2011.

Follow-up Reviews

[Resident Duty Hours Follow-up Review](#)
Original Report issued January 30, 2009

#2008-102
Follow-up Report issued November 5, 2009

Corrective actions are either complete or underway. Details regarding action plan implementation are noted below. **This audit is closed.**

Institutional Oversight

The Accreditation Council for Graduate Medical Education (ACGME) sets residency program standards that must be maintained to ensure continued accreditation. These standards require institutional oversight for compliance with residence duty hour requirements. The University of Michigan Graduate Medical Education Committee (GMEC) is a group appointed to manage and provide institutional oversight for

graduate medical education programs, including developing policy and monitoring compliance with ACGME duty hour requirements.

University Audits made recommendations in the audit report that GMEC clarify the level and types of centralized monitoring necessary to meet both the accreditation requirements and institutional needs related to duty hour standards. Programs are now required to submit detailed duty hours reports for the latest quarter to the Associate and Assistant Deans of Graduate Medical Education. These reports are reviewed for adequate duty log submittal and compliance with duty hour regulations, and findings are reported to GMEC during their regular meetings. If these reports indicate noncompliance, the program director is required to attend the GMEC meeting and provide a follow-up report that addresses progress towards compliance. Re-evaluation of the program within three to six months may also be required.

Moonlighting

University of Michigan Graduate Medical Education (GME) has detailed policies and procedures for employment by residents outside their normal residency activities (“moonlighting”) to ensure the outside employment does not detract from residency duties. In addition, internal moonlighting hours are counted as part of the ACGME duty hour limits. During the audit, some instances of non-compliance with moonlighting provisions were identified.

The GME office reviews moonlighting timecards for compliance with GME policy before they are approved and submitted to the payroll office. The office informally coached departments who had instances of non-compliance with moonlighting provisions. Residents were recently required to disclose outside moonlighting as outside interest activity as part of the annual outside interest disclosures required by the Health System.

University Audits noted internal moonlighting has substantially reduced since the date of the original audit. A GME office position was filled that provides resources to increase moonlighting monitoring. All moonlighting pay requests are approved by GME before Payroll processes the payment. Management has also committed to implementing the following:

- To further strengthen controls, on a quarterly basis, management will monitor moonlighting payroll payments for unusual trends or excessive amounts to ensure all moonlighting pay requests were appropriately approved.
- Moonlighting policies continue to be reemphasized during faculty and departmental administrator training sessions. GME Management is working with the Health System Compliance Office to incorporate this policy into relevant institutional training.

Measuring Duty Hours Compliance

Incomplete information affects the ability to monitor compliance with ACGME duty hour requirements. During the audit, it was found that measurement of duty hour compliance could be improved by increasing the duty hours log submittal percentage and submittal expectations. In response to audit comments, a change was implemented in MedHub (the management information system used to administer the GME program) so that when a resident submits a timesheet with zero hours, a warning appears informing the resident that the timesheet is blank.

Upon further review by management, it was determined that research is not a requirement of surgical residency programs, and therefore it is unnecessary to track research duty hours unless clinical activities are concurrently performed. GME management is in the process of clarifying these rules in the GME policies and procedures manual.

MedHub

The software used by GME to manage many aspects of the graduate medical education program was developed by a small, outside vendor (MedHub) in collaboration with the Department of Surgery. During the audit it was noted:

- The escrow agreement for the source code had expired
- The vendor contract provided for U-M data ownership upon contract termination or bankruptcy but was not specific regarding the format of the data transfer
- A formal application change management process was not in place
- User lists were not actively monitored for changes in job duties or termination

The software use contract was renewed in January 2009, and is now on an annual renewal cycle. At the next renewal date, this agreement will be amended to stipulate that data will be transferred to U-M in a readable format at the termination of the contract. A change management process was implemented in March and audit trails will be implemented in the next phase. Reports are in place to monitor user account activity on a monthly basis. During the next vendor upgrade, MCIT and GME office are planning to implement systematic automatic suspension of user access after a period of inactivity.

**Open Audits Follow-up Table
November 30, 2009**

Audit Title	Report Date	Issues	Expected Completion
College of Engineering Research Computing 2008-302	10/29/08	Vulnerable systems; unnecessary services; unknown ports and services; unknown systems; unsupported devices; users with system administrator privileges; updating firewalls; procedural documentation	First Follow-up September 2009
			December 2009
Michigan Administrative Information Services Grade System: Web-based Grade Changes 2008-114	12/23/08	Role assignments; customization; two-factor authentication	First Follow-up September 2009
			December 2009
Housing Information Technology Office Residential Housing Network 2009-309	5/28/09	Registration scans; patching through portal; vulnerable systems; traffic analysis; incident response procedure; signed service agreements	December 2009
ITS Virtual Firewall 2009-307	11/20/09	Security and contingency planning; data backups testing; change control	March 2010
Architecture, Engineering and Construction AECtion 2009-303	11/23/09	Business continuity planning	March 2010
University of Michigan Hospitals and Health Centers Cashier's Office 2008-206	10/17/08	Segregation of duties; bank statement reconciliation and check writing practices; follow-up of outstanding vouchers; duplicate facility refunds	First Follow-up June 2009
			December 2009
UMHHC Payroll and Timekeeping 2008-110	1/30/09	Human Resource Management System access; systematic data integrity; payroll expenditure analysis; roles and responsibilities	December 2009
Medical School Administrative Internal Control Review 2008-208	1/30/09	IT strategic planning; reconciliations; gift fund usage; IT security; fire drill regulations	January 2010
Children's and Women's Hospital Construction Audit 2009-601	4/02/09	Establishing guaranteed maximum price; sales and use tax; retaining payment documentation	March 2010
University of Michigan Health System Cardiovascular Center Supply Chain Audit 2009-105	5/15/09	Blanket purchase orders; inventory tracking; drug management; patient billing; system access; policies and procedures	January 2010

University of Michigan Hospitals and Health Centers East Ann Arbor Ambulatory Surgery and Medical Procedures Center 2009-208	07/28/09	Time reports; P-Card holder profiles; unsecured credit card terminal; building security	March 2010
UMHS Clinical Research Billing 2009-402	9/30/09	Research Planning; integrated solutions; interim solutions; policies and procedures	June 2010
University of Michigan Medical School, Otolaryngology Departmental Review 2009-843	10/30/09	Grant management; non-certified effort reporting; financial results and internal control assessment certification	March 2010
University of Michigan Health System Office of the Executive Vice President for Medical Affairs Operational Review 2009-205	11/17/09	Procurement and payroll training; excluded costs; segregation of duties; reconciliations	June 2010
University of Michigan Medical School Michigan Institute for Clinical Research and Health Research Grant Management 2009-106	11/30/09	Non-certified effort reporting; grant adjustments; Veterans Administration Hospital appointments; expense classification; compliance with P-card Guidelines; business continuity plans	August 2010
Plant Operations Construction Services 2008-602	11/4/08	Project management reporting	First Follow-up June 2009
			February 2010
School of Music, Theatre & Dance Fiscal Responsibilities 2008-815	11/26/08	Financial oversight and monitoring; several procurement and payroll observations; documented procedures; written delegation of authority; imprest cash management	First Follow-up August 12, 2009
			December 2009
William L. Clements Library 2008-212	1/26/09	Grant compliance; endowment agreements; collection management; insurance coverage; physical safety and security; reconciliations; recharge rates	February 2010
University Press Inventory and Receivables 2008-203	1/30/09	Accounts receivable; inventory	February 2010
School of Kinesiology Fiscal Responsibilities 2009-203	4/14/09	Effort reporting; SOA and gross pay register reconciliation and review; credit card terminal placement; time reporting review; imprest cash fund; deposits; record retention; background checks; hiring documentation	December 2009

Benefits Administration Office 2009-101	4/30/09	Logical access to benefits data; addition to discrepancy reporting; invoice error reporting; flexible spending account payment reconciliation; compliance monitoring	First Follow-up September 30, 2009
			March 2010
University of Michigan – Flint Office of Development and Alumni Relations and University Outreach 2009-811	5/15/09	Relationship with University Development; performance standards; prospect management; coordination with Schools; cash handling; pledges; budget process; business continuity/disaster recovery plan	February 2010
University Unions Focused Review 2009-809	6/01/09	Cash management; payroll observations; statement of activity reconciliation; computer access	December 2009
Chemical Biology Doctoral Program Interdepartmental Degree Program 2009-812	6/30/09	Program reporting and oversight; compliance with procurement and hosting guidelines; effort certification; record retention; service level agreement; conflict of interest and conflict of commitment	March 2010
Deposit Process Audit 2009-103	07/20/09	Tracking of bank errors/adjustments; foreign checks; automated deposit stations security; treasurer’s office procedures	December 2009
Intercollegiate Athletics NCAA Directed Review 2009-401	7/24/09	CARA forms process	December 2009
Dearborn Early Childhood Education Center 2009-110	09/30/09	Aged A/R; timeliness of deposits; physical security of cash; reconciliations; receipts; hosting events documentation; voucher review; privacy of employee records; double-time; IT security	March 2010
U-M Dearborn Grade Changes 2009-109	11/5/09	Faculty grade change notification; access to supplemental grade reports and the grade change system; management review of system access reports; registration and records policy and procedures; baseline controls in units	May 2010
University Housing Fiscal Responsibilities 2009-814	11/9/09	Various controls related to purchasing, financial reporting, discretionary funds, payroll and time reporting, cash operations, internal control gap analysis, travel and hosting, business continuity and disaster recovery plans, conflict of interest/conflict of commitment	June 2010
Center for Human Growth and Development 2009-206	11/17/09	Security/maintenance of sensitive data; monitoring grant budgets; imprest cash fund management/subject fee payments; disaster recovery/business continuity planning; statement of activity reconciliation/segregation of duties	June 2010
Taubman College of Architecture and Urban Planning 2009-202	11/20/09	International program administration; safety and security; shared access; faculty data backup; cash management; inventory management; recharge rates	March 2010

