Item for Information

Subject: Report of University Internal Audits
                July – September2012

Attached is the report of activities completed by the Office of University Audits for the period **July – September2012**.

Included in the report are a:

- Summary of each audit report issued during the period, including Management's Corrective Plans. These audits were presented at the Regents' Finance, Audit, and Investment committee meeting in July.
- Summary of each follow-up review report issued during the period, including the actions completed by management. Follow-up reviews are designed to provide assurance that Management's Corrective Plans have been implemented, are working as intended, and are sustainable.
- Table of open audit issues as of **September 30, 2012**, including estimated completion dates.

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

Respectfully submitted,

Jeffrey M. Moelich, Executive Director
University Audits

ORIGINAL REPORTS

Campus

Intercollegiate Athletics NCAA Compliance Review   2012-404
Report issued July 18, 2012

As a member of the NCAA, the University of Michigan is required to comply with NCAA rules and regulations. At U-M, the Compliance Services Office (CSO) has the primary responsibility to oversee conformity with these guidelines. University Audits completes an NCAA Compliance Review on an annual basis to provide assurance to the Athletics Office that CSO processes are effective. This review incorporates all varsity sports over a five-year cycle, with higher profile sports receiving more frequent reviews. Procedures also include a review of select external camps and booster clubs to confirm that processes for tracking financial activity are adequate. Booster clubs and external sports camps are reviewed on a five-year cycle. The current year's selected sports, booster clubs, and external camps are noted below.

Selected Sports	External Camps	Booster Clubs
• Football • Men's Basketball • Women's Basketball • Men's Swimming • Women's Swimming • Women's Tennis • Water Polo	• Track and Field • Men's Basketball • Volleyball • Men's Gymnastics • Tennis	• UM Club of Greater Detroit • "M" Club of the UM • UM Club of Greater Flint

Compliance Review Procedures
The section below outlines detailed procedures performed for each compliance area. Unless specifically noted, procedures were performed only for the selected sports and for the 2011/2012 academic year.

Overall, University Audits observed no NCAA violations that were not already appropriately identified by the CSO's regular monitoring processes and reported to the NCAA.

Rules Education
- Confirmed that the rules education program includes student-athletes, coaches, non-coaching Athletics employees, and other representatives of the University's athletics interest (e.g., boosters).
- Reviewed selected CSO rules education packets for meetings held during fall 2011 and winter 2012 to ensure coverage of key NCAA rules and regulations, including topics such as financial aid, recruiting, and eligibility.

Playing and Practice Seasons
Beginning in fall 2011, the process for submitting and monitoring Countable Athletically Related Activities (CARA) is now done through the CSO's compliance monitoring software, JumpForward. The new process requires that the coaches log in to the system and report weekly activities for each of their

athletes. JumpForward then identifies a random sample of athletes who will receive an email requesting that they login and anonymously verify the hours reported by the coach.

To complete the review of playing and practice seasons, University Audits:
- Confirmed the coaches for each of the selected sports did timely reporting for CARA for all weeks available at the time of the review.
- Noted the percentage of athletes in the random sample that had logged in to confirm the schedule.
- Verified compliance with NCAA weekly hour limits and day-off requirements and confirmed adequate follow-up with student-athletes based on their responses. For football, the entire season up to the end of March was included. For men's basketball, four weeks of the playing season and three weeks of the off season were reviewed. For all other selected sports, one playing season week and one off-season week were reviewed.Verified compliance with restrictions on start and (if applicable) length of playing seasons.

No issues of non-compliance with NCAA CARA rules were identified. University Audits met with CSO leadership to discuss possible ways to further strengthen the CARA monitoring processes. Recommendations and CSO's plans to further enhance the CARA verification process are detailed in a separate memo.

Coaching Staff Limits
- Verified compliance with NCAA coaching limits by reviewing the coaching staff lists
- Confirmed that non-countable staff (volunteer and other non-coaching positions) signed the agreement that details permissible and non-permissible activities.

Financial Aid
- For the entire student-athlete population, used an automated data analysis program to compare financial aid amounts in M-Pathways to the data reported to the NCAA. Specifically:
  - Verified that total financial aid and athletic-based financial aid reported in the University's system for the fall 2011 and winter 2012 terms was within NCAA limits.
  - Confirmed the financial aid amounts in the University's system were not greater than the amounts actually reported to the Big Ten on the squad lists.
- For the sampled sports, verified compliance with NCAA team limits.

Eligibility
- *Initial Eligibility* **-** For a sample of incoming student-athletes, confirmed each student-athlete:
  - Had initial eligibility reports or other documentation from the NCAA Eligibility Center
  - Had their certification of initial eligibility completed prior to the student-athlete's initial competition
  - Was enrolled in a full-time program leading to a degree
- *Continuing Eligibility* **-** For a sample of continuing student-athletes, confirmed each student-athlete:
  - Was enrolled in a full-time program leading to a degree
  - Was within the NCAA prescribed number of seasons of eligibility
  - Met specific NCAA and Big Ten progress toward degree and minimum grade point average requirements
- *Transfer Eligibility* **-** For a sample of incoming transfer student-athletes, confirmed each student-athlete:
  - Met the one-year residency requirement or qualified for a waiver
  - Had a copy of the releases from previous institutions on file

   o Met eligibility determinations for practice and competition

Recruiting
- *On-Campus* **-** Reviewed documentation for a sample of prospects from the selected sports who made an official visit to the University and confirmed:
  - The visit took place after the first day of classes of the prospect's senior year in high school
  - The file contained academic documentation and test scores or NCAA Eligibility Center verifications
  - The visit lasted no more than 48 hours
  - Lodging, meals, and entertainment were compliant with NCAA regulations
  - Official Visit and Code of Conduct forms were accurately completed
- *Off-Campus* **-** Reviewed a report from JumpForward that details all contacts and evaluations for a sample of prospects from the selected sports. Confirmed that the contacts and evaluations for the prospect did not exceed NCAA limits and occurred during allowable periods.
- **Phone Calls and Texts to Prospects** - Confirmed that all potential phone call and text discrepancies identified through the CSO's automated monitoring processes were either adequately explained or reported to the NCAA.

Camps and Clinics
- Reviewed compensation documentation submitted to Athletics to confirm that compensation for coaches and student-athletes is reasonably consistent with other counselors of like teaching ability and camp experience.
- Confirmed that free or reduced admissions were recorded on appropriate CSO forms and compliant with NCAA regulations.
- Reviewed bank statements and supporting documentation to ensure transactions are reasonable, have a clear business purpose, and appear to be related to the operations of the camp.
- Confirmed reasonableness of amounts reported on the Athletics Financial Disclosure form, based on documentation provided.

Boosters
- Reviewed each booster club's Statement of Disclosure and financial records and assessed their processes for managing and tracking financial activity. Each booster club received a memorandum with suggested process improvements in their area; no compliance issues were observed.

Complimentary Tickets
- For one postseason game for football, men's basketball, and ice hockey confirmed that:
  - Student-athlete guests were clearly authorized.
  - NCAA limits on number of tickets were observed.
  - Complete supporting documentation was available.
- University Audits conducted an audit of Athletics complimentary tickets in fiscal year 2011. The follow-up for this audit was active during this compliance review. Follow-up procedures included confirming that recipients of complimentary admissions (guests, coaches, and prospects) were properly identified and authorized, that complimentary admission was supported by postcards, and that the appropriate number of complimentary tickets were provided. Therefore, no additional testing was performed as part of this review for regular season games.

University Audits also obtained general information on processes used by the CSO and other Athletics personnel to oversee:

- Equipment and apparel
- Student-athlete vehicles
- JumpForward system

Detailed testing was not performed in these areas. University Audits assessed, at a high-level, the overall adequacy of the procedures through interviews and documentation review.
Based on University Audits review of written procedures and documentation, overall, the CSO has adequate controls for monitoring compliance with NCAA guidelines in the areas of rules education, playing and practice seasons, coaching staff limits, financial aid, eligibility, recruiting, boosters, and complimentary tickets. The CSO continues to look for ways to refine and enhance their monitoring procedures, including replacing manual processes with more efficient automated procedures. University Audits, the CSO, and the Athletics Business Office will meet in the second quarter of fiscal year 2013 to plan for the 2013 NCAA audit

Transportation Research Institute   2012-502
Report issued September 13, 2012

The University of Michigan Transportation Research Institute (UMTRI or the Institute) has earned an international reputation for its commitment to the research of transportation systems and driver safety. Founded in 1965, UMTRI continues to significantly influence transportation on a local and global scale. Over 1,000 research projects have been completed in areas such as data collection and safety analysis, human factors, engineering, and public policy. Human subjects, such as teenage and elderly drivers, participate in specific demographic studies. Because UMTRI is almost exclusively funded by federal and non-federal grants and contracts, the ability to successfully compete for available funding is a critical success factor. In fiscal year 2011, the two most significant funding sources included federal ($8.2M) and non-federal ($3.8M) project awards. Strong oversight of financial activity is critical to maintain an accurate budget and comply with grant and contract requirements.

One of UMTRI's major recent achievements is a 30-month, $14.9M contract awarded by the U.S. Department of Transportation to conduct a model deployment of the Connected Vehicle Safety Pilot. The program centers on deployment of a vehicle communications system in approximately 3,000 cars. Data from these systems will be analyzed and used to improve the safety and efficiency of the nation's transportation system. The national awareness of this program highlights the necessity of effective and secure information technology resources as well as sound asset management and financial monitoring procedures.

Managing payroll is a major component of projecting an accurate budget. The majority of staff do not have direct appointments in the University's payroll system. Instead UMTRI personnel use the sponsored pool accounting method. This method requires researchers to enter their daily time spent on multiple projects in Wolverine Access. UMTRI is one of very few units that account for their time in this manner. An advantage to using this method is that it also acts as their method to report effort. Effort reporting is a standard grant and contract requirement.

In recent years, UMTRI has undergone major restructuring and reorganization efforts as a result of a thorough self-assessment. Several subcommittees were formed to carry out key charges of UMTRI operations (e.g., space and facilities, budget, and faculty development). Progress is still being made in developing an effective shared services model and communication procedures within UMTRI. A recently developed five-year strategic plan is essential to UMTRI's continued growth. The plan, created with oversight of leadership in the Office of the Vice President for Research, details UMTRI's vision for contributing to safe and sustainable transportation for a global society.

Purpose and Scope
The primary objectives of the audit were to evaluate key operational and financial controls to ensure UMTRI is in compliance with University policies and procedures and all applicable state and federal requirements. Controls in the following areas were evaluated:
- Project management (e.g., grants/contracts)
- Procurement
- Financial monitoring and reporting
- Internal communication
- Conflicts of interest and commitment
- Payroll and effort reporting
- Asset management
- Safety and continuity of operations
- Information technology systems and access

Evaluation of these controls was accomplished by interviewing key UMTRI process personnel, documenting work flows, and testing sample documentation for selected projects.

Risk and Control Discussion
Standardized Project Management
UMTRI is almost exclusively funded by sponsored projects. Principal Investigators develop project proposals and obtain funding to retain their staff. Because funding is limited, staff is inherently sensitive to project expenditures including time and expenses. The review of project time and expenses by research administrators is thorough, and there is significant involvement from Principal Investigators. However, each research administrator reviews and reconciles project information differently. Some reconciliation processes use supplemental and shadow systems, which may be necessary because of University system limitations and the use of pool accounting. UMTRI leadership was aware of the differences prior to this audit and had already begun working to assess each method as a first step to standardize the process, moving toward their desired shared services structure.

Recommendation: Continue to assess all methods and materials used by research administrators as part of their monthly reconciliation process. Select procedures to use or modify to create the most efficient and compliant method to help standardize the review and reconciliation process. Consider the use of a compliance matrix to track unique grant/contract requirements (e.g., returning assets to sponsors at project end). Work with personnel from Information and Technology Services to develop reports that eliminate or reduce the need for supplemental and shadow systems. If there is a continued need for these systems, document procedures for their use and ensure monitoring controls are in place. Consider continued benchmarking of procedures and tools used by other units in this process. Finally, appropriate training for use of the new processes and procedures should be provided.

Management Plan: UMTRI has been actively assessing methods and materials used by research administrators for monthly reconciliation for nearly a year at the recommendation of the Administrative Subcommittee. In addition, in conjunction with the Administrative Subcommittee, UMTRI has investigated tools used by other units. This included hosting a cohort from UHS General Medicine

where they provided a demonstration of their reconciliation and projection system in March 2012. After searching the University at large, General Medicine was selected because they were using M-Reports and Unit-defined Commitments to reconcile and their system included a staff effort planning component. Finally, prior to this audit, UMTRI began a collaborative interaction with MAIS/ITS to develop a reconciliation query suitable for its person- and hour-based budget monitoring requirements.

Modifications to this query are currently underway and UMTRI expects to deploy a common reconciliation tool that optimizes the use of University tools and includes functionality for projections using unit-defined commitments prior to the end of the calendar year. Once complete, we will provide training, define procedures, and launch this reconciliation system at UMTRI by March 2013.

UMTRI will investigate the development of a compliance matrix for incorporation into its project management monitoring and oversight and will submit a proposal for incorporation of a compliance matrix to the Administrative Subcommittee prior to the end of the fiscal year 2013.

Compliance with University Guidelines
Faculty Certification Monitoring: UMTRI faculty has access to sensitive research information at the University. Because faculty may consult or have outside businesses they are required to certify their conflict of interest/commitment status each year using M-Inform, the online certification tool. The certification and review process should be completed during the July-September timeframe. Testing showed that certifications for three current faculty members were not reviewed and/or not signed by the employee. Eight certifications were not completed until March 2012.

Delegation of Authority: A subcontract between UMTRI and an external contractor was sent by the Office of Contract Administration to be signed by the Director of UMTRI. The document was instead signed by the Institute's Administrative Manager. There is no documentation on file supporting the documents/activities that have been verbally delegated by the Director to this individual. Delegation of authority is important because it allows an authorized person to bind the University to an obligation.

Recommendations
Faculty Certification Monitoring: Review the summary certification reports from M-Inform frequently during the established certification timeframe to ensure all faculty certifications are signed and reviewed in a timely manner. Develop and document escalation procedures for situations of noncompliance. Ensure faculty members are made aware of these procedures when the annual certification notice is sent out. For accurate reporting and ease of review, work with M-Inform personnel to remove past employees from the certification reports.

Delegation of Authority: To assist authorized individuals in performing delegated responsibilities appropriately, it is best practice to have a written delegation of authority on file that contains the following: names and titles of individuals with delegated authority, a list of delegated responsibilities, guidelines for applying delegated authority, and expiration date(s). The letter should be periodically reviewed and revised to reflect any changes to the delegation in a timely manner.

Management Plan: UMTRI will review and approve faculty certifications through M-Inform or other Office of the Vice President for Research (OVPR)-selected systems in the first quarter of fiscal year 2013. The UMTRI Director will review and approve submitted disclosures, and the Business Administrator will follow-up with unsubmitted faculty certifications by September 30, 2012.

UMTRI will provide a written delegation of authority letter, signed by the Director, to OVPR and the University by August 30, 2012.

Auditor's Note: Sustainability of the corrective action for faculty certification monitoring will be assessed during the formal follow-up.

Fiscal Responsibilities
Asset Tracking: Asset testing showed that not all assets are tagged and some selected assets could not be located. One asset selected for testing was sent back to the sponsor, per contract terms, at the conclusion of the program, but was not removed from the asset listing. The locations of assets taken off-campus several years prior are unknown. Dated and inoperable assets are held for reuse. Given the condition and age of these assets, reuse seems unlikely. The space and time required to retain and track these assets may not be a worthwhile use of UMTRI resources.

Analysis of Pool Accounting Method: UMTRI is one of three units at the University to use the pool accounting method for payroll. This method is manually intensive and requires research administrators to review every timesheet for corrections, available funding, minimum effort requirements, and to manually calculate effort percentages and total hours each month. Employees estimate their effort for the final working days of the month (up to six days); however, without commitment to the estimates there is a potential for inaccurate sponsor reporting and future payroll corrections. Additionally, the expense to participate in the pool may outweigh the overall benefit received by UMTRI.

Deferred Maintenance Account: UMTRI receives a General Fund allocation and could also request funding from the Provost (one-time or base) for equipment or facility items. In addition, OVPR established a Savings Program for maintenance needs and requires UMTRI, among other units, to transfer a set amount of funds to the program each year. In recent years, UMTRI's required contribution to the fund has been waived because they have used the funds intended for contribution for various infrastructure needs. The waiver and the process to receive the waiver was not documented or retained.

Recommendations
Asset Tracking: Confirm the accuracy of listed assets, including their location and value. Work with Property Control to ensure all existing assets and assets acquired in the future are tagged and listed on the asset inventory. Work with UMTRI IT to develop a mechanism to track assets taken off-campus, and assets that are highly moveable, yet under the asset threshold (i.e., computers). Assess the value of retaining older assets, specifically fleet vehicles.

Analysis of Pool Accounting Method: The use of the pool accounting method should be reassessed given the restructuring efforts and the new human resources responsibilities of administrators, particularly direct entry of department budget earnings[1]. Work with OVPR management to analyze the method and determine the cost-benefit for UMTRI, including the amount of time it takes each month to participate in the pool, cost of participating, accuracy achieved, completeness of effort reporting, etc.

Deferred Maintenance Account: Work with OVPR to document the process for contributing to the Savings Program, including the criteria or reason for receiving a contribution waiver. Document and retain any waivers obtained.

Management Plan: UMTRI will develop and initiate a comprehensive Asset Tracking Program that will include location and value, timely tagging of assets, and tracking of off-campus assets by March 31, 2013. The UMTRI IT Subcommittee will have a mobile computing security policy in place by

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[1] In November 2011, direct entry of Department Budget Earnings transitioned to departments. The primary benefit is that transactions impacting employee records can be entered by departments instead of flowing through central Human Resources, which decreases the amount of time it takes for a change to be posted.

September 2012, which includes asset tracking of institutional mobile devices such as laptops and tablets.

UMTRI will, in conjunction with related subcommittees under the Executive Committee, develop a process for curating and tracking older assets, including test vehicles. A tracking program will be introduced by June 30, 2013.

UMTRI will conduct an evaluation of the pool accounting method, including identification of its benefits and challenges, data collection and analysis of faculty and staff historical funding profiles, and known costs to the Institute and the University. In addition, UMTRI will compare the pool accounting method with the more common direct appointment method as a function of the project management system at the Institute. This evaluation will be concluded by December 31, 2012.

The UMTRI building is a general funds building and both the University and OVPR have active programs which set aside funding meant for building maintenance issues. UMTRI contributes to the University's fund through the annual budget process and has actively used funds ascribed to the OVPR Research Savings Program on ongoing maintenance needs. For the past few years, UMTRI's requirement to transfer funds to this program has been waived given its own investment into UMTRI infrastructure and facilities. In fiscal year 2013, UMTRI will contribute $100,000 to this savings program. UMTRI has not, as of this report, been identified as a University priority for building renovation or upgrades as supported from the University funds set aside for this program. UMTRI will continue to work with OVPR to create facilities suitable for long-term programs in sustainable transportation, as outlined in the 2012 – 2017 Strategic Plan.

Monitoring and Budget Reporting
Procurement Monitoring: UMTRI's process for reviewing procurement expenditures is very detailed. Every expense is reviewed at multiple levels of management from individual projects to UMTRI administration. This review process requires an extensive amount of time and effort. Aggregate monitoring reports are generally not used. Because of the nature of funding at UMTRI and sensitivity of expenses, most are pre-approved by Principal Investigators. As a result, the current review process could be streamlined without diminishing control.

Testing showed that some expenses contained unclear or generic business purposes. Per University guidelines, expense submissions require a clear business purpose to support and adequately describe the expense as a necessary, reasonable, and appropriate business expense for the University. A clear purpose also aids in effective monitoring of project expenses for compliance.

Budget Reporting: A central UMTRI budget is reviewed and modified by the Business Manager each month using the source-use information from University M-Reports. UMTRI management then removes future cost sharing commitments that are included in the current fiscal year information. Without additional disclosure, UMTRI's financial obligations may be obscured, which may influence the recommendations of the Budget Subcommittee.

Recommendations
Procurement Monitoring: Assess the cost-benefit of the current procurement expense review process to ensure all reviewers are necessary and are adding value. Work with ITS to use aggregate procurement reports. Remind personnel that all expenses require a clear business purpose prior to submission. Consider targeted training for repeat offenders.

Budget Reporting: Using the budget that is supported by the source-use report, clearly identify and explain the reason for adjustments (e.g., removal of future cost sharing commitments). Ensure all

contractual obligations are captured in the budget information provided to the Subcommittee, even if they are not to be paid in the current fiscal year. Consider explaining all variances over a defined threshold (e.g., $5,000) to increase transparency and aid in the monitoring of trends.

Management Plan: UMTRI will work with Procurement and MAIS/ITS to explore the acquisition of detailed procurement reporting capability that includes tracking of procurement exceptions with consideration to stricter OVPR unit policies. With the availability of adequate and complete aggregate procurement reporting, UMTRI will consider incorporating efficiencies in the procurement review process. Noting sub-certification requirements for internal controls in procurement, eliminating review steps will only be achievable with appropriate procurement aggregate reporting. UMTRI will actively seek such reporting by December 31, 2012.

UMTRI will provide all-institute re-training on procurement practices, with emphasis on improvements in identifying appropriate, detailed business purposes by December 31, 2012.

UMTRI has never adjusted cost sharing or other commitments not paid during a fiscal year on its financial reports provided to Budget Subcommittee or Executive Committee members. UMTRI has corrected financial reports to remove future or unconfirmed commitments from current fiscal year projections. To ensure transparency to the Budget Subcommittee and other individuals responsible for monitoring the UMTRI budget, UMTRI will add a new separate report that lists future firm and potential commitments on UMTRI central resources. UMTRI will better capture variances in fiscal year 2013 since new budget categories requested and approved by the Budget Subcommittee in the middle of fiscal year 2012 (February 2012) will be aligned with a supporting fund structure in the new fiscal year. While all variances are explained currently, the restructuring of supporting chart combinations to align with the approved report will greatly improve on the display of such variances.

Information Technology Controls
Security Risk Assessments: UMTRI has not assessed security risks to their sensitive information systems in accordance with Standard Practice Guide Section 601.27 and general best practices for information security. These include databases containing sensitive information on human subjects of UMTRI research, as well as commercial proprietary information. UMTRI may not be effectively targeting their security controls without the understanding of vulnerabilities and exposures that these assessments would provide. Management is, however, making a concerted effort to catch up and be more proactive in these duties. Working with ITS Information and Infrastructure Assurance, they have developed a plan identifying sensitive UMTRI systems and laying out a three-year assessment schedule for those systems. The first of these assessments began in January 2012 and was ongoing at the time of the audit.

Computer Hosting Facilities: The rooms in which UMTRI servers reside have been retrofitted for this use. The supplemental cooling (air conditioners) in these rooms are not redundant, so a sustained failure of any one cooling unit could require server shutdown. During the course of the audit, one server room experienced multiple air conditioning failures. Some of the rooms are packed with loose spare equipment and other items. Hardware destined for disposal was also frequently observed in the server rooms. Backup power is severely limited. Access to the rooms is controlled with brass keys, so there is no documented audit trail of room access. The rooms are keyed separately from the building master, and key distribution is quite limited. However, one room, which is also used for document storage, is accessible by ten people. This room also houses servers that store, process, or control access to export-controlled data.

Recommendations

Security Risk Assessments: Continue to perform security risk assessments as laid out in the three-year plan. These assessments should support the information security control assertions that UMTRI researchers have made in the security plans submitted to their research sponsors. The assessments should also examine the security practices surrounding significant data resources managed by each area, particularly those containing data on human research subjects and other forms of personally identifiable information. Examples include the Transportation Data Center and "Trucks/Buses Involved in Fatal Accidents." Assessing against NIST Special Publication 800-53 security control guidelines would be particularly appropriate in the case of federal government contracts and subcontracts, which are subject to compliance with the Federal Information Security Management Act.

Computer Hosting Facilities: Compare the availability requirements of UMTRI systems and the security requirements of UMTRI data to determine whether the current arrangement for housing servers is appropriate. If continuous availability is required, facility improvements, including reliable cooling, need to be addressed. If cost-prohibitive, a mirroring strategy might be a desirable alternative. Export-controlled data should be housed in the most secure space practicable. UMTRI should consider either moving the systems storing/accessing that data to a more restricted space, or relocating the documents currently stored in that room. Otherwise, anyone who is allowed unsupervised access should be screened for citizenship and other criteria under export controls regulations.

Management Plan: UMTRI will continue to execute its planned RECON schedule. These assessments will examine the security practices associated within UMTRI Groups and their respective research efforts, such as Safety Pilot Model Deployment, CMISST, and TIFA. Operating within the RECON methodology at all times, NIST Special Publication 800-53 will be consulted to ensure compliance with Federal regulations.

The UMTRI IT Subcommittee will continue to review UMTRI's server needs, including considering use of central U-M resources where appropriate and cost-effective.

The fourth-floor server room will be cleared of unrelated materials. Access will be further restricted to only those personnel who are authorized to access the most sensitive information that is stored on those servers and systems administration support cleared by appropriate background checks and PEERRS training.

Documented Procedures and Expectations

Given the recent restructuring and reorganization efforts, in some instances existing process documentation is outdated or not yet finalized. For example, procedures for assigning and managing fleet vehicles are not documented. The use of cars for research purposes after fulfilling their specific project commitment increases the need for controlling the risks associated with driving University vehicles. In addition, movement to a shared services model shifted individuals and responsibilities (e.g., Administrative Manager now handles UMTRI human resources functions) and procedures do not accurately reflect the new model.

Recommendation: Update and/or develop and document comprehensive procedures for UMTRI administrative processes, for example, reconciling projects at month-end (after a standardized process has been implemented) and processing, refunding, and reconciling credit card payments. Document procedures for assigning and managing fleet vehicles using the University Standard Practice Guide Section 601.21, *Parking and Transportation Services* as a reference. Include steps to verify a valid driver's license and, when necessary, to obtain exception permission to allow vehicles to park at personal residences. Document expectations (do's and don'ts) for when UMTRI personnel use the vehicles for research purposes.

Develop and distribute clear role descriptions and expectations for all administrators (research and general) to ensure standard, expected responsibilities are known. To the extent possible, leverage responsibilities of the new communications position to facilitate and internally communicate impactful changes and activities to UMTRI staff.

Consider the use of UMTRInet, an intranet for UMTRI faculty and staff, to store and update processes and procedures. Ensure all UMTRI personnel have access to UMTRInet and the OVPR policy site in CTools to encourage greater compliance and transparency.

Management Plan: UMTRI will develop and disseminate clear business processes and procedures for the new adopted standard reconciliation process by March 31, 2013. UMTRI will also develop and disseminate new business process procedures for any additional new processes that are developed in fiscal year 2013, such as those which may relate to procurement review and monitoring, business purpose development and review, etc. All new business processes will be included on the UMTRI-net and access to the OVPR Administrative Procedures CTools site will continue to be available for all administrative support staff.

UMTRI will reorient administrative support to the standard services provided in the shared services model at its September 2012 Support staff meeting. In addition, UMTRI will utilize performance review meetings in summer 2012 to provide the standard services descriptions to administrative staff. UMTRI will house all duties descriptions and business process procedures on the UMTRI-net for all UMTRI faculty and staff.

Auditors Note: Corrective actions for passed target dates will be reviewed for completeness during formal follow-up.

Summary

UMTRI management, in conjunction with OVPR leadership, has implemented significant administrative changes and process improvements over the past three years. Research project management is a central part of UMTRI operations, and opportunities to standardize and document the process were well received by management. Management's commitment to standardizing project procedures will facilitate the transition to the shared services model envisioned in their strategic plan.

Efficiencies can be gained by ensuring monitoring and reporting procedures are streamlined, with all steps adding value. Reeducating staff about University requirements regarding procurement, asset management, and faculty certification will aid in compliance. Documenting job responsibilities and communicating expectations will encourage consistency and transparency.

UMTRI has embraced IT rationalization, progressing toward a common, centrally provided desktop computing platform based on shared services while researchers focus on the special systems, tools, and technologies that power their discoveries. Management recognizes where the organization needs to improve controls to ensure appropriate levels of data security and IT service continuity, and is engaging with appropriate University resources to do so.

Formal follow-up to the outstanding issues will be begin during the fourth quarter of fiscal year 2013 and additional follow-up will be conducted as necessary until all significant corrective actions are completed

University Audit completed a post-construction review of South Hall, the Law School's (the School) new academic building, and the Robert B. Aikens Commons project. School demand for additional space increased in recent years due to a substantial growth of the student and faculty body, introduction of many new curricular and extracurricular programs and services, and evolving legal education methods that require contemporary technologies in classrooms and student service areas. The Board of Regents approved the construction project in December 2007.

The architectural firm of Hartman-Cox, based in Washington D.C., in association with Integrated Design Solutions, LLC, a Michigan firm, were selected to design the project. Walbridge Aldinger was selected

as the construction manager. Architecture, Engineering, and Construction (AEC), a department under the Associate Vice President for Facilities and Operations, oversaw all design and construction activities. The estimated cost for the project approved by the Regents was $102 million dollars. Funding was provided from gifts, University funds, and Law School internal resources. Ground was broken in September 2009.

South Hall opened in January 2012. It is a four story, 100,000 square foot structure, designed in a modified collegiate gothic style modeled after the other Law Quad buildings. It houses classrooms, clinics, student services, faculty and staff offices, and multi-purpose space. South Hall achieved LEED (Leadership in Energy and Environmental Design) Gold Certification for its sustainability features

South Hall

Robert B. Aikens Commons

The Robert B. Aikens Commons opened in September 2011. It is a two story, 16,000 foot structure connected to Hutchins Hall. It was named after Robert B. Aikens, who donated $10 million to the construction fund for this Law School addition. The Robert B. Aikens Commons provides student study, interaction, and support spaces, including a café on the main floor.

Purpose and Scope
As this audit occurred at the close of construction, vendor selection process, construction site safety and security, project schedule, infrastructure planning, and move-in planning were out of scope. The main objective of this review was to assess and evaluate policies and procedures for project close-out activities, gift administration, and financial management. The audit focused on:

- Ensuring the construction project was adequately completed before it was turned over to the University.

- Verifying the adequacy of processes that ensure gift funds were properly accounted for, reconciled, and used in accordance with donor intent.
- Assessing processes and controls in place to monitor costs and promote efficient and effective spending.

Conclusions and Current Project Status
University Audits did not identify any significant issues during the audit. The construction manager and trade contractors delivered the project scope in accordance with the contract terms and conditions. All applicable inspections and punch lists were completed in a timely manner. Operating and maintenance manuals were turned over to the University and appropriate staff received training on building maintenance requirements and systems operation (e.g., lighting system and audio-visual equipment).

AEC has robust processes and procedures to monitor and control project expenses. It is estimated the final total construction cost will be approximately $84 million dollars, significantly under the original budgeted $102 million dollar cost. Key factors for budget savings were favorable bids from contractors due to the economic situation and value engineering during the design phase. The project remains open pending completion of some items such as executing the final change order and the final payment with the construction manager, closing all purchase, and finalizing the reconciliation of expenses to the general ledger. The timing is appropriate for a construction project of this magnitude.

The Law School raised over $70 million in gifts including cash, future pledges, bequests, and life income gifts. The School has adequate processes to track, reconcile, and monitor gifts and future pledges. To recognize significant gifts, the process of naming internal spaces after donors is under way. We encourage the School to continue its efforts to ensure naming of facilities is done in accordance with the funding plan and donor gift agreements, and in compliance with University policy and guidelines. The Central Development Office and the University Planner's Office can be valuable resources in this process.

Summary
South Hall and the Robert B. Aiken Commons are the School's most significant additions since Hutchins Hall opened in 1933. The new facilities will serve the needs of a growing Law School faculty and student community for years to come. AEC and Law School management effectively managed a successful design and construction project. **This audit is closed.**

Information Technology
IT Services Provided to North Campus Research Complex (NCRC) Third Party Companies   2012-312
Report issued July 18, 2012

NCRC's mission statement is to "expand the University's capabilities as one of the nation's top translational research[2] institutions and be a driver in the resurgence of the Michigan economy." NCRC provides opportunities for research collaboration between private or not-for-profit entities and the University through co-location. The University of Michigan leases space and provides services to numerous small companies and the Department of Veterans Affairs Medical Center Ann Arbor. The U-M Office of Technology Transfer's Venture Accelerator at NCRC provides laboratory and office space, as well as business services, to start-up companies. This relationship allows research collaboration between the University and each start-up. NCRC provides various services to these companies; one of

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[2] Transitional research is used to translate the findings in basic research more quickly and efficiently into medical practice and, thus, meaningful health outcomes, whether they are physical, mental, or social outcomes.

which is information technology (IT) service. IT services provided include basic networking, telephone services, and server hosting. Medical School Information Services (MSIS) is the primary IT support organization. Other IT providers involved in these relationships include Medical Center Information Technology (MCIT) and Information and Technology Services (ITS).

Purpose and Scope
The primary objective of the audit was to review IT services provided by the University to non-University third party companies located at NCRC. Areas considered during the audit included:
- Incident response procedures
- Vulnerability of U-M networks due to connecting third party IT assets to the network
- Access controls that disallow immediate, unauthenticated access to U-M networks
- Change control notifications, identifying network outages, or changes to services provided
- Insurance coverage for physical and intellectual property loss
- IT security requirements
- Disaster recovery plans
- The Proper Use of Information Resources, Information Technology, and Networks at the University of Michigan

Interviews were conducted with the NCRC Executive Director, the IT Director, and mangers from MSIS, MCIT, and ITS. Leases with the following companies were also reviewed:
- Start-ups
  - Arborlight LLC
  - Diapin Therapeutics LLC
  - Edington Associates LLC
  - Life Magnetics, Inc.
  - Sensigma, Inc.
- Other third parties
  - BoroPharm, Inc.
  - Lycera Corporation
  - Department of Veterans Affairs Medical Center Ann Arbor (VA)

The third party company's personnel, equipment, and policy and procedures were deemed out of scope and were not included in the audit.

Risk and Control Discussion
<u>VA Security Requirements</u>
Discussion: University of Michigan representatives met with VA personnel to agree on security policies and procedures for VA use of U-M communication closets. There was no documentation to validate that the VA accepted these procedures, though MSIS management stated that there was a verbal acceptance. That there is no documentation stating if physical security of the communication closets at NCRC Building 14 Room D007, NCRC Demarc, and UM/NCRC Network Interconnect are acceptable to the VA is a primary concern.

Control Recommendation: Acceptance by the VA of University of Michigan's security policy and procedures for the network closets that contain VA equipment and networks needs to be documented and included with the other contractual agreements between the University of Michigan NCRC and the VA. Fully documenting the VA's acceptance of the network closets' security configurations during the negotiations of NCRC Building 16 will help to ensure that contractual agreements between the University and VA are met and any exceptions have been approved.

Management Plan: The NCRC Managing Director will be responsible for working with the U-M Real Estate Office to obtain written acceptance from the VA regarding security policy and procedures, assumptions, and exceptions regarding the overall IT plan, including physical security of communications closets, as part of contractual agreements relating to leased space at NCRC.

Presuming a successful lease negotiation for Building 16, this corrective action will be incorporated into the Building 16 IT plan, rendering retroactive action for the Building 14 lease unnecessary. If the Building 16 lease negotiation is not successful, this corrective action will be obtained for the existing current lease between the University and VA.

Conflict of Interest
Discussion: The IT Administrator for the Office of Technology Transfer (OTT) provides basic technical support to the Venture Accelerator companies consisting of:
- Central printing support
- Desktop support
- Coordination with MSIS helpdesk for network support and infrastructure support
- Review of monthly vulnerability scans of networks and reports findings with respective tenants
- Data entry into network address management software

The Venture Accelerator companies occasionally have hired the OTT IT Administrator as an outside consultant to perform IT tasks that are outside the normal services provided, such as server administration or setting up network storage devices. The IT Administrator notifies his manager and takes vacation time to cover the hours spent working as a consultant. The companies have the option to hire other outside companies to help or manage their IT assets. There is a potential conflict of interest or commitment, which needs to be addressed and formally documented.

Control Recommendation: Develop a formal document to track management plans to oversee potential conflicts of interest or commitment. The individual disclosing the conflict and the Office of Technology Transfer Director should sign the management plan.

Management Plan: During the course of this audit, OTT formally documented the potential conflict of interest and the disclosure was sent to the Executive Director of OTT. Policy and procedures are already in place to handle conflicts of interest and commitment.

Auditor's Comments: No further action is required for this observation. The formal disclosure was reviewed during this audit.

IT services provided to third party companies at NCRC appear to be well controlled. Policy and procedure governing IT services provided by the University to non-University third party companies located inside NCRC are documented appropriately and appear to be comprehensive. Primary points of contact are established between the University and relevant third parties. Changes that affect such third party tenants are communicated via email. Insurance coverage protecting tenants and the University are in place and security requirements and responsibilities have been defined and implemented. All tenants are subject to the University's Acceptable Use Policy. In order to maintain proper IT procedural and security controls in a dynamic environment, such as NCRC, which involves outside companies and multiple IT service providers, it is imperative to ensure continual coordination among all involved University entities and the third party companies. MSIS, MCIT, and ITS meet on a frequent basis with the IT Director of NCRC to ensure collaboration between all parties involved.

During the audit it was identified that the NCRC IT Director's position served as a key control for coordination between the third party companies and the University. A recent change at the NCRC IT Director position has the potential to impact the services, communication, and collaboration between the third party tenants and the IT Service providers for NCRC. However, a replacement was identified, and this position has transitioned to another person maintaining the same responsibilities.

Continued University collaboration and implementing the mitigation strategy in this report would ensure a well-controlled environment for the growing number of tenants at NCRC.

University Audits will conduct a follow-up review during the second quarter of fiscal year 2013 to assess the effectiveness of improvements implemented by management

Information and Technology Services Communications Systems and Data Centers Enhanced Cellular Coverage Project   2012-303
Report issued July 26, 2012

The Enhanced Cellular Coverage Project, managed by Information and Technology Services Communications Systems and Data Centers (ITS Comm), is focused on improving cellular coverage in campus buildings. The main goal of this project is to have adequate cellular voice and data service in all University-owned buildings over 10,000 square feet on the Ann Arbor, Flint and Dearborn campuses , including the U-M Medical Center. The University of Michigan sought proposals from select suppliers that provide multi-carrier distributed antenna systems (DAS)[3] for in-building cellular service improvement. They selected one of these suppliers (ExteNet) to provide the engineering planning and design, project management, installation of equipment, and network management of the system to improve services for multiple carriers representing at least 70% of the cellular marketplace.

The University's responsibilities include granting exclusivity rights to ExteNet, allowing unrestricted access to designated (head end[4]) equipment rooms that house ExteNet and wireless service providers equipment, and installing and maintaining fiber optic cables between the head end and buildings throughout the University.

ExteNet's responsibilities include building a carrier neutral infrastructure. The goal is to have the wireless service providers (Verizon Wireless, Sprint, AT&T, etc.) fund the installation, but this plan puts them in control of timing and gives the University little control of the project. This model requires minimal funding from the University of Michigan since ExteNet owns the DAS equipment and is responsible for the business relationships with the carriers. With the ownership and responsibilities placed on ExteNet the risk involved with the Enhanced Cellular Coverage Project is low.

Purpose and Scope
The primary objective of the audit was to review project processes and procedures used to control physical access to U-M facilities by ExteNet, the third-party company installing the DAS used in the Enhanced Cellular Coverage Project. The audit focused on:
- Access control procedures used by contractor ExteNet while on University property
- Processes used to notify proper personnel/departments when maintenance/changes occur to the DAS

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[3] A multi-carrier DAS is defined as a multi-airlink/multi-frequency/multi-WSP (wireless service provider), fiber-optic based, distributed antenna system.
[4] Equipment or a facility that receives communications signals for distribution

- Project's milestones
- Identification procedures used for ExteNet contractors

Since it is not part of the Enhanced Cellular Coverage Project, University of Michigan wireless equipment was deemed out of scope and not included in the audit.

No significant issues were identified during the audit. Access control, identification, and communication procedures with ExteNet appear to be well controlled. Project milestones are identified and communicated in weekly status meetings between ExteNet and ITS Comm. ExteNet is currently in the build-out phase of the project, meaning installation of DAS equipment is still taking place. Once the system is fully installed and operational, the DAS will enter a maintenance stage where processes for access controls and communication procedures will need to be assessed to ensure the same level of control is maintained. **This audit is closed**.

Information and Technology Services Michigan Academic Computing Center	2012-807
Report issued August 23, 2012	

The Michigan Academic Computing Center (MACC) is a highly available data center owned and operated by the University of Michigan in a property leased from MAVDevelopment (MAVD). The MACC occupies the majority of the lower level of the building with the exception of the parking garage. Other building occupants include offices of Plante Moran, University of Michigan Health System, Merit, and Internet2.

The MACC covers 10,000 square feet with space for 250 computer racks. It hosts a variety of research and academic computer systems, including high density systems, small high performance computing clusters, and other systems with significant power and cooling needs. Both U-M units and University partners use the MACC.

Essential data center infrastructure such as electrical power and cooling equipment is co-located with equipment that supports the building. The main distribution frame (MDF), which conveys MACC data communications in and out of the building, is shared with other building tenants and U-M partners.

The MACC is designed to ensure the safety, integrity, and availability of the systems and the data housed in the facility by leveraging a high level of redundancy. This redundancy is derived from several components:
- A dual power path from the property line to the power distribution units
- Three diesel powered generators for electrical backup (only two are required)
- Flywheels (not batteries) to provide power while the generators come on line
- Two backup computer room air conditioners
- Two backup dry coolers
- Glycol system for cooling with two parallel pathways and crossover valves at regular intervals

Physical security is a primary concern for the safety and integrity of the data and systems hosted in the MACC. State-of-the-art security devices such as iris scanners, cameras, closed circuit television (CCTV), control access and on-call staff monitor machines housed in the facility. Sensors throughout the MACC provide staff with real-time status and notification of irregularities in a broad array of parameters such as power events, unauthorized access, and temperature fluctuations.

One of the goals of NextGen Michigan[5] is to optimally and cost-effectively match U-M data centers to the reliability and security needs of University systems and service offerings. To support this strategy, Information and Technology Services (ITS) is considering refocusing the MACC on administrative computing, including the storage and processing of sensitive regulated data. ITS requested that the Office of University Audits review the access security processes and procedures in preparation for hosting NextGen systems and services at the MACC.

Risks
The MACC is an important University asset. Failure to effectively manage risk in the data center could result in:
- Loss of server availability
- Inappropriate disclosure of data
- Data tampering
- Lost productivity
- Damage to the University's reputation

Reliability of the MACC's electrical power has been an issue for MACC tenants and an area of significant remediation effort by ITS. Redundant systems help to mitigate the risks of power loss. In addition to risks associated with access controls and security systems, controls that reduce the risks associated with the availability of electrical power are critical to the successful operation of the MACC. MACC Data Center Operations Staff (DCOS) have made several improvements to the power management systems by taking steps to mitigate power outages and improve the reliability of fail over systems.

Scope and Objectives
The objective of the audit was to ensure that access controls for the MACC are effectively managed and that the MACC will meet the reliability needs of the University by assessing controls in the following areas:
- Authorization of physical access
- Credentialing process
- Points of ingress and egress
- Oversight of visitors
- Adherence to U-M security policies
- Asset inventory
- Disaster recovery planning
- Continuity of electrical power

The audit focused on the core responsibilities of data center owners and operators outlined in the objectives above. Other units rely on these services when hosting their servers at the MACC. This audit did not examine controls such as:

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[5] NextGen Michigan is a strategy for changing the University's IT service approach and investing in the next generation of technology.

- Server hardening
- Passwords
- Server user accounts
- Antivirus
- Patching

These controls are typically the responsibility of server owners and operators, who were outside the scope of this audit.

Risk and Control Discussion
Role Based Access Approval Process
Discussion: The physical access request process currently does not follow a standard set of procedures. Access requests are processed differently depending on the source of the request. The lack of process documentation contributes to the inconsistency. A well-documented process ensures that the process will be completed the way that it was designed every time it is performed. Process documentation will also mitigate errors, gaps, and rework. Following documented procedures will also ensure consistent application of MACC user access policies. Other benefits of proper documentation include improved training, task delegation, and knowledge sharing.

Control Recommendation: University Audits recommends that the physical access request process for the MACC be standardized and thoroughly documented. Documentation should include the steps necessary to request physical access, roles that are responsible for granting access, job roles that are appropriate for access, and the handling of exceptions and request forms. Access requests should be tracked using a ticketing system that will provide a detailed history of the request and other necessary detail in the event of an investigation. Paper request forms should be stored and organized for easy retrieval.

Management Plan: ITS agrees with the need for process standardization and documentation. Due to the shared tenant nature of the MACC, ITS does not believe it is in a position to identify roles acceptable for admittance. By working with the MACC Operations Committee, ITS hopes to identify and limit access to those individuals requiring access and meeting regulatory requirements applicable to the data and equipment housed in the MACC. ITS does agree with the recommendation for tracking and retaining access records. ITS is working to implement an access request system utilizing the ITSM ticketing system.

User Access Removal
Discussion: Access control systems showed that 190 individuals have access to the MACC. A significant number of these users have not accessed the facility in at least one year. Two of the accounts belonged to individuals no longer employed by the University. One of the accounts belonged to an employee that was terminated in 2010. These accounts were discovered in both the keycard and iris scanner enrollment databases. Several accounts were discovered that belonged to employees whose current job role did not appear to require access to the MACC.

Each quarter the MACC Associate Data Center Coordinator reviews the list of accounts that have access to the MACC and requests feedback from MACC tenants to determine if accounts can be removed. This process does not effectively ensure account removal as it requires the tenants to notify MACC Operations of accounts that can be removed. The process is not fully documented and does not ensure timely recognition of employee status changes in employment, affiliation, and job role.

Some data and computing equipment held by the University is subject to export controls and other regulations that strictly limit who may physically or electronically access it. Access to items controlled

under the International Traffic in Arms Regulations (ITAR), for example, must generally be restricted to U.S. citizens or permanent residents. The high number of individuals with physical access to the MACC could make compliance with such a requirement difficult, should management decide to harbor ITAR-regulated data there. Limitation and justification of physical access is also an important component of other government regulations and industry standards the University encounters, such as the HIPAA Security Rule and the Payment Card Industry Data Security Standard.

Control Recommendation: Typical practice is to disable any account or access when the individual's need for it has ended or when it has been dormant for a predetermined period of time. University Audits recommends that MACC Operations strengthen and document their quarterly user account audit process to better ensure that dormancy, employment termination, or employee transfer to an unrelated unit or job role triggers a timely review of access. More stringent criteria limiting the range of persons qualified for MACC access would reduce the number of accounts to administer while increasing the security of the facility and facilitating regulatory compliance. The agreement with MACC tenants should require units to inform MACC Operations when an employee transitions out of a role that required access to the MACC.

Management Plan: ITS agrees to strengthen and document the quarterly account audit process and to include the requirement that tenant units inform MACC Operations of the need to revoke an individual's access.

Auditor's Comment: MACC Operations personnel removed the accounts of the terminated employees discovered during the audit. Retesting of user access to the MACC will be completed during the follow-up.

Third Party Employee Vetting Process
Discussion: ITS MACC Operations has entered into a contract (Rack License Agreement) with partners external to U-M. The contract states that MACC Operations will maintain a list of all authorized individuals and will review it with the authorizers at least twice each year. An authorized approver is someone that has been granted the authority to request access to the facility for personnel in their own organization. Currently a authorized approver list is not maintained.

Control Recommendation: University Audits recommends that MACC Operations develop an authorized approvers list as stated in the Rack License Agreement and review the list for accuracy on a regular basis.

Management Plan: ITS agrees to develop an authorized approvers list and review the list periodically for accuracy.

Video Monitoring
Discussion: The MACC currently houses fourteen Closed Circuit Television (CCTV) cameras which monitor the interior and exterior of the facility. Management stated that these cameras store their video feeds on site for a period of six months. At this time, the cameras serve as a deterrent to crime and an investigative tool to be used after an incident occurs. MACC Operations personnel can access the video feeds on demand from the MACC office, however the feeds are not regularly monitored during or after normal business hours.

Systems deemed critical to the function of the University require special security considerations. MACC Operations is currently unaware which systems are considered critical, and therefore cannot ensure those systems are monitored with CCTV cameras.

Control Recommendation: University Audits recommends that CCTV feeds from the MACC should be sent to a network operations center to facilitate monitoring. These feeds should be monitored on a schedule no less frequent than other ITS administrative datacenters.

MACC Operations should identify critical systems in order to ensure those systems are monitored with CCTV cameras.

Management Plan: ITS agrees that CCTV feeds should be routed off site and available for real time observation as required. As part of the Michigan Information Technology Center buyout, ITS has been allocated funding for additional cameras overlooking the generators and fuel tanks. As part of this project, ITS will review the cost/feasibility of networking the camera feeds to the ITS operations center and develop appropriate procedures for monitoring and retention.

Due to the shared tenant nature of the MACC, ITS does not believe it is in a position to identify tenant critical systems for CCTV monitoring. Contingent on the availability of funding, ITS will consider the CCTV monitoring of critical ITS enterprise systems.

ITS understands an SPG to address cameras used for security/monitoring is in development. ITS is committed to complying with camera guidelines as appropriate.

Door Alarm Response
Discussion: When a person exits the MACC, a sensor designed to detect that someone has opened the door from the inside should disable the logging of an alert. This system is intended to prevent false alerts from filling the door alert log. However, review of the door alert log found that alerts are still being generated each time a door is opened from the inside. The large number of alerts reduces the effectiveness of the alert log and could hinder detection of unauthorized entry.

The northeast egress door triggers an audible alarm when opened for more than a few seconds. The alarm currently does not notify either MAVD building security or MACC Operations. In the event of unauthorized entry, personnel would not be notified.

Control Recommendation: University Audits recommends that ITS MACC Operations work with the appropriate vendor to remediate the issue(s) causing false alert entries in the door alert logs. ITS MACC Operations should also work with MAVD to determine the appropriate notification procedure when the northeast egress alarm is triggered. A process of reviewing the alert logs, once the false alert entry issue has been resolved, should also be developed.

Management Plan: ITS agrees with the recommendation and will address the false alert issues with door alarms and implement appropriate log monitoring. ITS will work with MAVD to develop the appropriate procedure for response to northeast door alarms.

Incident Response Procedure
Discussion: In the event of an incident such as fire, theft, damage, or unauthorized access, the ability to properly respond to a situation is critical in mitigating the effects an incident may cause. Following proper procedure is important to minimize the risk and contain the threat. In order for personnel to properly respond to an incident, the procedure must first be documented. The MACC does not have an incident response procedure.

Control Recommendation: University Audits recommends that MACC Operations develop an incident response procedure and educate personnel once the procedure has been developed.

Management Plan: ITS agrees to develop an incident response procedure regarding the MACC infrastructure including electrical, cooling, security, and support systems. It is ITS's position that business continuity and incident response regarding compute infrastructure is the responsibility of the infrastructure owner/tenant/unit.

Load Transfer Test

Discussion: MACC Operations has taken significant steps to improve the power systems at the MACC. Since the MACC came online in June 2008, several power outages have been reported. ITS stated that the primary role of the MACC will change from research and academic use to administrative use. The MACC will host systems critical to the business of the University. Critical systems require redundant and reliable power. Power outages in July 2010 and May 2011 were the result of utility power loss and a failure of redundant power systems. Improvements were subsequently made to the power systems, but they have not been fully tested. A simulated load transfer test of the three backup power generators was completed in November 2011, but a full load transfer test has yet to be performed. In contrast, the power systems for the ITS data center in the Administrative Services Building are fully tested each quarter.

Control Recommendation: University Audits recommends that MACC Operations should regularly perform a test of the redundant power systems.

Management Plan: ITS agrees with the recommendation and will utilize posted quarterly maintenance windows to perform redundant power system tests including load transfer a minimum of three times per year.

Disaster Recovery Hardware Replacement Contract

Discussion: The University has contracted with a third party vendor for quick replacement of computer hardware in the event of a disaster. If a disaster occurs, ITS will contact the vendor, who will ship replacement equipment within five business days. This contract is considered part of the disaster recovery process. MACC Operations has not yet supplied the vendor with the necessary list of equipment (the "configuration schedule") as required in the contract. The contract states that the configuration schedule should be sent to the vendor within thirty days of contract execution.

Control Recommendation: University Audits recommends that MACC Operations submit the configuration schedule as required in the contract, to avoid any delays in hardware replacement if a disaster should occur.

Management Plan: ITS agrees to include ITS owned compute hardware in the current third party disaster recovery contract for hardware. It is ITS's position that business continuity and incident response regarding non-ITS compute infrastructure is the responsibility of the infrastructure owner/tenant/unit.

MACC Operations has demonstrated a strong commitment to security by implementing a layered strategy including biometric security devices to manage user access into the facility, CCTV surveillance cameras, electronic key cards, door alarms, and multiple access control points. These controls enable the MACC to operate as a lights out[6], secure data facility with minimal staff. This approach also boosts energy efficiency by reducing the loss of conditioned air when personnel enter and exit the facility.

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[6] A lights out datacenter is a room that contains a number of servers under lock and key and kept in the dark that under normal operation is not entered by human administrators, and all operations in the room are automated.

A reliable source of power, effective redundancy, and backup systems are important safeguards against downtime and data corruption. MACC Operations have taken positive steps to improve the reliability of the power systems that serve the facility. Continued testing is necessary to ensure that these improvements are working and power failover systems will operate as designed when a loss of power occurs.

The audit noted opportunities to improve facility security in the areas of user access, video monitoring, and incident response. Harboring sensitive regulated data will require more active management in controlling user access.

Further improvements in the power management of critical systems will reduce the risk of lost productivity and access to critical systems when an outage of utility power and loss of multiple backup generators occur. With these improvements, the MACC will be well positioned to house NextGen services. A formal follow-up to the outstanding issues will be conducted in the third quarter of fiscal year 2013.

Follow–up Reviews

UM-Dearborn Office of the Provost	2011-311
Original report issued June 20, 2011	Follow-up report issued July 17, 2012

University Audits issued the UM-Dearborn Provost Audit Report on June 30, 2011. A follow-up review was conducted to determine management's progress toward strengthening internal controls examined during the audit. Several audit observations have been addressed; however, improvements are still underway in some areas. We will follow up in the second quarter of fiscal year 2013 to review the status of the remaining action plans. The following summary discusses UM-Dearborn Provost Office's status and progress towards completion of their corrective action plans.

- **Central Provost Office** - Segregation of Duties: UM-Dearborn has recently transitioned to self-service time entry. All employees previously required to track time via timesheets are now required to do so using the online self-service time entry system. The reconciler of the Gross Pay Register no longer submits employee times. The GPR reconciliation is reviewed by the Associate Provost for accuracy and completeness. These changes eliminate the segregation of duties issue that existed during the review. This issue is closed.
  o Timekeeping: With the transition to self-service time entry all time entries are approved online by a direct supervisor. The Provost's Office has documented their timekeeping procedures. This issue is closed.

- **Fairlane Center**
  o Timekeeping: The implementation of self-service time entry has eliminated the opportunity to manipulate approved time that existed during the review. Employees no longer have access to approved hardcopy timesheets. Any changes to approved time in the online system must be approved before they are processed. The Special Events Manager approves the reported time for all Fairlane Center staff. Timekeeping procedures for the Fairlane Center have been documented. This issue is closed.
  o Deposits: Once deposits are received, they are restrictively endorsed and placed in a secure lockbox. When possible, duties are segregated for those receiving and those depositing funds. Due to the size of the office and limited staff, this is not always possible. As a compensating control, the Special Events Manager now reconciles deposits by verifying the cash receipt ticket to the event invoice. The cash receipt tickets are reviewed and initialed by the Special Events Manager and then filed. This issue is closed.
  o Purchasing: Procedures have been documented for purchasing at the Fairlane Center including purchases through University suppliers, purchases of office and event supplies, and purchases of

audio/visual (AV) equipment. Procedures include attaching adequate supporting documentation for all purchases. Purchases for AV equipment are now managed more closely by the Special Events Manager and the AV Tech Assistant. All purchases in Concur are approved by the Office of the Provost.

A complete listing of all Fairlane Center equipment is now maintained by the Special Events Manager. The list includes all computers, projectors, wireless microphones, and other AV equipment. The make, model, serial number, location, and year purchased are documented for all equipment. Large items for Fairlane Center are now purchased on a cycle and incorporated into the budget. This issue is closed.

- **Collections and Exhibitions** - A formal process has been identified and implemented for sorting, deaccessioning (remove and sell), and accurately recording and cataloguing art. Procedures for the deaccessioning process have been documented; however other procedures remain undocumented. Although progress has been made, the majority of art and inventory has not been catalogued and input into the collections database.
    - o Donor Intent/Gift-in-Kind Form - Gift-in-kind forms are in place for all art in UM-Dearborn Collections and Exhibitions. While donor intent forms do not exist for some art, the majority of art was donated by a select few donors with donor intent forms on file. It would not be reasonable for staff to locate donors of small gifts in order to complete donor intent forms. This issue is closed.
    - o Cataloguing and Inventorying - PastPerfect museum collection software was purchased to improve the cataloguing and inventorying of art. All art and inventory information previously housed in a Microsoft Access database has been transferred to PastPerfect. The majority of art has yet to be catalogued. Staff will continue to take photos of all art, measure and document dimensions of art, and perform quality checks for input into PastPerfect.
    - o Maintenance - Although art and inventory is secured from theft, storage space is still inadequate. Art will continue to be deaccessioned and some pieces will be placed around campus in administrative and teaching areas to free up storage space.

- **Policies and Procedures -** Purchasing, timekeeping, and other administrative procedures have been documented for the Office of the Provost and the Fairlane Center. Several procedures remain undocumented for the UM-Dearborn Collections and Exhibitions, including cataloguing and inventorying of art, proper storage, and maintenance best practices.

College of Literature, Science, and Arts Information Technology Asset Management	2011-311
Original report issued July 22, 2011	Follow-up report issued July 19, 2012

University Audits reviewed the LSA ITAM process and issued an audit report on July 22, 2011. Management has made improvements that have enhanced the efficiency and effectiveness of the ITAM process since that time. Status of individual audit recommendations is summarized below.

- **Use of the K2 Client -** University Audits recommended mandatory use of the K2 client on each workstation. Management indicated that a policy would be drafted regarding the K2 client for LSA units, a provision would be placed in a Service Level Agreement (SLA) for non-LSA users, and a process to determine that the K2 client has been installed on all IT assets would be created. As of the date of this follow-up review, use of the K2 client on all workstations has been presented to LSA departments by UmichITAM personnel. The requirement that workstations include the K2 client has been added to the draft of an updated SLA that departments will sign upon renewal of their relationship with UmichITAM. Additionally, the MiWorkspace build will include the K2 client. To complete the response to this recommendation, exceptions need to be documented and the usage policy for ITAM updated.

- **Firewalling License Servers -** University Audits encouraged LSA Information Technology to place the UmichITAM licensing servers behind the LSA firewall and require VPNs for accessing campus resources. UmichITAM personnel have discussed this item with users at a recent community meeting and the licensing servers are now behind LSA's virtual firewall. UmichITAM will notify people who are using the ITAM service from off campus that this service will no longer be available and then modify the appropriate firewall rule to deny off campus access. LSA will also put old machines that no longer should be accessing the K2 server in the 'deny' pool and block appropriate ports on the license servers to limit access.

- **Changing and Deleting Users -** We recommended that a process for identifying non-LSA Department System Administrators who have transferred or terminated be established. An exit procedure has been completed and has been shared with the departments. **This item is complete**.

- **Key Process Areas -** University Audits indicated that Software Licensing should document all Key Process Areas that support UmichITAM in order to ensure that ITAM is performed using systematic and well-controlled processes. The Software Asset Manager has started to go through the UmichITAM SharePoint site and categorize existing documentation by Key Process Areas.

- **Project Management -** University Audits encouraged Software Licensing to create and document a project management methodology for ITAM to set priorities among competing projects. A prior Software Asset Manager started putting this together. There is a listing of projects with budgets and start and end dates. To address this finding, LSA needs to bring this listing up to date and, the project management process needs to be documented.

- **Disaster Recovery and Business Continuity Plans Testing -** University Audits recommended that LSA update and test their disaster recovery and business continuity plans on a regular basis. Some work has been done on this recommendation. The updating is complete but no actual testing has been done. LSA Security is talking with the LSA manager's group regarding this issue.

- **Management of Copyrighted Software -** Standard Practice Guide (SPG) sections related to software have not been updated in nearly twenty years. University Audits recommended that these SPG sections be reviewed and updated. UmichITAM planned to address this by forming a committee to review existing policy and develop new policy verbiage. The committee was to consist of members of OGC, Office of the CIO, the UM Copyright Office, and others who would add value to the discussion. At this time, the committee has not been formed and policies have not been updated. Instead, these policies are scheduled for review by Information and Technology Services' Information and Infrastructure Assurance area.

- **Licensing Processes -** To more effectively match supply and demand for software titles, University Audits recommended that UmichITAM create a communication mechanism between themselves and faculty. According to the LSA IT Asset Management Administrator, Campus Computing Sites has a software product that is used to coordinate classroom use of software known as the Classroom Reservation and Instructional Software Submission (CRISS) system, which LSA could adopt for managing reservations for course software. Use of this software will be evaluated to determine if it can be cost-justified; if not, other options will be explored.

University Audits will conduct a second follow-up during the second quarter of fiscal year 2013 to assess additional progress made addressing the action items that remain open.

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UMHS Michigan Health Corporation   2011-109
Original report issued July 30, 2011   Follow-up report issued August 17, 2012

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Michigan Health Corporation (MHC) is a separate corporation wholly owned by the University of Michigan and managed by the University of Michigan Health System (UMHS). MHC, a non-profit, non-stock membership corporation was created to enable UMHS to enter into partnerships, acquisitions, joint ventures, and other business activities with outside entities. University Audits reviewed MHC and issued an audit report July 30, 2011. The objective of the audit was to assess key financial and operational controls over local board operations and oversight, financial monitoring, equity investment accounting, patient billing, and venture cost allocations.

The audit concluded that significant joint venture financial transactions and processes occur outside the direct control of University operations. Personnel from partner organizations principally manage day-to-day operations and monitor regulatory compliance. Due to the unique organizational structure of the joint ventures, effective oversight controls need to continue and be strengthened, where possible, to protect the University from financial, regulatory, and reputational risks. The current status of management's response is detailed below:

- **Compliance -** The UMHS Compliance Office has taken the lead in developing a compliance monitoring process for joint ventures to assure compliance with federal and state regulations. The Compliance Office developed a comprehensive compliance checklist to be used by the joint venture partners to attest to key compliance requirements such as privacy, medical documentation, Medicare compliance, and Joint Commission[7] standards. The attestation process and checklist will be presented to the MHC Board at the August 28, 2012 meeting for approval. If approved, management plans to implement the checklist over the next year with the partner organizations.

- **Financial Oversight -** Payroll, procurement, and operational expenditures are generally managed by the partner institutions. As MHC management and staff do not have day-to-day direct operational control and management of venture revenues and expenses, there is a risk that some partner organizations may misallocate revenues and costs. University Audits recommended adoption of standardized analysis and operational reporting based on venture type. The UMHS Chief Financial Officer is currently working with MHC management to develop some internal metrics and analysis tools to provide improved financial monitoring and oversight.

- **Equity and Consolidation Accounting -** Partner organizations maintain detailed financial records and prepare and report financial results to MHC. On a quarterly basis, MHC personnel compile financial results and prepare consolidated financial statements and equity adjustments. University Audits recommended standardization and streamlining of consolidation process, adoption of simple security procedures for Excel spreadsheets, and a knowledgeable independent review of consolidation accounting entries. Current status of action plans:

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[7] Joint Commission accredits and certifies more than 19,000 health care organizations and programs in the United States and is recognized nationwide as a symbol of quality that reflects an organization's commitment to meeting certain performance standards.

- o The quarterly compilation and consolidation process remains unchanged. MHC management discussed standardizing venture financial reporting with partner organizations and determined MHC staff are best equipped to determine appropriate reporting line classification. The UMHS Chief Financial Officer supports this decision.
- o Management has represented that accounting spreadsheets are maintained in secure limited access files and determined that password protection and locked cells are not necessary. The UMHS Chief Financial Officer supports this decision.
- o The Division Controller for University Financial Reporting has agreed to provide an additional review of MHC equity accounting entries at year-end.
- o The annual PwC Agreed Upon Procedures engagement will be expanded to provide external review and testing of MHC equity and consolidation accounting.

- **Conflicts of Interest Policy -** The MHC Conflicts of Interest (COI) Policy did not completely align with current University COI policy. The MHC COI policy and disclosure process has been updated to conform to current University policy, and was approved at the June 4, 2012 board meeting.

- **Joint Venture Board Minutes -** All board minutes contain attendance records including quorum requirements. The Eye Care Alliance board minutes are now consistent with other MHC ventures and sufficiently document the board deliberative process.

As MHC management has partially addressed management action plans and others are in progress and UMHS management has accepted responsibility **the specific audit issues identified above are closed.** University Audits has broader concerns related to the future and direction of MHC. In fiscal year 2012, MHC approved several new ventures. To accommodate the new ventures, in June 2012, MHC capital investment level was increased from $30 million to $45 million by Regental action. In response to healthcare reform and patient care needs, and as part of the UMHS strategic plan, MHC is also investigating additional relationships with hospitals, physician groups, and healthcare providers.

UMHS management has acknowledged the need to add additional staffing to MHC as the numbers of ventures increase. University Audits recommends the MHC Board and UMHS management assess the current structure and determine the optimal structure for managing evolving joint venture activity and mitigating risks.

CTools Software Development Processes	2011-808
Original report issued August 29, 2011	Follow-up report issued September 13, 2012

University Audits issued an audit report on the Information and Technology Services CTools Software Development Processes on August 29, 2011. CTools is an open source, web-based, course and collaboration environment. It provides a set of tools designed to help instructors, researchers, and students create course and project websites. An initial follow-up was performed in June 2012 and it was determined significant progress had been made to address the audit recommendations. This is the second follow-up on the audit. Management has addressed all of the issues discussed during the audit. Status of individual audit recommendations is summarized below.

- **Documentation -** University Audits recommended that CTools management review and update or create documentation in the key system areas, and periodically review the documentation to ensure it remains current. In response to this finding, management documented capacity

management, the project lifecycle, service level expectations, and use of Radmind[8]. In addition, the production infrastructure was documented and server details collected. University Audits reviewed these documents and found that they properly addressed the documentation issue discussed. Periodic review of this documentation will keep it up-to-date. **This item is closed**.

- **Backups -** University Audits indicated that CTools management should review all backup processes currently in use for locally managed systems and decide upon a coordinated backup process. In response to this finding, management created and distributed consistent backup procedures for all CTools data. **This item is closed**.

- **Code Management -** It was recommended that the CTools group discontinue use of Wush.net as a code repository for CTools code, since another repository existed and multiple storage points can complicate revision management and contribute to lost code. In response, management issued guidance consolidating CTools code in a single repository; currently the subversion repository housed at source.sakaiproject.org. **This item is closed**.

Based on the steps taken by management to address the audit issues detailed above, **this audit is closed**.

Financial Analysis: Management of Asset Data, Space Data, and University Surplus 2011-808
Original report issued August 29, 2011 First follow-up report issued January 24, 2012
Second follow-up report issued September 13, 2012

In May 2011, University Audits issued an audit report on Financial Analysis: Management of Asset Data, Space Data, and University Surplus. The results of our initial follow-up review were issued in January 2012. Based on our recently completed second follow-up review, University Audits concludes management has effectively addressed the remaining open items by implementing a new point-of-sale system and revising existing processes to enhance controls. **This audit is closed.**

- **Staff Oversight** - During the audit, University Audits noted that the Property Control Office lacked a standardized process for tagging assets and entering information. Management revised inventory coordinator responsibilities to adjust for staffing modifications and improve accountability over staff. Revisions included decreasing the number of inventory coordinators tagging equipment from three to two, reassigning building locations, modifying the data entry process, and requiring inventory coordinators to document where they plan to be during the workday. Management is considering requiring inventory coordinators to physically check-in and check-out of the office daily to increase visibility and accountability. **This issue is closed.**

- **Outside Trucking -** Various University sites delivering surplus items to Property Disposition via an outside trucking firm failed to follow guidelines outlined on Property Disposition's website regarding the completion and submittal of Declaration of Surplus (DOS) forms. Management developed more robust delivery practices and guidelines and directed the outside trucking company to forgo picking up surplus deliveries without properly completed DOS forms. Management also issued a memo to the Facilities Users Network, a group of 400+ individuals throughout the University community, advising the group that Property Disposition may refuse future deliveries without a completed DOS form. New practices have resulted in

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[8] A suite of Unix command-line tools and a server designed to remotely administer the file systems of multiple Unix machines.

more departments putting shortcodes on surplus items and fewer deliveries being turned-down. **This issue is closed.**

- **Sale of Goods -** To address issues related to managing surplus goods, management recently installed a new point-of-sale system. According to staff, the new system is more effective and easier to use. Staff have learned core processes, including how to create price stickers and run standard reports. Property Disposition has documented daily procedures and is in the process of documenting reporting guidelines. Management completed a physical inventory in May 2012 and plans to complete one annually. University Audits suggested physical inventories be performed more often, initially, to analyze shortages and other potential inventory issues. At minimum, management should consider periodically performing partial physical inventories of high risk items (i.e., laptops and other electronic equipment). **This issue is closed.**

Leased Employees	2011-108
Original report issued June 22, 2011	Follow-up report issued September 25, 2012

University Audits performed a review of leased employees at the University of Michigan, and issued a report on June 22, 2011. Overall, the review concluded leased employees were difficult to identify and the process was not well defined or controlled.

Key recommendations in the audit report included the:
- Importance of a *central process owner* with authority to establish policies or procedures.
- Requirement of an *method to identify* leased employees across the University
- Need for *strong policy and guidance* for University units that sponsor leased employees through external organizations.
- Necessity for clear and effective *contracts* to simplify management of leased employees

In addition to the challenges associated with leased employees identified in our audit report, the State of Michigan passed the Professional Employer Organization Regulatory Act (PEO legislation) on July 1, 2011. Under this legislation, businesses that intend to lease employees to external organizations must register with the State and submit various reports. The U-M Office of General Counsel has determined that the University of Michigan is subject to these statutory requirements. This further necessitates effectively managing leased employees.

Following the audit report, the Executive Vice President and Chief Financial Officer and the Vice President and General Counsel agreed to joint responsibility for addressing the audit observations. A working group was assembled to address the audit observations along with satisfying the conditions inherent in the PEO legislation. This group consists of employees from University Human Resources and the Office of the General Counsel. The working group has reviewed comparable policies at peer institutions, further reviewed our own internal processes and systems, and met with the Executive Officers. The working group developed an action item checklist to address both objectives. Key action items include:
- Immediate Action Items:
  - Designate a senior executive to acknowledge and respond to the PEO legislation.

- Short Term Action Items:
  - Develop methods to identify leased employees, including data querying tools and surveys for unit key administrators
  - Designate offices with responsibility for managing contracts and employment issues.
- Longer Term Action Items:

- o Develop a formal hiring letter template for all new hire leased employees detailing limitations and other conditions.
- o Draft a new section for the Standard Practice Guide for leased employee arrangements
- o Draft a checklist for evaluation of leased employee contracts
- o Determine a sustainable mechanism through which leased employees and their corresponding wages/benefits can be identified and monitored.

These action items were reviewed with the University's Executive Officers. The University has registered with the State of Michigan as a Professional Employer Organization. A representative from the Finance Department has been selected to aid the working group by providing financial perspective and expertise regarding transactions involving leased employee arrangements including use of agency fund accounts and grant management matters. A survey has been distributed to key administrators at all three campuses and UMHS to begin identifying leased employee arrangements and capturing information about the external organizations' leased employees, and current contract status. In addition, the working group continues to meet to address the additional checklist items in their report.

University Audits verified that the working group has made significant progress in developing clear and thorough plans to address the observations in the initial audit report as well as ensuring U-M complies with the new PEO legislation. Completion of all action items will take significant time and require substantial changes in policy and processes. Our follow-up work performed thus far confirms that plans have been set in motion by the working group and are progressing with reasonable expectations that they will address the audit satisfactorily. **This audit is closed.** Leased employees will be included in the annual risk assessment process in two to three years. At that time, management's progress towards completing their longer-term action items will be evaluated to determine if the new processes warrant a second audit.

Open Audits Follow-up Table
September 30, 2012

Audit Title	Report Date	Issues	Expected Completion
UM–Flint Business Continuity 2011–303	8/12/11	University impact analysis; BCP standards template; business continuity testing; disaster recovery plan	First Follow-up March 2012 _____ November 2012
College of Literature, Science, and Arts Information Technology Asset Management 2011–311	7/22/11	Use of the K2 client; firewalling license servers; key process areas; project management; disaster recovery and business continuity plans testing; management of copyrighted software; licensing processes; maintenance of access control lists	First Follow-up July 2012 _____ October 2012
Information and Technology Services eResearch Proposal Management 2010–304	6/27/11	Contractual restrictions on vendor access; "Site Manager" access	First follow-up March 2012 _____ December 2012
Information and Technology Services MCommunity Sponsored Accounts 2011–304	11/22/11	Sponsorship administrator roles; improper permissions; monitoring of sponsored accounts; data verification policy; recurring training; policy enforcement	October 2012
Institute of Social Research Data Security 2011-308	12/7/11	Identification and assessment of sensitive and critical systems; risk mitigation activities; ITsecurity incident management; security plan	October 2012
UMHS Lost Laptop Exercise 2011-809	12/16/11	Risk assessment; encryption; compliance and security awareness training	November 2012
North Campus Auxiliary Service Building/North Campus Data Center 2011-301	2/3/12	Security cameras; service level agreements	December 2012
Information and Technology Services DNS - Domain Name Service 2012-301	5/2/12	Recursion on authoritative name servers; recursion - external clients; zone transfer authorization; authenticated zone transfers; DNS architecture documentation; host operating system; performance metrics; server access	December 2012
Information and Technology Services Mobile Applications 2012-308	6/29/12	Accessibility	December 2012

IT Services Provided to North Campus Research Complex (NCRC) Third Party Companies 2012-312	7/18/12	VA Security Requirements; conflict of interest;	December 2013
ITS Michigan Academic Computing Center 2012-807	8/23/12	Role based access approval process; user access removal; third party employee vetting process; video monitoring; door alarm response; incident response procedure; load transfer test; disaster recovery hardware replacement contract;	March 2013
UM–Flint School of Health Professions and Studies 2010–209	1/25/11	Segregation of duties; faculty and staff certifications; privacy and data security; policies and procedures; P–Card controls; conflict of interest and conflict of commitment management; affiliate payment processing	October 2012
University of Michigan–Flint Educational Opportunity Initiatives 2010–211	2/18/11	Strategic oversight and guidance; campus support and collaboration; budget and financial management; staff management; event management; business continuity; documentation of policy and procedure	First Follow-up April 2012 _____ November 2012
Conference Services 2010–102	2/25/11	Contract compliance; department accounting and reporting; billing and payment accuracy; payroll and time reporting; statement of activity reconciliation; background check verification; client management	First follow-up April 2012 _____ October 2012
Division of Student Affairs Recreational Sports – Club Sports 2010–816	3/2/11	Sponsored student organizations; guidance; financial management; practice, game, and fitness space; medical support; property	First Follow-up April 2012 _____ March 2013
University Unions 2011–814	6/15/11	General control environment; financial monitoring and oversight; purchasing management; human resource management; building renovation and maintenance	November 2012
Financial Considerations for International Activity 2011–101	6/30/11	Coordination of effort; documented policies and procedures; currency exchange; cash purchases; international bank accounts	December 2012
UM–Dearborn Office of the Provost 2011–210	6/30/11	Segregation of duties; timekeeping; policies and procedures; Fairlane Center procedures; collections and exhibitions	First Follow-up July 2012 _____ December 2012

Ross School of Business 2011–202	10/19/11	International programs coordination; verification of Aramark reported data; sub–certification of internal controls; continuity of operations planning; unit assessments	First follow-up June 2012 _____ November 2012
School of Dentistry Admissions and Financial Aid 2011–812	10/26/11	Multiple Mini Interviews (MMI); application review; documentation; application fees; spreadsheet controls; need–based aid	First follow-up June 2012 _____ November 2012
Intercollegiate Athletics Complimentary Tickets 2011–110	11/16/11	Documented policy and procedure; monitoring and oversight; recording of complimentary tickets; complimentary parking and access passes; system access and use; compliance monitoring	October 2012
Plant Operations Information Management and Reporting 2011-102	12/22/11	Data management; reporting and analysis	Review progress June 2012 _____ Follow-up December 2012
e-Verify 2011-302	2/20/12	Contract information; identification of employees; document retention; e-Verify notice requirements; subcontract language; e-Verify System user access	November 2012
Rackham Graduate School Institute for Human Adjustment 2012-219	2/27/12	Patient receivables; Patient Protection and Affordable Care Act of 2010; segregation of duties; cash and cash equivalent handling	December 2012
University Safety and Security Communication, Reporting, and Incident Investigation 2012/809	02/10/12	Communication among University safety and security organizations; privacy and law enforcement; duty to report; emergency response; shared reporting system; lessons learned; training; organizational structures; culture	Quarterly
College of Literature, Science, and the Arts Museum of Natural History 2012-224	03/23/12	Inventory tracking system; cash handling and security; merchandise management; continuity of operations planning; hazard training and safety documentation; segregation of duties; internal controls certification; on and off-boarding checklists; student docent screening; payroll; conflict of interest or commitment process;	October 2012

University of Michigan Facilities and Operations Parking Operations 2012-107-1	3/27/12	Staff use of patient/visitor parking; override controls for gate operations; monitoring of parking activity; imprest cash funds; credit card controls; special events parking contract	December 2012
University of Michigan School of Public Health Office of the Dean 2011-211	5/25/2012	Financial assistance; admission practices; internship funding; conflicts of interest and conflicts of commitment; timekeeping practices	March 2013
Automotive Research Center 2012-217	6/25/12	Administration; grant management; financial management/oversight; asset management	December 2012
UM-Dearborn College of Engineering and Computer Science 2012-302	6/29/12	Financial oversight; documented policies and procedures; conflict of interest and commitment; training and facility safety; contracts, grants, and agreements; asset management; gift handling and monitoring; Engineering professional development; incident response plan; key logs; vulnerability scans; configuration control policy; disaster recovery plans of IT; data security procedures	March 2013
International Institute 2012-101	6/29/12	Oversight and monitoring; international travel; Concur; unit subcertification of financial results and internal controls; copies of checks;	December 2012
Transportation Research Institute 2012-502	9/13/12	Standardized project management; compliance with University guidelines; fiscal responsibilities; monitoring and budget reporting; information technology controls; documented procedures and expectations	June 2013
Medical School Department of Emergency Medicine 2011-204	12/5/2011	Internal Control Assessment certification; non-certified effort reporting; purchasing; P-Card transactions; gross pay register reconciliation; statement of activity reconciliation; delegation of authority	October 2012

U-M Hospitals and Health Centers Valet Parking 2012-107-2	3/26/2012	Reconciliation practices; vendor employee use of patient/visitor parking space; valet parking vouchers, imprest cash fund and cash handling practices; annual certification of internal controls and gap analysis; background checks on vendor employees	December 2012
UMHHC Community Health Services- Community Programs and Services 2012-214	6/28/2012	Monitoring loan activity; cash handling practices; credit card controls; interpreter services program; monitoring accommodations activity; training and performance evaluations for hospital volunteers; annual certification of internal controls and gap analysis	March 2013
Office of Medical School Education 2012-105	6/29/12	Restricted funds; financial aid; admissions; payroll controls; financial training	March 2013