

**SAN DIEGO STATE UNIVERSITY**  
**CHEMISTRY/GEOLOGY/BAM RENOVATION PROJECT**

Final Report

April 1, 2005

**CONSTRUCTION PROJECT EVALUATION**  
**SAN DIEGO STATE UNIVERSITY**  
**CHEMISTRY/GEOLOGY/BAM RENOVATION PROJECT**

April 1, 2005

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*This report and all associated analysis contained herein are based upon information made available to KPMG LLP. KPMG LLP is not responsible for incomplete or inaccurate information provided during the preparation of this report. This report only presents and summarizes factual data and does not represent an opinion or attestation to the position, approach or representation of information made by any other party involved with this evaluation.*

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## EXECUTIVE SUMMARY

### Summary of Findings

Based upon our evaluation, the SDSU Chemistry/Geology/BAM Renovation Project has been adequately planned, and is being reported and administered consistent with our expectations of a project of this size, scope and complexity.

While we did not find any significant or unexpected cost overruns or concerns, we did observe certain isolated control or process weaknesses, which could expose SDSU to unnecessary risks and costs. These weaknesses should be addressed to ensure that SDSU does not develop more serious control issues or take on unnecessary risk on projects on a going-forward basis. These recommended areas for improvement should be applied to other future projects.

In addition, we have included in this report recommendations pertaining to the CSU system wide operations.

Our observations, associated risks and recommendations are outlined below:

|    | <b>Observation</b>   | <b>Risk</b>   | <b>Recommendation</b>  |
|----|--|---|--|
| 1. | Contract language allows for reimbursable expenses, which were not meant to be paid.   | Architect may claim contractual entitlement to reimbursable expenses, contrary to SDSU's actual intent.   | If reimbursables are not intended to be invoiced separately by the Architect, modify the scope of work language to state that such charges are to be included with the Basic Services.<br><br><u>Ownership: SDSU</u> |
| 2  | Contract language states Extra Services to be paid based on hourly rate, not fixed fee. SDSU intended and did use fixed fee. | The Architect may insist on contractual entitlement to the adjusted hourly rate on a time and materials basis, contrary to SDSU's intent.                 | On future contracts, use a contract language consistent with intended pricing and invoicing methodology.<br><br><u>Ownership: SDSU</u>   |
| 3. | Prevailing wage rates are not included with the bid.   | Bidders may use the wrong rates resulting in potential violation of Labor Code or unintentionally underbid the project with performance issues to follow. | Include governing prevailing wage rates with the bid.<br><br><u>Ownership: SDSU</u>  |
| 4. | Architect's Estimates varied greatly from Contractor's Cost Proposal.  | May cause the Contractor to submit inflated costs and the University may pay an unnecessary premium for changes.  | Establish means to obtain meaningful and reliable independent estimates. Obtain a revised Architect estimate per CSU Project Administration Manual directives.<br><br><u>Ownership: SDSU</u>                         |

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EXECUTIVE SUMMARY

|    | <b>Observation</b>  | <b>Risk</b>  | <b>Recommendation</b>  |
|----|---|--|--|
| 5. | There was limited authorization by appropriate individuals on change order process documentation. | Lack of formal authorization may cause unnecessary cost and risk exposure to the University. | a) In all instances, follow CSU policy and obtain the correct approvals before executing any change.<br><u>Ownership: SDSU</u><br><br>b) Individuals executing the encumbrance request on the accounting side should review for appropriate approvals.<br><u>Ownership: CPDC</u> |

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## INTRODUCTION

### Purpose

KPMG LLP (“KPMG”) was retained by California State University’s (“CSU”) Office of the University Auditor on October 29, 2004 to perform an independent project evaluation of San Diego State University (“SDSU” or “the University”) Chemistry/Geology/BAM Renovation Project (the “Project”).

The overall objective of the construction evaluation was to assess construction management practices for the Project and to substantiate that it was managed in accordance with law, Trustee policy, generally accepted best business practices, and industry standards.

To the extent they were uncovered as part of our work, this Report provides conclusions and recommendations addressing necessary recovery of project costs and process improvements. Recommendations are listed and numbered sequentially throughout this report.

### Scope

While the basic scope of our work matches that required by the RFP and that which KPMG has performed in years past, we also included additional items that we believe will provide significant value to the CSU. KPMG identified specific areas within the scope listed below that present the greatest potential for substantive loss or liability for the Chemistry/Geology/BAM Renovation Project. The various scope categories are outlined in CSU’s Request for Proposal, dated July 14, 2004 and KPMG’s Proposal, dated July 27, 2004 and contains the following sections:

- Project Background (*included for information, contains no recommendations*)
- Design Cost
- Construction Bid Process
- Construction Change Orders
- Project Management Inspection Services
- Major Equipment/Materials
- Close-Out Documentation
- Liquidated Damages
- Accounting

## Methodology

KPMG's approach to this engagement incorporates a work plan shared with the University Auditor's office as outlined in our Agreement with CSU. During the course of our work we expanded on tasks related to scope sections with the greatest potential risk exposure. The work performed by KPMG was conducted in accordance with our aforementioned Methodology, but is not limited to, the following tasks:

- Examine financial records, reports, written CSU procedures, University contract documents and other material related to the project and compare current practices and procedures with University requirements and best practices in the industry;
- Conduct a preliminary review to determine project emphasis;
- Interview key individuals involved in the project;
- Identify significant deficiencies, if any;
- Recommend changes that may result in streamlining the design/construction process, assuring adequate project controls and reducing costs; and
- Prepare a written report of our findings and recommendations.

## Exclusions

The services, fees and delivery schedule for this Engagement are based upon the following assumptions, representations or information supplied by CSU ("Assumptions").

1. KPMG is not responsible for and will not make management decisions relating to this Project or any other aspect of CSU's business. CSU shall have responsibility for making all decisions with respect to the management and administration of its real estate and capital projects.
2. CSU management accepts responsibility for the substantive outcomes of this engagement and, therefore, has a responsibility to be in a position in fact and appearance to make an informed judgment on the results of this engagement.
3. Our work under this did not include technical opinions related to engineering, operations and maintenance.
4. KPMG's work under this engagement did not include a review, audit or evaluation of financial statements, tax services, or other services of KPMG not listed in this Statement.
5. We have, and will continue to consider the effect of this Engagement on the ongoing, planned and future audits, as required by *Government Auditing Standards* and have determined that this engagement will not impair KPMG's independence.

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## **PROJECT BACKGROUND**

The Chemistry/Geology/BAM Renovation project totaled 110,000 gsf for the 1960 Chemistry/Geology (GC) building and a minor renovation of 11,000 gsf in the Business Administration and Math (BAM) Building. Our audit did not include any related abatement work, which was bid, awarded and carried out separately from the renovation work.

KPMG conducted its fieldwork during the week of November 29, 2004 at the SDSU Campus and met with the C.E.Wylie Construction on January 7, 2005. KPMG reviewed project records from the following entities involved with the project:

|  |   |
|--|---|
| General Contractor                           | C.E. Wylie Construction.  |
| Architect                                    | McGraw Baldwin Architects   |
| Construction Management and Inspection (IOR) | R.G. Wade, Inc. and RIO Management  |
| Project Management                           | San Diego State University Campus, Facilities Planning and Management (FPM) |

Follow-up discussions to clarify issues and supplement supporting documentation were conducted through the completion of this report.

### **Delivery Methodology**

The project was delivered using a traditional Design-Bid-Build, Lump Sum project with the Contractor being C.E. Wylie Construction. The Architect providing the Design was McGraw Baldwin Architects.

### **Timeline**

The design process started in late 1999 by McGraw Baldwin and included both the abatement work and the renovation work. The abatement work was bid in April 2001, began in July 2001 (notice to proceed), and was carried out by Clauss Construction. The renovation work was bid in May 2001, began in October 2001 (notice to proceed), and was completed in March 2003 (CG) and August 2003 (BAM) by C.E.Wylie Construction.

### **Project Costs**

The entire project, both renovation and abatement, was funded at \$19,535,000 including design, construction, and contingency. The total actual expenditures on the project were \$19,285,000, including \$13,928,686 for general construction.

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## DESIGN COSTS

Through a competitive bid process with five competing firms, McGraw Baldwin Architects were selected and retained in November 1999 for the design work. McGraw Baldwin's contract, a standard CSU Architect/Engineering Agreement<sup>1</sup>, was entered into on December 1, 1999. The original contract was for \$1,294,000 and was amended by 14 extra service agreements ("ESA's") totaling \$378,072. The architectural contract language allows for three categories of costs: Basic Services, Additional Services and Reimbursables.

The following is a summary of the basic contract and extra services, all which was billed at 100% and paid by the University:

| Date     | Description  | Amount              |
|----------|--|---------------------|
| 12/01/99 | Preliminary Design   | \$ 416,000          |
| 12/01/99 | Schematic Design   | 483,000             |
| 12/01/99 | Construction   | 365,000             |
| 12/01/99 | Landscape Design   | 30,000              |
| 12/01/99 | <b>Total Original Agreement</b>                                      | <b>\$ 1,294,000</b> |
| 06/06/00 | ESA 1 - Design Changes for Environmental Abatement/Closure Plan      | \$ 169,912          |
| 02/20/01 | ESA 2 - Additional Consulting Services - Acoustic, Parking, Closure  | 40,580              |
| 06/05/01 | ESA 3 - Hazardous Materials Consultation                             | 1,280               |
| 08/24/01 | ESA 4 - Elevator Engineering Requirements                            | 43,577              |
| 12/11/01 | ESA 5 - Additional Civil Engineering Services (Detector Check Valve) | 2,920               |
| 01/08/02 | ESA 6 - Revised Grading of North Parking Lot                         | 6,495               |
| 02/07/02 | ESA 7 - New Chilled Water P.O.C, revised Civil Plans                 | 6,600               |
| 03/14/02 | ESA 8 - Revise Foundation Design, Different Site Conditions          | 8,600               |
| 05/01/02 | ESA 9 - Artwork and Infrastructure Construction Design               | 15,500              |
| 08/14/02 | ESA 10 - Provide ITS Infrastructure                                  | 3,680               |
| 09/13/02 | ESA 11 - Additional Landscape Design                                 | 9,160               |
| 12/03/02 | ESA 12 - Revised Full Size Drawings                                  | 14,220              |
| 04/23/03 | ESA 13A - Street Realignment and Landscaping                         | 40,728              |
| 07/16/03 | ESA 14 - Replace Corridor Ceilings                                   | 14,820              |
|          | <b>Total Extra Services</b>  | <b>\$ 378,072</b>   |
|          | <b>Total Contract Value</b>  | <b>\$ 1,672,072</b> |

KPMG compared the progress billings to issued drawings. Billings were in accordance with the scheduled milestones. We found total encumbered fees equaled the expenditures made against the Architectural agreement.

It was noted that reimbursable costs, as defined by the contract, were not invoiced to SDSU by McGraw Baldwin. SDSU reported that no such reimbursables were ever intended to be

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<sup>1</sup> McGraw Baldwin's contract is slightly different from the current governing CSU version of the Architect/Engineering Agreement. According to the campus, this difference is attributed to CSU revisions of an earlier version.

charged by the Architect and that such items, had they been invoiced, would have been disallowed. The contract is inconsistent with the actual intent on this point.

***Risk:***

If stated as allowable costs under the contract language, the Architect may claim contractual entitlement to reimbursable expenses, contrary to SDSU's actual intent.

***Recommendation:***

1. If reimbursables are not intended to be invoiced separately by the Architect, modify the language on future scopes of work to state that such charges are to be included with the Basic Services. (Ownership: SDSU)

***Campus Response:***

1. We concur. Reimbursables could have been invoiced separately. However, California State University contracts have since been modified and now include reimbursables with Basic Services.

The contract language further calls for Extra Services to be invoiced by the Architect on an adjusted hourly rate basis. SDSU and McGraw Baldwin instead agreed to a negotiated cost up front for each extra services agreement, which subsequently was invoiced on a percent complete basis. This approach is allowed under SUAM, but is contrary to the actual stated contract language.

***Risk:***

The Architect may insist on contractual entitlement to the adjusted hourly rate on a time and materials basis, contrary to SDSU's intent.

***Recommendation:***

2. On future contracts, use a pricing and invoicing methodology consistent with contract language. If any language is changed, obtain and document appropriate approval for any modifications to the standard Architect Agreement or Rider A. (Ownership: SDSU)

***Campus Response:***

2. We concur. In the future, pricing and invoicing methodology will be consistent with contract language.

As noted above, the A/E Agreement as used by SDSU differed from the current version of the CSU standard A/E Agreement. It cannot be determined by KPMG if any unauthorized changes were made to the standard Architect Agreement that governed at the time, as that version has not been archived. SDSU explained to KPMG they used the approved version that was current at the time.

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## **CONSTRUCTION BID PROCESS**

The CG/BAM project was state-funded and as such was required to be publicly bid under State Public Funding requirements. The bidding process was administered through SDSU's Office of Procurement Services.

The project was constructed under the standard CSU design-bid-build approach. A complete set of specifications, general conditions and drawings were made available to the bidders with the exception of certain requirements resulting from the abatement work, which at the time of bid were unknown. Prior to bid opening, three addendums were issued.

Through a competitive bid process, eight general contractors submitted bids; West Coast Air Conditioning, Kvaas Constructors, Taylor Ball, Soltek Pacific, Nielsen Dillingham Builders, TB Penick & Sons, Douglas E. Barnhart, and C.E. Wylie Construction. The lowest responsible and responsive bidder was C.E. Wylie Construction at \$11,714,000.

KPMG reviewed the bid files and process and found the SDSU Project Administrative Team in compliance with requirements related to Prebid Meeting, Advertising for Bids, Distribution of Project Plans and Specifications, Review of Bid Proposal Package, Addenda During Bidding, Pre-qualification of Bidders, Obtaining Required Documentation from the Successful Bidder, and Award of Contract.

No deviation from CSU policies was observed.

***Recommendation:***

None

**Contractor Compliance – Subcontractor Practices**

The Contractor submitted an Expanded List of Subcontractors (Form 701.04A) as well as a required Subcontract Status Report to demonstrate compliance with the Subletting and Subcontracting Fair Practices Act. When the submitted expanded list of subcontractors was compared to the Contractor's actual cost record, KPMG's test work discovered no evidence of unauthorized subcontractor substitution. In one known approved instance, the University authorized substitution of Encompass Services by Prime Electrical, per request from Encompass and due to Encompass' recorded financial status. This substitution occurred in accordance with Trustee policy.

***Recommendation:***

None

## **Prevailing Wage Rate**

Prevailing wage rates were not included with the original bid documents and could not be located by SDSU. Per discussions with CPDC, governing procurement code established by the California Department of Industrial Relations requires the Contractor to use prevailing wage rates in effect at the date of bid advertising. The project was advertised on 4/13/01 and 4/20/01. The California Department of Industrial Relations does not have prevailing wage rates archived and available for this time period. However, in an effort to verify the reasonableness of the wage rates used by the contractor, KPMG sampled three larger contractors and trades and compared certified payroll records against the prevailing wage rates available for 2001-2 (most of these rates were effective on August 22, 2001).

The following three contractors and trades were reviewed:

- Able Heating (Sheet Metal workers for HVAC)
- Encompass (Electrical)
- C.E. Wylie Construction (General Labor)

It was established that the wage rates used by the Contractors closely matched prevailing wage rates for 2001-2. No unreasonable increases or changes came to KPMG's attention

### ***Risk:***

If governing prevailing wage rates are not included with the bid, bidders may use the wrong rates resulting in potential violation of governing Labor Code or unintentionally underbid the project with potential performance issues to follow.

### ***Recommendation:***

3. In the future, include governing prevailing wage rates with the bid. (Ownership: SDSU)

### ***Campus Response:***

3. We concur. The campus process has been changed to include prevailing wage rates with the bids.

## CONSTRUCTION CHANGE ORDERS

The contractor incurred actual costs of \$13,255,046. It is not possible to determine how much was for incurred Basic Scope versus Change Orders, as the Contractor did not separate these different costs until later in the project at the request from the University. The incurred costs can be compared with contractual agreed to and paid amounts of \$13,928,686.

All Contractor invoices reviewed were submitted and approved in accordance with CSU General Conditions and SUAM.

The Change Order Approval Process include the following documents and steps:

- 1) Change Proposal (“CP”, containing Architect’s Preliminary Estimate)
- 2) Cost Request Bulletin (“CRB” Request from Architect to Contractor to provide quote for change)
- 3) Contractor Cost Proposal (cost estimate from contractor for the change work)
- 4) University approval of Contractor’s quote (usually e-mail from SDSU to Architect)
- 5) Acceptance of Cost Proposal and Notice to Proceed with Change (letter to Contractor issued by Architect)
- 6) Change Order (usually containing multiple CRB’s)

### Change Order Report Analysis

The University provided a change order log that reflected the initiating source of each Change Order. The following table summarizes this data:

| Type Of Change             |  | Amount               | % of Total CO  | % of Orig. Contract |
|----------------------------|--|----------------------|----------------|---------------------|
| 4.1                        | Error in or omission from the contract documents                           | \$129,634            | 7.22%          | 0.93%               |
| 4.2                        | Unforeseeable job site condition   | \$925,525            | 51.57%         | 6.64%               |
| 4.3                        | Change in the requirements of a regulatory agency                          | \$647,636            | 36.09%         | 4.65%               |
| 4.4                        | Change originated by the University  | \$91,891             | 5.12%          | 0.66%               |
| 4.5                        | Changes in specified work due to the unavailability of specified materials | -                    | -              | -                   |
| 4.6                        | Other  | -                    | -              | -                   |
| <b>Total Change Orders</b> |  | <b>\$1,794,686</b>   | <b>100.00%</b> | <b>12.88%</b>       |
| Original Contract Amount   |  | \$12,134,000         |                |                     |
| <b>Total</b>               |  | <b>\$ 13,928,686</b> |                |                     |

All Time and Materials changes reviewed by KPMG contained appropriate back-up and were supported by an authorizing Field Instruction.

***Recommendation:***

None

In the review of the Change Order files, it was noted that several Change Request Bulletins' agreed to costs varied greatly from the original Architect's or Engineer's estimate. The Architect's estimate was frequently considerably lower than the Contractor's Cost Proposal. SDSU attributed this to the Architect's lack of ability to estimate costs correctly and in some occasion due to changed scope. The CSU Project Administration Manual Section 4.04 requires that if the actual contractor quote varies more than 20% of the approved estimated costs (the Change Proposal) a revised change proposal should have been issued.

***Risk:***

Not having a reliable independent estimate may cause the Contractor to submit an inflated cost estimate with subsequent actual costs much lower. As a result, the University may pay an unnecessary premium for changes.

***Recommendation:***

4. Establish means to obtain meaningful and reliable Architect's (or otherwise independent) estimates. (Ownership: SDSU)

***Campus Response:***

4. We concur. The campus will establish procedures to obtain meaningful and reliable Architect's estimates.

SDSU has its own approved Capital Outlay Management Plan for the Delegation of Capital Outlay, which outlines the Change Order process and associated approval limits.

**Approval Limits Per SDSU Capital Outlay Management Plan:**

| <b>Amount</b>        | <b>Approval Signature Needed</b>   |
|----------------------|------------------------------------|
| Under \$20,000       | Junior Level Facilities Manager    |
| \$20,001 - \$50,000  | Senior Level Facilities Manager    |
| \$50,001 - \$150,000 | Director of Facilities Management  |
| \$150,001 and over   | Vice President of Business Affairs |

While reviewing change order documentation, it was found that most of the Change Proposals and or Cost Request Bulletin’s selected for review did not always contain the proper approval signatures. Several change orders were without Director or VP signature where required. We also noted instances where the actual contractor quote varied more than 20% of the approved estimated costs (the Change Proposal). As noted previously in this report, those instances require a revised change proposal to be issued, which did not occur. Although KPMG found evidence of on-going consultation between the Architect and SDSU, such support was generally difficult to follow and did not always establish a final estimated amount from the Architect.

Change Proposals in KPMG’s sample where appropriate approval signatures were missing:

| CO# | CRB# | Observation  | CP            | CRB        |
|-----|------|--|---------------|------------|
| 8   | 32   | CRB was for \$57K, without evidence of Director approval. CO 8 was for \$164K and was without VP approval.   | \$ 49,000     | \$ 56,936  |
| 15  | 136  | CP 136 was for 65K without evidence of Director approval. CRB 136 was for \$60K without evidence of Director approval. CO 15 was for 142K and without Director approval. | \$ 65,000     | \$ 59,683  |
| 19  | 117  | CRB 117 was of \$97K and was without evidence of Director approval. CO 19 was for \$253K without Director or VP approval.  | \$ 10,000     | \$ 96,589  |
| 19  | 152  | CRB 152 was for \$122K without Director approval (per SDSU a credit, but is additive on CO). CO 19 was for \$253K without Director or VP approval.                       | \$ 95,000(CR) | \$ 122,077 |
| 20  | 36   | CRB 36 was for \$73K and was without Director approval.  | \$ 15,000     | \$ 73,097  |
| 23  | 216  | CRB 216 was for \$69K and was without director approval.   | \$ 7,000      | \$ 69,498  |
| 24  | 219  | CP 219 was for 85K without Director approval. CRB 219 was for 300K without Director or VP approval. CO 24 was for \$379K and did not have Director or VP approval.       | \$ 85,000     | \$ 301,932 |

**Risk:**

Lack of formal authorization by appropriate individuals on change proposals or change orders may cause unnecessary cost and risk exposure to the University.

**Recommendations:**

- 5a. In all instances, SDSU should follow CSU policy or SDSU approved Delegation of Capital Outlay Authority to obtain correct approvals before executing any change, as required by each step in the change order process. (Ownership: SDSU)
- 5b. As an additional check, individuals executing the encumbrance request on the accounting side should also go through the step of reviewing for appropriate approvals. (Ownership: CPDC)

***Campus Response:***

- 5a. We concur. The campus will follow CSU or SDSU policy to obtain correct approvals before executing any change as required in the change order process. The campus has implemented additional internal accounting processes to insure the correct approvals have been attained.

***Management Response:***

- 5b. We agree that there should be an additional check, but believe the campus' (or chancellor's office for non-delegated campuses) contracts and procurement unit (instead of the accounting unit) should perform it. The chancellor's office of contracts and procurement currently reviews the signature authority; this process was undertaken when our financial system was converted to PeopleSoft, as Delegation of Authority was established with the Department Manger, or in the case of construction, the Construction Administrator. As the accounting staff only confirms that the project funds are available for encumbrance, it is more appropriate for the campus contracts unit to perform the additional check on signature authority. It is the Construction Administrator's responsibility to follow the campus' management plan as the first line of approval, and secure appropriate approvals for each change order.

The change proposal document is the tool campuses should be using to secure appropriate approvals of proposed change orders. In Section 1.03-a.8 of the change order procedures (SUAM Appendix D) CPDC identifies the various levels of signature authority required. CPDC has also modified the change order form to allow space for two additional levels of approval to recognize the dollar limitation on signature authority.

**Fire Marshall Issue**

SDSU had secured a building code plan check and State Fire Marshal ("SFM") plan review as required prior to the start of construction of this project. Near the end of construction, the State Fire Marshal field inspector determined that the BAM second-and third-floor corridor ceilings would need to be reconstructed in a different manner to satisfy building code requirements. This ultimately led to a costly and unexpected change order that was borne by the University (\$457,900, 26% of the overall changes to project). KPMG was told this requirement was unforeseen by SDSU, McGraw Baldwin, the outside plan check agency retained by the campus for code review, and by the SFM's own plan review.

It is unclear whether the observation and resulting code interpretation by the SFM inspector should have been known by McGraw Baldwin and addressed in the design process, or why this was not caught during the SFM and third party plan reviews. The issue in question, fire-rating separations, is a key plan review item and would have been assessed by the design architect, third party code check, and the SFM plan check. Ideally, the SFM would make its representatives available when requested to walk proposed construction, offer guidance, and provide interpretations to observable field conditions during the design phase.

CPDC and SDSU explained to KPMG that at the time of this project, requests by SDSU to secure preliminary SFM reviews were declined by the SFM due to staffing shortages. In 2003, the CSU implemented a Memorandum of Understanding (MOU) with the SFM that now does provide these services. This MOU reduced review times from 12 weeks to three weeks, and allows the CSU to secure preliminary reviews and/or request special field visits by the SFM on an as-needed basis.

Due to the FY 2004 state funding elimination for the SFM, the CSU/SFM MOU and its provision of timely SFM services has been put into doubt. The SFM is now authorized to bill for all services in an open-ended manner, which has given the CSU and other agencies some pause. The CSU is currently establishing a process for monitoring SFM campus visits, working to confirm the SFM billing is accurate, and negotiating new terms for SFM construction services. The CSU will be monitoring the provision of SFM inspections of existing CSU facilities.

***Recommendation:***

None

### **Labor and Fringe Burden**

C.E. Wylie Construction and their financial auditors, Moss Adams, furnished audited support of their 28% labor burden rate included with C.E. Wylie Construction's Change Order work. C.E. Wylie Construction's actual burden is 37% and is comprised by the following components:

| <b>Component Description</b> | <b>Percentage</b> |
|------------------------------|-------------------|
| Workers' Compensation        | 12.8 %            |
| General Liability            | 2.00 %            |
| State Unemployment           | 5.40 %            |
| Federal Unemployment         | 1.00 %            |
| FICA (statutory rate)        | 6.20 %            |
| Medicare (statutory rate)    | 1.45 %            |
| Health and Welfare           | 3.50 %            |
| Apprentice & Training        | 0.50 %            |
| Pension                      | 5.00 %            |
| <b>Total</b>                 | <b>37.8 %</b>     |

The 37% burden was verified in C.E. Wylie Construction's labor cost reports for their actual cost of work performed on the job, but was not charged SDSU. C.E. Wylie Construction reported that 28% burden was what they were able to invoice CSU on change order work, and as a result the 28% was the invoiced rate. This is by industry standards a very low percentage. The contractor may have agreed to the 28% if enough profit could be made through the more generous change order mark-up percentage. In addition, the bidding climate at the time motivated the contractor to agree to these terms. Favorable terms for SDSU are further suggested by the relatively thin margin the contractor actually made on this project (5% to cover overhead and profit).

***Recommendation:***

None

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## PROJECT MANAGEMENT INSPECTION SERVICES

Independent project management inspection services were initially provided on the project by R.G. Wade, Inc. The consultants were retained to assist in preparation of bid document, to provide project administration, to employ an inspector of record and perform duties of the Project Manager as described in section 1.03 of the Construction Management Project Administration reference Manual and SUAM Section 9792.04.

SDSU executed two agreements with R.G. Wade as follows:

| <b>Description R.G. Wade Contractual Agreements</b>   | <b>Amount</b>    |
|---|------------------|
| Pre-Construction Services, effective February 7, 2001 | \$35,360         |
| • Contract Close-Out                                  | (\$4,788)        |
| Project Administration, effective May 25, 2001        | \$701,980        |
| • ESA #1  | \$13,229         |
| • Contract Close-Out                                  | (\$190,278)      |
| <b>Total R.G. Wade Contract Value</b>                 | <b>\$555,503</b> |

In February 2003, R.G. Wade informed CSU that they wished to terminate its business relationships in California beginning March 2003. They suggested Rio Management take over this task. Rio Management was a newly formed company run by R.G. Wade's on site inspector, Mike Kubota. SDSU accepted this proposal and as a result, the University issued a deductive change order in the amount of (\$190,278) to R.G. Wade, representing the remaining balance on their contract.

Rio Management was retained under the arrangement below.

| <b>Description Rio Management Contractual Agreements</b>   | <b>Amount</b>    |
|--|------------------|
| Construction Management Services, effective March 10, 2003 | \$108,600        |
| • ESA #1   | \$19,108         |
| <b>Total Rio Management Contract Value</b>                 | <b>\$127,708</b> |

The R.G. Wade and Rio Management billings reviewed by KPMG were all in accordance with the agreed upon hourly rates and had appropriate signature approvals. Total billings against the contract were \$555,503 (R.G. Wade) and \$115,290 (Rio), leaving a contractual balance of \$12,418 for Rio.

SDSU initially submitted an accounting report from their local shadow-system accounting system to KPMG, which did not include the last (close-out) transaction. Additional documentation from the University's Oracle was produced to show actual close-out of the Rio contract and account for the discrepancy.

KPMG did not see any evidence that the switch in project management/inspection companies resulted in any unnecessary costs to the University, as the same individual inspector continued with the work under his own company name and at reasonable hourly rates. Under the circumstances, this was a logical choice by the University. The nature of work performed by the inspector included project management as well as inspection services. The project involved renovation work, which normally requires closer monitoring due to existing conditions. As such, we cannot say the inspector fees are excessive.

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## MAJOR EQUIPMENT/MATERIALS REVIEW

KPMG selected major equipment and materials budget line items and reviewed submittals, verified against drawings and specifications that what was installed in the field matched the contract documents. A project walk-through was conducted with representatives from SDSU Physical Plant and the Facilities Planning and Management Department. The equipment selected was verified in the field against performance specifications issued, drawings and engineering calculations available without comment and was supported with required acceptance documentation.

The following equipment items and specific model data were approved and visually confirmed as installed on the project:

| Spec. Section | Drawing No. | Brand      | Model No./ Capacity   | Description                            |
|---------------|-------------|------------|-----------------------|--|
| 15725         | 1M1.2       | Temtrol    | WF-DHR22 (25hp/5hp)   | Air-handler AHU-2A                     |
| 07320         | 1A8.2       | US Tile Co | Molded clay, per spec | Roof Tiles                             |
| 16200         | 1E7.1       | Square D   | Cat No. 112T3HFISNLP  | Electrical Transformer<br>XFMR ST-D2LW |
| 16200         | 1E7.1       | Square D   | Cat No. 500T68H       | Electrical Transformer<br>XFMR ST-ADDN |
| 16200         | 1E7.1       | Square D   | Cat No. 15143824-005  | Main Switchboard<br>MSB                |

***Recommendation:***

None

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## CLOSE-OUT PROCESS

KPMG verified the project close out requirements established by the Contract General Conditions and SUAM. The CSU Standard Close Out Check list was not used by the University; however close-out was completed timely. KPMG reviewed Certificate of Completion, Certificate of Occupancy, Punch List, Operating Permits, O & M Manuals, Warranties, As-Built Drawings, Pre-Final and Final Inspections, Punch List and other relevant project close out documentation, which was filed and retained properly at the University.

It was noted by KPMG that a thorough Post Project Performance Review was completed for this project.

***Recommendation:***

None

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## LIQUIDATED DAMAGES

The State Fire Marshal Certificate of Occupancy was issued on March 6, 2003 (Chem/Geo) and October 20, 2003 (BAM). The University took beneficial occupancy of the BAM building on August 18, 2003. The Notice of Completion was issued by CSU on August 19, 2003 (for original scope) and November 4, 2003 (due to change orders resulting from Fire Marshal requirements).

Since the Contractor completed the project and/or the University took beneficial occupancy ahead of the scheduled completion date of September 26, 2003 (126 additional change order days after original contractual completion date of May 23, 2003), liquidated damages were not warranted.

***Recommendation:***

None

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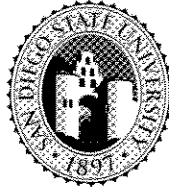
## **ACCOUNTING**

KPMG conducted a review of the University's cost accounting system and procedures for invoice review and payment authorization. The progress against budget for each contract is independently maintained, tracked and reported by the Facilities Planning and Management Department at SDSU. The Facilities Planning and Management Department monitors the accounting system to see when Account Payables cut a check against an approved invoice and when new encumbrances have been entered into the system.

The efforts of the Facilities Planning and Management Department are somewhat duplicative of the central accounting system, as they both track contract value, encumbrances and payments. We understand that the University is looking at a system wide implementation of construction project reporting module to interface with the current accounting software.

***Recommendation:***

None

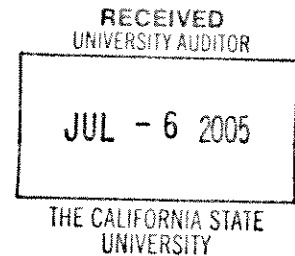


San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8000  
Tel: 619 594-5201  
Fax: 619 594-8894

THE PRESIDENT

June 28, 2005

Mr. Larry Mandel  
University Auditor  
The California State University  
401 Golden Shore, 4th Floor  
Long Beach, CA 90802



Dear Mr. Mandel:

Attached is San Diego State University's response to the KPMG audit report on the Chemistry/Geology/BAM Renovation construction project. Audit recommendations relevant to Capital Planning, Design, and Construction (CPDC) are being submitted separately.

Should you have any questions or require additional information, please contact Valerie Carter, Audit and Tax Manager, at 619-594-5901.

Sincerely,

  
Stephen L. Weber  
President

SLW/tal

Enclosure

- c: Sally F. Roush, Vice President, Business and Financial Affairs  
Ellene J. Gibbs, Associate Vice President, Financial Operations  
Tony Fulton, Director, Facilities Planning, Design and Construction  
Valerie J. Carter, Audit and Tax Manager

**CONSTRUCTION PROJECT EVALUATION**  
**SAN DIEGO STATE UNIVERSITY**  
**CHEMISTRY/GEOLOGY/BAM RENOVATION PROJECT**

**DESIGN COSTS**

***Recommendations:***

1. If reimbursables are not intended to be invoiced separately by the Architect, modify the language on future scopes of work to state that such charges are to be included with the Basic Services. (Ownership: SDSU)
2. On future contracts, use a pricing and invoicing methodology consistent with contract language. If any language is changed, obtain and document appropriate approval for any modifications to the standard Architect Agreement or Rider A. (Ownership: SDSU)

***Campus Response:***

1. We concur. Reimbursables could have been invoiced separately. However, California State University contracts have since been modified and now include reimbursables with Basic Services.
2. We concur. In the future, pricing and invoicing methodology will be consistent with contract language.

**CONSTRUCTION BID PROCESS**

***Recommendation:***

3. In the future, include governing prevailing wage rates with the bid. (Ownership: SDSU)

***Campus Response:***

3. We concur. The campus process has been changed to include prevailing wage rates with the bids.

## CONSTRUCTION CHANGE ORDERS

### *Recommendations:*

4. Establish means to obtain meaningful and reliable Architect's (or otherwise independent) estimates. (Ownership: SDSU)
  
- 5a. In all instances, SDSU should follow CSU policy or SDSU approved Delegation of Capital Outlay Authority to obtain correct approvals before executing any change, as required by each step in the change order process. (Ownership: SDSU)

### *Campus Response:*

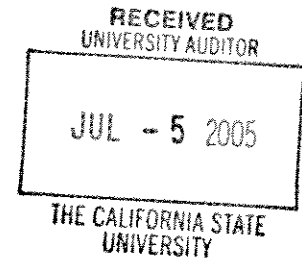
4. We concur. The campus will establish procedures to obtain meaningful and reliable Architect's estimates.
  
- 5a. We concur. The campus will follow CSU or SDSU policy to obtain correct approvals before executing any change as required in the change order process. The campus has implemented additional internal accounting processes to insure the correct approvals have been attained

# Memorandum

**To:** Mr. Larry Mandel  
University Auditor  
Office of University Auditor

**Date:** June 29, 2005

**From:** Richard P. West  
Executive Vice Chancellor and Chief Financial Officer  
Business and Finance Division



**Subject:** **Audit Report**  
Chemistry/Geology/BAM Renovation  
San Diego State University

I am pleased that the overall theme of this audit report continues in a positive vein and that it finds general compliance with established procedures. I have reviewed the report's findings with my Capital Planning, Design and Construction (CPDC) staff, and our specific comments to the auditors' findings and recommendations are on the attached pages.

RPW:JRC:bn

Attachments

cc: Ms. Elvyra F. San Juan  
Mr. Larry Piper  
Mr. Thomas M. Kennedy  
Mr. James R. Corsar

**CONSTRUCTION PROJECT EVALUATION**  
**SAN DIEGO STATE UNIVERSITY**  
**CHEMISTRY/GEOLOGY/BAM RENOVATION PROJECT**

**CONSTRUCTION CHANGE ORDERS**

***Recommendations:***

- 5b. As an additional check, individuals executing the encumbrance request on the accounting side should also go through the step of reviewing for appropriate approvals. (Ownership: CPDC)

***Management Response:***

- 5b. We agree that there should be an additional check, but believe the campus' (or chancellor's office for non-delegated campuses) contracts and procurement unit (instead of the accounting unit) should perform it. The chancellor's office of contracts and procurement currently reviews the signature authority; this process was undertaken when our financial system was converted to PeopleSoft, as Delegation of Authority was established with the Department Manager, or in the case of construction, the Construction Administrator. As the accounting staff only confirms that the project funds are available for encumbrance, it is more appropriate for the campus contracts unit to perform the additional check on signature authority. It is the Construction Administrator's responsibility to follow the campus' management plan as the first line of approval, and secure appropriate approvals for each change order.

The change proposal document is the tool campuses should be using to secure appropriate approvals of proposed change orders. In Section 1.03-a.8 of the change order procedures (SUAM Appendix D) CPDC identifies the various levels of signature authority required. CPDC has also modified the change order form to allow space for two additional levels of approval to recognize the dollar limitation on signature authority.

THE CALIFORNIA STATE UNIVERSITY  
OFFICE OF THE CHANCELLOR



BAKERSFIELD

October 10, 2005

CHANNEL ISLANDS

CHICO

**MEMORANDUM**

DOMINGUEZ HILLS

EAST BAY

TO: Mr. Larry Mandel  
University Auditor

FRESNO

FROM: Charles B. Reed  
Chancellor

A handwritten signature in black ink that reads "Charles B. Reed".

FULLERTON

SUBJECT: KPMG Draft Final Report on the *Chemistry/Geology/BAM*  
*Renovation* Construction Project at San Diego State University

HUMBOLDT

LONG BEACH

LOS ANGELES

In response to your memorandum of October 10, 2005, I accept the response as submitted with the draft final report on the *Chemistry/Geology/BAM Renovation* construction project at San Diego State University.

MARITIME ACADEMY

CBR/amd

MONTEREY BAY

Enclosure

NORTHRIDGE

POMONA

cc: Ms. Erika Alvord, KPMG

SACRAMENTO

Ms. Ellene J. Gibbs, Associate Vice President, Financial Operations

SAN BERNARDINO

Mr. Dennis Hordyk, Assistant Vice Chancellor, Financial Services

SAN DIEGO

Dr. Stephen L. Weber, President

Ms. Elvyra San Juan, Assistant Vice Chancellor, CPDC

Mr. Richard P. West, Executive Vice Chancellor and Chief Financial Officer

SAN FRANCISCO

SAN JOSÉ

SAN LUIS OBISPO

SAN MARCOS

SONOMA

STANISLAUS