Auditing Capital Projects and Project Controls

March 2013
Internal Audit Perspective

Oversight
- Is the process operating as planned?
- Are controls, resources, and performance measures adequate and operating effectively?
- Are policies being adhered to as intended?

Insight
- How can the process, measurements, and controls be modified or enhanced?
- What are other companies doing?
- Are you missing out on best practices?

Foresight
- Where is this process going?
- Is it scaleable as the company grows?
- Will current controls be adequate in the future?
- What planned or future adjustments should be considered?

Are we safe?
Are we effective and efficient?
Are we thinking ahead?
Auditing Capital Project Control Effectiveness

Inserting Photo Here
Capital Project Lifecycle

Pre-Feasibility / Feasibility

Feasibility
- Market Analysis
- Portfolio Analysis
- Site Selection and Acquisition
- Environmental Review
- Assumptions & Risk
- Financial Analysis

Planning
- Development Plan, Schedule & Budget
- Risk Assessment
- Plant Configuration
- Design Specifications
- Topographical Studies
- Taxes and Permits
- Third Party Permitting

Prioritize Projects
- Risk Strategy
- Strategic Fit
- Selection

Capital Availability
- Deal Structuring
- Financing
- Funding and Cash Flow
- Monitor Use of Capital

Deal Approval
- Portfolio Risk
- Risk Committee
- Deal Authorization

Owner Agreements
- Owner Procedures
- Third Party Services
- Supply Chain Logistics
- Utilities & Permitting

Pre-Feasibility / Feasibility & Planning

Resource Allocation & Commitment

Contractor Award
- Plant Bid Package
- Scope
- Clarification
- Capability & Risk Assessment
- Negotiate Bid Evaluation
- Award Notification

Contracting
- Terms and Conditions
- Permitting
- Standstill Costs
- Liquidated Damages
- Performance Guarantees
- Contractor Schedule & Incentives
- Insurance and Bonding
- Review and Approvals
- Notice to Proceed

Contract
- Contract Administration
- Change Order Authorization
- Progress Billings
- Claim Prevention
- Work Oversight and Inspection
- Quality Assessment
- Risk and Issue Management
- Status & Regulatory Reporting

Project Financing
- Letters of Credit
- Contingency Reserves
- Project Draws
- Covenant
- Compliance
- Change Order Funding

Execution

Commission & Turnover

Operations
- Performance & Guarantee Testing
- Compliance & Emissions Testing
- Start-up Plan & Responsibilities
- Inspections
- Operations Transfer

Close-out
- Certificate of Completion
- Liquidated Damages
- Warranty & Claims
- Release of Liens
- Contractual Terms

Post Audit
- Contractor Audit
- Post Financial Analysis
- Lessons Learned

Maintenance

Work Orders
- Tracking
- Suppliers/Sub-contractors
- Procurement of capital Goods, Materials & Suppliers

Scheduling
- Scheduling
- Project Management
- Service Delivery
- Tools & Equipment
- Fleet/Fixed Assets

Billing/Invoicing
- Bill Rates
- Travel & Expenses
- Processing & Collections

Warranty
- Claims
- Supplier/Subcontractor Performance
• A business case was not documented or approved for the project
• The processes to perform a scoping study, pre-feasibility and feasibility analysis may not have been followed and documented.
• There may not be documented processes for site selection/acquisition, environmental analysis and financial analysis or the processes and analysis were not followed or performed.
• The budget may not be adequate to complete the project or the project plan may not address all identifiable risks?
• The capital expenditure may not be approved through proper corporate channels
• Resources may not be available to complete the project
• Competitive bids may not have been solicited and evaluated based on defined criteria to select an Engineering, Procurement, Construction Management (EPCM) firm or other vendors.
• Controls are not in place to monitor cash flow and use of capital through-out the project
• Status reporting and forecasting methodologies are not in place to assist management monitor project status
## Potential Audits – Pre-Feasibility / Feasibility and Planning

<table>
<thead>
<tr>
<th>Project Risk</th>
<th>Suggested Audit</th>
<th>Description</th>
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</table>
| Informal or undocumented policies & procedures could lead to inconsistent execution of projects resulting in project inefficiencies and possible budget overruns | Construction Management Policies and Procedures Review | Review policies and procedures created for capital projects to ensure projects remain on budget and are completed timely.  

**Key areas of focus:**  
- **Commitment of Funds**  
  - Review the policies in place to ensure the authorization of contracts and purchase orders are documented properly  
  - Evaluate the procedures in place to review variances between PO and ATC documents  
  - Review the policy for closing out purchase orders  
- **Quality Assurance**  
  - Review the procedures for matching commitments matched to goods/service receipts and verifying quality of goods/services provided  
  - Evaluate the utilization of three-way matching principles  
- **Disbursement of Funds Processes**  
  - Review procedures in place to verify payments are only made for goods/services received  
  - Evaluate the process for ensuring payments are only made to authorized vendors |
| The project cost structure may not be adequately designed to allocate project costs appropriately | Work Breakdown Structure Element Review | Review the WBS Element structures of approved capital projects to identify opportunities to establish standardization and consistency across projects. Also review the set-up of capital projects as it pertains to project structure and accounting.  

**Key areas of focus:**  
- **Standardized WBS structure for like projects**  
  - Review that consistent WBS element structures are used across projects  
- **Consistent application of WBS elements at project initiation**  
  - Validate that WBS structures were in place prior to the commitment of funding  
  - Review access to the WBS element structure to ensure it is restricted to appropriate individuals.  
- **Proper allocation of capital and expense**  
  - Review the controls in place to determine if they are operating effectively to manage the allocation between capital and expense |
• The vendor selection process is inadequate or not followed (competitive bids are not solicited and adequately evaluated prior to awarding contracts to vendors).
• Contract terms and conditions are not advantageous to manage project costs or to allow management to monitor the vendors.
• Contractors may not be properly incentivized to complete quality work on time and on budget due to contract terms and conditions
• The scope of work is not adequate, clearly defined, or lends itself to change orders and project overruns.
• Contractors may not have the resources or expertise required to complete the project according to time and budget restraints
Change orders may not be properly reviewed and approved to identify changes to contract scope, terms, labor rates, and other modifications.

Change orders may include tasks that are included in the scope of the original contract.

Contracts may not be accessible and stored in a central location.

Invoices may not be properly reviewed prior to payment to verify compliance with contract terms and conditions.

Management may not review the quality and adequate completion of work prior to approval of progress billings.

Contingency may be improperly allocated.
## Potential Audits - Execution

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| Unauthorized invoices or costs not allowable per contractual agreements are paid | Vendor Invoice Review | Review a selection of construction project vendor invoices to identify compliance with contract terms and conditions.  
Key areas of focus:  
• **Invoice Approval**  
  ✓ Review invoices to ensure they are properly approved by appropriate project and contract management  
  ✓ Evaluate the terms of the invoice to determine if they are in accordance with purchase or contractual agreements |
| Ineffective or missing capital project processes and controls may lead to:  
  • Susceptibility to fraud, waste, and abuse  
  • Costly timeline and budget overruns  
  • Operational and financial reporting inaccuracies | Process and Control Review | Conduct assessments of process and internal controls to identify potential gaps. Focus on contract and invoice management. Verify compliance with Cliff’s internal policies and procedures.  
Key areas of focus:  
• **Initiation**  
  ✓ Review the process and related controls for the initiation of projects  
• **Planning**  
  ✓ Evaluate the processes and controls related to the budgeting and planning activities associated with projects  
• **Execution**  
  ✓ Identify and review the processes and controls in place to monitor the execution of project activities such as budget control, procurement, change orders, and vendor management.  
• **Monitoring**  
  ✓ Review the controls in place related to project oversight and reporting processes  
• **Completion of Contract Activities**  
  ✓ Review the process in place to close out contractual obligations for capital projects  
• **Financial Reporting and Accounting**  
  ✓ Review the processes for valuations of key financial estimates such as ARO  
  ✓ Evaluate impact of multiple ERP systems |
## Potential Audits - Execution (cont’d)

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<tbody>
<tr>
<td>Costs may be improperly recorded, tracked and reported leading to potential budget overruns, inaccurate forecasts and incorrect information provided to management</td>
<td><strong>Budget and Forecast Review</strong></td>
<td>Review methodologies and management reports that reflect current project status and projections to completion to verify that costs are properly allocated, reported, and forecasted.</td>
</tr>
</tbody>
</table>
| Processes and controls are not in place to ensure contract terms and conditions are adhered to by the vendor leading to: • Over-billed costs by vendor • Budget overruns | **Contract Risk Assessment** | Review and evaluate contract’s terms and conditions, including audit rights, billing methodology, etc. Assess the likelihood that potential risks and exposures have been identified and that processes and controls are in place to reduce the risk of fraud, waste, or abuse. Also determine if agreed upon terms and conditions are potentially disadvantageous to Cliffs.  
Key areas of focus:  
• **Contract Management**  
  ✓ Evaluate each contract to assess the appropriateness of a contract’s terms and conditions including audit rights, billing methodology, etc.  
  ✓ Identify and review the processes in place for monitoring the performance of vendors |
| Project expenditures may not be properly approved or tracked to purchase orders and contracts | **Procure to Pay Review** | Review Procure to Pay process, policies, and procedures and perform a detailed audit of transactions to verify compliance with the process.  
NOTE: This audit would be completed after the process has been redesigned and implemented. |
• Purchase orders may not be properly closed-out as work is completed.
• Costs may not be properly allocated as capital project costs or operating costs.
• Completed work is not properly reviewed by management or the EPCM firm for acceptable quality prior to acceptance and release of contingency.
• Inefficiencies may exist in the supply chain (procurement and sourcing of goods and services)
• Management may not allocate sufficient resources to adequately manage the project
## Potential Audits – Post Completion

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| Operational and financial objectives are not achieved for the project | Project Post-Mortem | Review the project details and objectives contained within the Scoping – Feasibility Studies and compare them to the final outcomes of the project to determine if what was proposed was actually achieved. Such details can include the projected cost of the project, ROI & IRR measures, and objectives (e.g., production targets, etc.). Develop a format and procedure to be leveraged and completed for future capital projects.  
Key areas of focus:  
• **Post-Mortem**  
  ✓ Review the objectives detailed in the planning phases of the project to determine if they were achieved during the project (e.g., ROI, IRR, production, etc.) |
| Inability to properly close out projects can lead to:  
  • Incorrect costs are recorded to the project after completion  
  • Recoverable funds not returned from vendors  
  • Inaccurate financial reporting | Project Close-Out | Review the close-out of the project including the in-service dating of capital costs and associated accounting and financial reporting considerations, and contract reconciliation to identify any recoverable funding related to construction activities. Moreover, ensure the project closes out in a timely manner and additional costs are not occurred.  
Key areas of focus:  
• **Project Close-out**  
  ✓ Review the processes and controls in place to timely close out projects  
  ✓ Evaluate the resulting assets related to the project to determine the proper application of accounting principles (e.g., in service date, depreciable lives, etc.)  
  ✓ Review contracts to verify they were reconciled at completion of the project to collect any recoverable funding  
  ✓ Verify the cut-off of project costs to determine what should be capitalized versus expensed |
Questions
Program Management Office (PMO) and Project Controls Group (PCG)

Photo Inserted Here
Typical Program Management Office (PMO) Structure

- **PMO Executive Committee**
- Program Management Office
  - Program Director
  - Project Management
  - Engineering
  - Quality Assurance
  - Procurement
  - Operations
  - Internal Audit
  - Project Forecasting & Reporting
  - Strategic Sourcing
- Cross Functional Coordination
- Project Categories
Establishing A Program Management Office

Typically there is a structured approach for defining the Program Management Office (PMO) requirements and transitioning to execution mode.

The Function of the PMO:

Functions of a Program Management Office will vary, and staffing and responsibilities will be scaled based on the organization’s needs and their appetite for multiple capital project initiatives.

Typical functions include the following:

- Risk & Issue Management
- Standards Management
- Stakeholder Management
- Performance Management
- Cost Management
- Resource Management
- Change Management
- Integration Management

Delivering Critical Success Factors:

Program Management provides the roadmap and communication mechanism for successful execution of projects and programs to include the following:

- An integrated master plan
- Well defined communication plan
- Identification of risks, issues and dependencies
- Attention to project tracking and reporting
- Strong executive support
- Clear set of goals, expectations and requirements
- Strong project management skills
- Measurable performance metrics
- Active participation and input from business units
- Well defined set of roles and responsibilities
### Key Program & Project Responsibilities (Example)

<table>
<thead>
<tr>
<th>PMO Steering Committee</th>
<th>Program Management Office (PMO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish strategy and risk management plan</td>
<td>• Coordinate overall project management governance and reporting framework</td>
</tr>
<tr>
<td>• Provide guidance to project leads and PMO to resolve issues timely</td>
<td>• Establish ground rules across projects</td>
</tr>
<tr>
<td>• Ensure timely completion of Mission Critical activities</td>
<td>• Maintain master project plan</td>
</tr>
<tr>
<td>• Oversee internal and external communications regarding program</td>
<td>• Maintain list of key dependencies and facilitate communication across projects</td>
</tr>
<tr>
<td></td>
<td>• Coordinate resources and budget</td>
</tr>
<tr>
<td></td>
<td>• Provide guidance on issues as they arise</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Project Managers (PM)</th>
<th>Core Team Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify and prioritize required project plan and tasks</td>
<td>• Execute and report on project tasks, tracking progress against established milestone dates</td>
</tr>
<tr>
<td>• Manage execution against established milestones</td>
<td>• Identify key risks as they arise and escalate to PM as appropriate</td>
</tr>
<tr>
<td>• Define project teams and manage deliverables and resources</td>
<td>• Identify areas where additional resources are required</td>
</tr>
<tr>
<td>• Provide regular reporting of progress (including scope decisions and issues) to the PMO</td>
<td>• Identify potential dependencies imbedded across work streams</td>
</tr>
</tbody>
</table>
### Project Controls Group

#### Project Controls Group (“PCG”)

<table>
<thead>
<tr>
<th>Contract Management</th>
<th>Project Forecasting &amp; Reporting</th>
<th>Project Accounting</th>
<th>Working Capital Management</th>
<th>Internal Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Change Management and Change Control</td>
<td>• Monitoring of Project Budgets, Actual Costs and Forecasts</td>
<td>• Invoice Review and Approval</td>
<td>• Capital Project Funding / Expenditure Request Management</td>
<td>• Performance of Pre and Post Implementation Audits (Operational, Financial, and Compliance)</td>
</tr>
<tr>
<td>• Contract Review</td>
<td>• Cost / Schedule Tracking &amp; Reporting (Earned Value Mgmt)</td>
<td>• Tax / Rebate Incentive Tracking &amp; Submittals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Purchase Order Review and Control</td>
<td>• Project Contingency Monitoring</td>
<td>• CIP / WIP Accounting Monitoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bond and Insurance Monitoring</td>
<td>• Project Cost and Schedule Forecasting</td>
<td>• Compliance Monitoring (FCPA, OFAC, UK Bribery, VAT, etc.)</td>
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<tr>
<td></td>
<td></td>
<td>• Cost Tracking</td>
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Typical Project Controls Group Organization

Corporate Office
- Project Controls Director
  - Financial Analyst
  - Master Scheduler (Engineer)
  - Tax / Compliance Analyst

Internal Audit
- Internal Audit Director
- Internal Audit Resources

Operational Auditors
- Capital Project Audit SME
- Auxiliary Audit Support

Project Site #1
- Project Site Manager
  - Project Finance Manager
  - Project Finance Assistant
  - Contract Management Support
  - Auxiliary Site Auditor

Project Site #2
- Project Site Manager
  - Project Finance Manager
  - Project Finance Assistant
  - Contract Management Support

Knowledge sharing
Common Processes

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Questions
Change Orders
Change Orders

Most likely area to audit due to higher risk because of opportunity

- The contract has been awarded and the unforeseen changes appear in many forms:
  - “Not in the original set of plans”
  - “This is an unforeseen condition”

Determining if a change order was needed for out of scope work (Vendor driven, Owner driven)

- Corrective work
- Missed item on the original proposal
- Emergency services
  - Natural disaster
  - Sub-contractor mistake

Potential Audit Areas:

- The underlying support
  - Time cards
  - Equipment rental
  - Sub-contractor invoices
  - Review the previously mentioned indirect costs
**Time & Material Contracts & Change Orders**

With these type of contracts and change orders, most of the risks have been accepted by the Owner:

- Emergency services
- Environmental services
- Undefined scope of work
- Time is of the essence

Here are some risk areas the Owner needs to be concerned with:

- Materials
- Equipment
- Expenses
- Allowances
- Rework/Warranty
- Insurance/Bonds
Auditing Time & Material Type Contracts & Change Orders

**Labor**
- Determine if labor hours and rates billed per contract
  - Higher rates (ST, OT) / levels
  - Excessive / Inflated hours
  - Billing ghost / Terminated employees
  - Inflated labor burden

**Materials**
- Determine if materials billed appropriately
  - Wrong project
  - Duplicate invoices
  - Excess materials

**Equipment**
- Determine if equipment hours and rates billed per contract
  - Idle equipment
  - Higher / Missing rates
  - Rent vs. Buy
Auditing Time & Material Type Contracts & Change Orders

**Expenses**

- Determine if expenses are reasonable
  - Travel
  - Meals
  - Entertainment
  - Discounts

**Allowances**

- Determine if allowance billed along with expense
  - Relocation
  - Office supplies
  - Data processing
  - Mobile phones
  - Safety program
  - Vehicles

**Expenses**

- Determine if work was previously performed and billed again
- Emergency services required because of sub-contractor mistake or negligence
  - Flood or mold work
  - Improper moisture plan
    - Windows left open after finish work was completed
Auditing Time & Material Type Contracts & Change Orders

**Insurance / Bonds**

- Determine the following:
  - Insurance / bond costs incurred were less than billed
    - Verify and validate bonding rate percentage
    - Request copies of cleared checks
  - Insurance/bonds billed but not obtained
    - Request copy of notarized bond
    - Call the surety company to verify bond
    - Upon completion, request a copy of the bond release
  - Insurance / bond refunds / rebates were not credited back to the project at close out
Questions
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