

Checklist	Remarks	Action (X)
<p>Project System Audit Cost Engineering Group</p> <p>Note: Not all items of the checklist shall be checked. It depends on the status of the work and whether it is the first, second or third audit.</p> <p>1. Project Definition</p> <p>1.1 Has the lead cost engineer:</p> <ul style="list-style-type: none"> • a copy of the priced contract? • a copy of the invoice instructions? • a copy of the as sold pricing sheet including the detailed back-up? • a copy of the investment cost estimate (details)? <p>1.2 Is the Project Procedure and Execution Manual (PPEM) available? What is the status, issue and date? (CM-PE-303).</p> <p>1.3 Does the PPEM properly describe the scope of work and services expected from your discipline to execute the work?</p> <p>1.4 Are Company/client, standards/norms/ guides/practices/procedures/forms and specifications, applicable and to be used by cost engineering being listed in the PPEM?</p> <p>1.5 Does the PPEM contain an instruction how to handle project variations of the original scope of work and project development changes regarding administration, approvals and distribution prior to be implemented? Did the client approve the instructions?</p> <p>1.6 Has the schedule for the issue of cost reports been issued, if different from standard?</p> <p>1.7 How is the cost engineering filing system organized?</p>		
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<p>2. Engineering Technical</p> <p><i>Affiliated and Branch Offices</i></p> <p>2.1 If applicable, are contracts with Company Engineers & Constructors affiliate companies and branch offices available?</p> <p>2.2 Is the procedure for affiliate and branch office billing available?</p> <p>2.3 Have purchase orders been prepared for inter-company services?</p> <p>2.4 Is there a budget for branch office and inter-company services?</p> <p>2.5 How are costs from affiliated companies and branch offices controlled?</p> <p><i>Variation Control</i></p> <p>2.6 Has the Procedure for project variations been agreed upon? Including the client? (ref.. CM-PE-313)</p> <p>2.7 Are CN's/CO's controlled?</p> <ul style="list-style-type: none"> • with sufficient backup documents? • with proper registration? • with proper description? • including detailed manhour estimates? • with cost effect on schedules? • with correct approvals? <p>2.8 How are consequences of changes in one account leading to changes in other accounts recognized?</p> <p>2.9 Have approved CO's and deviations from plan been incorporated in the cost report?</p> <p>2.10 Has a change order coordinator been assigned?</p> <p>2.11 Have project variations been properly administered and pushed around in the minimum of time indicated in the PPEM?</p>				
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2.12 Have CO's-CN's and project variations been pursued aggressively with approved resolutions, rather than being deferred to a later date?		
2.13 How many CO's and deviations are currently outstanding and to what extent may they affect the project?		
<i>Computer Programs</i>		
2.14 Which computer programs are used for cost reporting?		
2.15 Have these programs been revised to meet specific project requirements?		
2.16 Have revised computer programs used for this project been released for use by the department? Have they been approved by the client?		
2.17 Have issued computer generated documents been: <ul style="list-style-type: none"> • checked/approved? • numbered? 		
<i>Documents</i>		
2.18 Has the cost engineering scope document been issued and approved by the project manager?		
2.19 Has the cost report been signed by the project manager?		
2.20 Has the cost reference list for internal/external cost codes been approved and issued?		
3. Engineering General		
3.1 Are detailed HO discipline schedules available in your group?		
3.2 Has the subcontracting philosophy for construction been set up and agreed upon?		
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<p>4. Cost Engineering</p> <p>4.1 Has the applicable work breakdown structure and codes of account been defined and approved by the project manager and the client?</p> <p>4.2 In case client's standards/details/procedures/forms etc., must be used are they:</p> <ul style="list-style-type: none"> • listed in the PPEM? • available in the group and/or other Company disciplines, where required? <p>4.3 Have documents and formats to be prepared by your discipline been properly defined? By client or by Company?</p> <p>4.4 Has the control budget status been established for the entire scope of work and been approved by the Company project management and/or the client, where applicable?</p> <p>4.5 Have budget reports/controlled budget split been approved by the Company and/or client project manager, whichever is applicable?</p> <p>4.6 Are the cost report narratives easy to read and do they give a good overview of the current project status and trends?</p> <p>4.7 Is the escalation used for the project still sufficient?</p> <p>Has there been an interim correction? Are adjustments foreseen in the forecast to complete?</p> <p>4.8 Is there a current or forecasted impact on XYZ, due to schedule extensions (manhours) applicable? Has this impact been incorporated?</p> <p>4.9 What is the status of commitments made vs anticipated finals?</p> <p>4.10 Have budget releases been made for each purchase order or subcontract?</p> <p>4.11 How do you know that all PO's/SC's and PO/SC amendments have been included in the current commitments?</p>			
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<p>4.12 How are field PO's and extra work orders registered and included in the cost report?</p>		
<p>4.13 Are cost analyses continuous or ad hoc?</p>		
<p>4.14 Have material bulk quantities been supplied in time by engineering?</p>		
<p>4.15 Is the impact of revised quantities times unit rates immediately processed and reported ahead of the next cost report issue?</p>		
<p>4.16 Who is responsible for material quantity forecasting?</p>		
<p>4.17 Are regular analyses made and revised forecasts issued?</p> <p>State last issue date.</p>		
<p>4.18 Have planned/actual/forecast commitment and expenditure curves for main equipment, bulk materials, sub contracts and engineering services been made and regularly updated?</p> <p>State last issue date</p>		
<p>4.19 Are actual and forecast payment curves available?</p> <p>State last issue date.</p>		
<p>4.20 Has the status of subcontract reporting, progress vs. allowances for EWA's been monitored continuously, bi-weekly, or monthly?</p>		
<p>4.21 What is the monitoring status of bulk quantities unit prices experienced vs estimated prices for material and labor? Were any deviations experienced from original budget backup details?</p>		
<p>4.22 Have cheaper alternatives been properly evaluated, both technically and commercially?</p>		
<p>4.23 Have recommended lowest bidders been screened for completeness of their bids?</p>		
<p>4.24 Did the cost engineering group receive a copy of all requisitions-subcontracts for bids/purchase with back-up documentation?</p>		
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4.25 Did the cost engineering group receive a quantification copy from all bidders as mentioned under 4.24?								
4.26 Indicate where 30% or more changes were experienced after PO or subcontract placement.								
5. Miscellaneous								
5.1 Were there any disagreements arising from the cost control authority within either the cost control group itself, project management, or from the allocation funds? (own discipline or client).								
5.2 Were there any disagreements experienced stemming from prior unresolved conflicts reported in previous progress reports?								
5.3 What approach has been followed to ascertain that the optimal cost control/forecast could be applied for the design engineering and construction craft disciplines?								
5.4 To what extent has cash flow generation been a drive to start work activities?								
5.5 Is there anything which should be mentioned that affects the success of the project and/or the quality and/or effectiveness of the cost reporting and forecasting?								
6. Joint Ventures								
6.1 Has the cost engineer a copy of the contract between Company and the JV?								
6.2 Who is responsible for the JV cost reporting towards the client and the JV partners?								
6.3 Does each JV partner have its own budget?								
6.4 Has the scope of work associated with these budgets been clearly defined?								
6.5 Have the cost report cut-off dates been synchronized between the JV partners?								
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<p>6.6 How are budget transfers between JV partners organized?</p> <p>Who ensures that the combined cost report is consistent with respect to budget transfers?</p>		
<p>6.7 Has a cross-reference list between cost codes of the JV partners been issued?</p>		
<p>6.8 How are currency exchange rates and currency cost handled?</p> <p>Is the same exchange rate applied by each partner?</p>		
<p>6.9 Who is responsible for treasury? Have forecasts been made for financing costs and interest?</p> <p>Have they been included in the JV cost report?</p>		
<p>7. Job Control</p>		
<p>7.1 Has a budget for the cost engineering group been defined?</p>		
<p>7.2 Has the cost engineering group prepared a forecast, planning and manpower curve for executing the scope of work and services required for the project?</p>		
<p>7.3 What is the current relationship between spent and planned manhours?</p>		
<p>7.4 Is the manhours forecast for cost engineering being updated and maintained?</p>		
<p>7.5 How does the forecast final manhours requirement relate to the anticipated final budget, being the sum of the current budget and approved deviations from plan?</p>		
<p>7.6 Were any manpower problems experienced in:</p> <ul style="list-style-type: none"> • filling requirements? • assigning people? • performance of people? 		
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<p>7.7 Does the lead cost engineer receive the following documents:?</p> <ul style="list-style-type: none"> • weekly time reports • monthly invoice status (incl. outstanding invoices) and payment from client status • monthly expenditure and outstanding expenditure per PO or SC • monthly job history report • monthly/weekly computer usage report • copy of travel authorization report • copy of assignment conditions/ letters • isometric release schedule • eng. serv. progress report by discipline • field progress report by subcontract • procurement status report • commitment register(s) • material received notices • commercial bid evaluations • key quantity tracking report (incl. quantity curves) 					
<p>7.8 Is there a regular coordination meeting with the project/ engineering management and other lead engineers incl. cost engineering?</p>					
<p>7.9 Is there evidence of good communication with other disciplines/departments?</p>					
<p>8. Additional Questions</p>					
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