

Checklist	Remarks	Action (X)
<p style="text-align: center;">Project System Audit Environmental, Health & Safety (EH&S) 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>Evidence of nonconformity in items audited may indicate that a more extensive audit is required.</p> <p>1. Project Definition</p> <p>1.1 Is the Project Procedure and Execution Manual (PPEM) available?</p> <p>What is the status, issue and date?</p> <p>1.2 Does the PPEM properly describe the scope of work and services expected from your discipline to execute the work?</p> <p>1.3 Are the applicable governmental, local authorities design codes/norms/rules/standards design guides, listed in the PPEM?</p> <p>Are they available in the discipline group?</p> <p>1.4 Are Company/client, standards/norms/guides/practices/procedures/forms and specifications, applicable and to be used by your discipline being listed in the PPEM?</p> <p>Are they available in your group?</p> <p>1.5 Are specific project (account) code specifications applicable and to be used?</p> <p>Are these certified, including client's comments incorporated? e.g.</p> <ul style="list-style-type: none"> • EH&S program • quantitative risk assessment • emission limits (air, water, waste, noise) • working environment 		
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<p>1.6 Does the PPEM contain an instruction on how to handle project variations of the original scope of work regarding administration, approvals and distribution prior to be implemented?</p>		
<p>2. Engineering Technical</p>		
<p>2.1 How is it ensured that specifications and calculations are:</p> <ul style="list-style-type: none"> • performed in sequence of criticality? What sets this criticality? • coordinated with other disciplines concerned, where required? • supported by (preliminary) calculation results to prove the quality in accordance with the applicable design codes and governmental and/or local statutory requirements? 		
<p>2.2 How is it ensured that:</p> <ul style="list-style-type: none"> • basic data used by your discipline, are provided by the appropriate discipline and incorporated in the quantitative risk assessment? State issue date and status. • emission limits are checked and are approved and incorporated in the EH&S reports. • subcontractor documents are approved by the discipline engineer assigned on the project. • final calculation documents, prepared by the selected subcontractor are provided for comments and/or approval. 		
<p>2.3 Based on which issue of the plot plan(s) is the quantitative risk analysis prepared? State issue no., date and status.</p>		
<p>2.4 Computer calculations:</p> <ul style="list-style-type: none"> • are client's software programs to be used? • if so, are they listed in the PPEM with issue number, date and status? 		

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<ul style="list-style-type: none"> • If not, have our programs been certified by the discipline manager? • have they been approved by the client? • if a design code is involved how is it verified, that the latest design code issue has been implemented in the program? 		
<p>2.5 Is it anticipated that non-routine calculation methods are to be applied?</p>		
<p>2.6 Are job related internal instructions developed and used?</p>		
<p>2.7 Is it expected that we need the services of consultants for special items, e.g. studies?</p>		
<p>2.8 Is the subcontract plan issued, indicating type and scope of the various subcontracts and key dates?</p>		
<p>2.9 Relative to EH&S activities, do particular risks exist which could ultimately make Company liable and add costs (Euro) to the project.</p>		
<p>2.10 How are EH&S requirements communicated with other disciplines, e.g.</p> <ul style="list-style-type: none"> • sewer requirements to civil; • fire proofing requirements to structural steel; • fire fighting requirements to mechanical; • blast resistance requirements to architect; • emission requirements to process; • noise requirements to mechanical; • legal requirements to purchasing; • layout requirements to piping;. • safety requirements to construction. 		
<p>2.11 How are deliverables from other disciplines reviewed for EH&S aspects?</p> <p>Refer Safety Audit Questionnaires (BN-S-UK009).</p>		

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<p>2.12 To what extent is the authority engineer involved in the approval of in-house and/or supplier documents/data?</p>		
<p>2.13 Does the EH&S engineer attend pre-award/bid clarification meetings?</p>		
<p>3. Engineering General</p>		
<p>3.1 How has the discipline project file been organized?</p>		
<p>3.2 Does the EH&S group have a list of "action" points to be addressed in their group?</p>		
<p>3.3 Are the project documents kept up-to-date on a continuous basis or with frequent intervals?</p>		
<p>3.4 Is the information incorporated in the equipment list, consistent with the issued equipment data sheets received from our internal disciplines?</p>		
<p>3.5 What is the frequency of receipt of new issues of the equipment list?</p> <p>When was the last (re)-issue received?</p> <p>State issue number, date and status.</p>		
<p>3.6 Are package units properly checked for EH&S aspects?</p>		
<p>4. Job Control</p>		
<p>4.1 Where has the budget for the EH&S group been defined?</p>		
<p>4.2 Was the EH&S group involved in preparing the estimate, planning and manpower curve in executing the scope of work and services required for the project?</p>		
<p>4.3 Has the Project Execution Control System (PEC) been prepared for the scope of work and services required?</p> <p>Is it used for progress measurement?</p>		
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<p>4.4 How much is the progress measured against the PEC summary for the EH&S group?</p> <p>State date.</p>		
<p>4.5 What efficiency is being reported?</p>		
<p>4.6 Are changes in the scope of work being processed in time?</p>		
<p>4.7 Are the PEC and scheduled manhours being adjusted based on the approved project variations?</p>		
<p>4.8 Does the lead EH&S engineer receive a copy of the weekly LDS print-out?</p>		
<p>4.9 How does the final expected manhour requirement relate to the assigned manhour budget?</p>		
<p>4.10 Is there a regular coordination meeting with the project/engineering management and other lead engineers, including planning and cost control?</p>		
<p>4.11 What is currently the percentage of agency personnel on the job within the EH&S group?</p>		
<p>4.12 Are planned milestones met in time?</p>		
<p>4.13 Have the authority requirements been established?</p> <ul style="list-style-type: none"> • which EH&S documents have to be submitted for approval and by whom? • which authorities are involved? • is sufficient time allowed for presentation and approval time? 		
<p>5. Additional Questions</p>		