

Engineering Procedure

SAEP-12

31 August, 2004

Project Execution Plan

Document Responsibility: Project Support and Controls Dept.

Saudi Aramco DeskTop Standards

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1 Scope

1.1 Definition

The Project Execution Plan (PEP) is a strategic planning document that defines objectives, plans, requirements and related information necessary for optimum project execution. It is a master reference guide that promotes common understanding and alignment of all project participants. The PEP is prepared by the Project Manager, with input from the Proponent and other Saudi Aramco organizations that have key roles in a project's execution.

1.2 Purpose

The PEP serves as a communications and coordination tool that formally establishes the Project Manager's front-end project planning, with emphasis on identifying issues critical to project success and defining strategies to address these issues. It is an agreement endorsed by the Saudi Aramco Project Management Team (SAPMT), the Proponent, and Management defining the execution of the project, including schedule, method(s) of executing the work and responsibilities of major participants. In one comprehensive document, the PEP relates the approved project scope with contracting and material plans, cost information, summary schedules, value practices implementation, departmental responsibilities, and SAPMT staffing requirements. The PEP is intended to provide strategic guidance to develop more detailed tactical planning and execution as the project progresses.

1.3 Timing and Application

The PEP shall be issued in accordance with the timing outlined below, which is designed to support the PEP's purpose of serving as a strategic planning tool:

- Abbreviated PEP is mandatory for all BI's
- Full PEP is mandatory for BI's
 - over \$25MM
 - or recommended by the responsible Department Manager
- PEPs are waived for Master Appropriation projects.

1.3.1 Abbreviated PEP

To be issued prior to release of Preliminary Engineering funds. When requested, PS&CD / Project Controls & Information System Unit (PC&ISU) shall participate and assist SAPMT in the preparation of the PEP Level II Milestone Schedule.

The Abbreviated PEP is intended to provide a framework for subsequent planning. It is not expected that every detail required by SAEP-12 will be addressed at this time. As a minimum, the SAPMT shall address the following items using the best information currently available. It is understood that all sections are subject to further development and change:

- Project Summary
- Contracting Strategy
- Organization Chart
- Milestone Schedule
- Value Practices
- Contractor Saudization Plan
- Maximizing In-Kingdom Design Work
- Projects within Existing Facilities (Non-Grass Roots)
- Areas of Concern

The Abbreviated PEP will be the basis for development of the Full PEP if one is to be prepared. The Abbreviated PEP shall be updated or revised as required to reflect major changes in plans if a full PEP is not required.

1.3.2 Full PEP

To be issued for approval by 30% preliminary engineering completion or within 90 days of Project Proposal Start. SAPMT will report status of PEP submittals in the PPU's comments section.

The PEP shall be updated as the need arises prior to implementing major scope changes or significant changes in contracting plan, and at other times deemed necessary by the PEP approval authority. SAPMT may issue a completely revised document or an addendum covering the changed section(s) only.

2 Applicable Documents

Saudi Aramco Engineering Procedures

<u>SAEP-13</u>	<i>Project Environmental Assessments</i>
<u>SAEP-14</u>	<i>Project Proposal</i>
<u>SAEP-31</u>	<i>Corporate Spare Parts Data Requirements</i>
<u>SAEP-125</u>	<i>Saudi Aramco Engineering Standards</i>
<u>SAEP-329</u>	<i>Project Close-out Report</i>

Saudi Aramco General Instructions

*GI-0002.710 Mechanical Completion and Performance
Acceptance of Facilities*

GI-0710.002 Classification of Sensitive Documents

Saudi Aramco Cost and Scheduling Manual

Saudi Aramco Contracting Manual

Supply Chain Management Manual

3 Instructions

The PEP shall include the following sections:

3.1 Table of Contents, Approval Sheet and Revision Control

For format, see Exhibits A, B, and C.

3.2 Project Summary

Provide a brief synopsis of the objectives, scope, and current progress status of the Project. Incorporate into the Project Summary:

3.2.1 Project Purpose

Summarize the purpose of the project explaining why it is being done (e.g., to increase production capacity of a plant by 100,000 barrels/day).

3.2.2 Design Basis

Provide a synopsis of how the project is to be accomplished (e.g., to increase production by expanding existing facilities or by constructing a new plant) by summarizing the project's basis of design as described in the current scoping paper.

3.2.3 Project Scope

Briefly describe what is to be accomplished by the project, such as project activities to be achieved, physical facilities to be built, demolished, or revamped, etc. This information will be a summary of the work described in the current Design Basis Scoping Paper and/or Project Proposal scope of work.

3.2.4 Project Progress Status

Define where the project currently stands in the project life cycle, in order to establish the information basis on which the PEP is being prepared. Briefly identify the major ongoing activities and provide current percent complete of project proposal, detailed engineering, procurement, and construction, as applicable.

3.2.5 Project Location

PEP should state location of project and indicate whether offshore or onshore.

3.2.6 Project Shutdown Requirements

PEP should identify shutdown requirements and if it is planned during Plant T&I.

3.2.7 Related Projects

PEP should identify other related projects that may impact the project.

3.3 Contracts

The contract development process is often intricate and interrelated and once actions based on a particular strategy are initiated, it may not be practical or possible to modify the strategy. An overall contracting strategy which addresses all aspects of the work must be developed and presented to management at an early stage of every project.

3.3.1 Contracting Strategy

A Contracting Strategy document reflecting the SAPMT's initial view on what type(s) of contracts to be used shall be prepared as part of each Abbreviated PEP. This Contracting Strategy shall be updated to reflect any major changes (particularly related to OOK contracts, non-lump sum contracts, and non-competitive awards). If a Full PEP is prepared, the Contracting Strategy shall become part of it. If a Full PEP is not prepared, the Contracting Strategy shall be updated even if other parts of the Abbreviated PEP are not.

The Contracting Strategy shall summarize the plans for developing and procuring the necessary contracts for the project's major contracting phases (i.e., Project Proposal, Detailed Design, Procurement and Construction). Information shall be categorized by the major contracting phases mentioned and include the following:

- a) Type of Contract (Lump Sum Turnkey, Lump Sum, Lump Sum Procure/Build, Reimbursable Cost, Unit Rate, Service Order, etc.) and the reasons for selection.
- b) Procurement Method (Competitive Bid, Sole Source, etc.) and reasons for selection and whether an existing General Bid slate will be used.
- c) Appropriate Project and Contracting Milestones, for example:
 - Expenditure Request Approval (ERA)
 - Prepare and Issue Bid Packages
 - Contract Award
 - Mechanical Completion
 - On Stream

The Contracting Strategy shall include an exhibit illustrating the contracting plan in matrix form (See Exhibit D).

3.3.2 Contracting Plans

A Contracting Plan is required for each contract action (or related contract actions) unless the requirement has been waived (in writing) by the Contracting Representative. The Contracting Plan is the joint responsibility of the Contracting Department and the contract proponent. After approval by the Contract Signatory, the Contracting Plan shall be incorporated into the Project Execution Plan. For more detailed instructions, refer to the Saudi Aramco Contracting Manual VII(1) - Contract Planning and VIII(24) - Contracting Plan (Outline).

Prior to carrying out a detailed analysis as part of the Contract Plan, potential contracting alternatives in the form of a summary level schedule comparison shall be prepared (See Exhibit E).

For projects involving major LSTK contracts, the option of issuing the bid package prior to ERA should be addressed. Analysis should include estimated effects on schedule, cost, and other considerations comparing the normal procedure of issuing bid package after ERA with a proposed option of bidding prior to ERA. This analysis should

also include evaluation of the feasibility of using the LSTK bids in the ER estimate.

3.4 Material Procurement Plan

The Material Procurement Plan addresses project material requirements, their procurement and movement. It should define the proposed procurement and traffic responsibilities of Saudi Aramco and the Contractor(s). Projects will review proposed procurement actions with representatives of Material Supply. This review shall involve, at a minimum, the project Liaison Coordinator of the Projects Purchasing Division.

3.4.1 Critical and Long Lead-Time Material and Equipment

Prepare an itemized listing of material and equipment considered critical and/or long lead items. Specific actions should be identified to ensure that such items will arrive at the designated job site on or before the required dates irrespective if handled by Saudi Aramco or by a contractor. Examples of such actions include use of air freight, dedicated trucks, premiums, penalty and incentives, identification, prioritization, and close monitoring of critical material and its properties to the construction schedule, SAPMT representative at vendor's shop, expediting custom clearance, unloading and placing large material on foundations rather than storing, etc.

If procurement of major equipment and materials is on the critical path of the project schedule, SAPMT shall consider various strategies to reduce its impact to the project schedule. Such strategies may include early Company procurement, early Company procurement and assignment ("novation"), Company or Project Proposal Contractor procurement of early vendor engineering ("beneficial engineering"), and early engineering by vendors using time unit rates under the Project Proposal Contractor's contract.

3.4.2 Other Material and Equipment

Designate responsibilities between Saudi Aramco and Contractors for cost effective supply of materials and equipment to meet project schedules.

The Material Procurement Plan requires addressing maximum cost-effective usage of locally-manufactured materials, use of on-hand and surplus material, material quantity concerns, standardization, and total cost of ownership and takes into consideration the guidelines of [SAEP-125](#), Saudi Aramco Engineering Standards, and the Supply Chain

Management Manual. Furthermore, the plan should address the use of existing corporate agreements; vendor selection criteria; material quality concerns; documentation; expediting; inspection; packing and marking; shipping, clearance and receiving; storing, issuing, staging, and the return and disposal of excess project material and equipment.

3.4.3 Surplus 9COM Material and Equipment

Review Surplus 9COM (previously known as Direct Charge – DC) material and equipment list that could be incorporated in the project's design. Surplus 9COM material and equipment should be looked at in the earliest stages of design so that it can be incorporated into the design.

3.4.4 Excess 9CAT Materials

Review Excess 9CAT (previously known as Saudi Aramco Materials System – SAMS) materials list of high-dollar-value items (\$10,000 and above) that could be incorporated in the project's design.

3.4.5 Heavy/Oversize Material or Equipment

Prepare a list of heavy/oversize material or equipment. Establish responsibilities for heavy lift requirements. Heavy lift planning for materials and equipment, and related requirements, will be coordinated with the Saudi Aramco Heavy Lift Group. Consult with the Materials Traffic Department regarding proposed international shipping arrangements and with the Transportation Department for in-Kingdom movements of heavy/oversize material or equipment.

3.4.6 Start-up, Operating, and Capital Spares

Establish responsibilities and requirements for start-up, operating, and capital spares procurement. Ensure compliance to requirements for operating spare parts in accordance with [SAEP-31](#), Corporate Spare Parts Data Requirements. Address the disposition of contractor procured spares, if applicable.

3.4.7 Customs Duties

Address responsibility for payment of customs duties, based on the most recent Government regulations including compliance with proper customs exemption requirements if any.

3.4.8 Quality Assurance/Quality Control

Identify materials quality assurance and quality control planning requirements. Address vendor inspection requirements and plans, including identification of materials to be factory tested and coordination with Saudi Aramco Vendor Inspection.

3.5 Precommissioning, Commissioning, and Startup Plan

Startup is defined as the transitional phase between facility construction completion and onstream, including all activities that bridge these two phases (i.e., precommissioning through performance acceptance). Overall project success is strongly related to startup success, which depends heavily on the degree and thoroughness of early startup planning. Saudi Aramco GI-0002.710, Mechanical Completion and Performance Acceptance of Facilities, provide the framework for startup planning. The Best Practices "Planning for Startup Model" is a useful reference and provides tools designed to assist in developing and implementing an early startup plan. The Startup Planning Model recommends that 50% of the startup planning effort should be completed by the end of Project Proposal phase. By the end of detailed design the startup planning effort should be 80% complete.

The startup plan addresses the roles and responsibilities of key persons and organizations, as well as the timing of startup planning and execution activities. The startup plan shall address the following issues:

3.5.1 Responsibilities and Timing

SAPMT and Proponent representative shall be assigned responsibility for managing the planning of startup; specify when these assignments will be made and what their startup planning responsibilities will entail. Identify other key contributors to startup planning and execution, including Inspection, Loss Prevention, contractors, vendors, and others as required, and define their roles and responsibilities.

Provide estimated timing and duration of startup planning, precommissioning, mechanical completion, and commissioning activities, including operations and maintenance training required prior to startup.

3.5.2 Systems Turnover Sequence

Provide a conceptual plan of the breakdown of the facility into systems and the sequence in which these systems will be checked out and turned over to the Proponent. Address specific plans to implement partial Mechanical Completions, if applicable.

3.5.3 Startup Execution Plan (SUEP) Preparation

The Startup Execution Plan (SUEP) is a planning document that defines the objectives, plans, requirements, and related activities and information necessary for a successful startup. It is a master reference guide that promotes common understanding and alignment of all project participants.

3.6 Project Cost

3.6.1 Project Funding

Describe Preliminary Engineering Funds requirements, Prior Approval Expenditure Request (PAER) Funds requirements if applicable, and plans for ER Estimate preparation. Also, describe the project budget amount and provide a summary of its major elements of engineering, material, and construction if available. Describe the basis of the current estimate. Identify any critical cost items that will require special attention to avoid cost overruns.

3.6.2 Cost Control

Describe the strategies to be utilized to ensure effective cost control and accurate cost reporting throughout the project life from Preliminary Engineering Funds approval through project close-out. Address the subjects of work breakdown structure, cost contingency management, cost status reporting systems, and expenditure forecast preparation. Identify any unique project characteristics that may require deviations from standard Saudi Aramco cost control procedures, and provide plans for handling such cases.

The project's work breakdown structure should be developed as a unified system that supports integrated cost and schedule control.

3.7 Project Schedule

3.7.1 Project Plan

Describe the summary logic and interdependencies used to develop the project milestone schedule. Identify critical schedule risk items and the potential impact of unforeseeable schedule delays.

Provide Project Milestone Schedule (See Exhibit F) in bar chart format summarizing major project activities, including plant outages and interfaces with other projects as applicable. The schedule shall include:

- contract development and award milestone dates by packages
- value engineering studies
- project proposal review and approval
- ER estimate preparation, review, and approval
- mobilization for engineering and construction
- detailed engineering control points
- long lead material procurement activities including release of purchase orders, fabrication, and delivery
- interim construction milestones
- Beneficial On Stream (BOS)
- mechanical completion
- precommissioning, commissioning, & startup
- shutdowns
- onstream

3.7.2 Progress Measurement and Schedule Control

Describe the methodology to be utilized to ensure accurate progress measurement and effective schedule control throughout the project life. Address the subjects of work breakdown structure, progress reporting systems, responsibilities of contractors with respect to progress measurement and schedule control, and Critical Path Method (CPM) scheduling software requirements. The Saudi Aramco Cost and Scheduling Manual provides a definition of scheduling levels of detail to be used on Saudi Aramco projects.

3.8 Project Organization and Interfaces

3.8.1 Establishing the SAPMT

Describe the process of establishing the SAPMT, including the following:

- Through review process that will be conducted to determine the type of disciplines needed to be covered by the SAPMT.
- Objectives and responsibilities (including correlation with work breakdown structure) for the Project Manager, Senior Project Engineers, and other SAPMT members as appropriate.

Provide organization charts for each major phase of the project (Exhibit G).

3.8.2 SAPMT Interfaces

Describe the roles, responsibilities, and reporting relationships between the SAPMT, Proponent, and other parties involved in the project, including Saudi Aramco departments and contractors. Include a typical project responsibility matrix (Exhibit H).

Describe how the SAPMT will provide effective and efficient communications among the SAPMT, proponent, support groups, and contractors during all phases of the project.

Describe how the SAPMT will provide close coordination and effective interface with other BI SAPMTs or Proponents, whose work will have direct impact on the Project's activities.

3.9 Value Practices

The oil and gas industry, as a whole, uses value practices that have been proven through experience to assist projects in reaching goals of shorter schedules and lower costs, as well as enhanced safety. The value practices outlined below are applicable to Saudi Aramco projects and, when properly planned and implemented, can help guide project teams to improved performance. If a project team does not include the use of value practices as an activity in the project plan, some value practices may be overlooked and potential benefits lost. Value practices must be implemented early in the project cycle to be effective, so the planning must reflect this approach.

Provide Value Practices Implementation Schedule (Exhibit I)

SAPMT may contact PS&CD/Project Performance Optimization Division (PPOD) for assistance with this section if required.

3.9.1 Value Engineering

Summarize SAPMT plan for implementing Value Engineering in accordance with the requirements of [SAEP-14](#), Project Proposal. Identify when the VE study will be conducted and by whom.

3.9.2 Best Practices Implementation

Summarize SAPMT plan for implementing Project Management's currently-identified or other industry best practices in accordance with PPOD guidance or the requirements of [SAEP-14](#), Project Proposal – as appropriate. Since best practices have the greatest impact on a project in the very early stages, it is recommended that use of best practices be planned early and should be combined and repeated, as applicable. (For example, a constructability review should be executed during

preliminary engineering at approximately 30% and again before 20% detailed design completion.)

- The following best practices have been identified as having high payback potential for Saudi Aramco projects:
 - Lessons Learned
 - Project Definition Rating Index
 - Project Execution Planning Workshop (PEPW)
 - Scope Control & Change Management
 - Constructability
 - Schedule Optimization
 - Planning for Startup

It is the responsibility of the SAPMT to implement as many of these practices as are appropriate to ensure successful project planning and execution.

- Should other best practices be "rolled out" by PPOD between revisions of SAEP-12, project teams should investigate if those new best practices offer value improvement to their projects, and plan their implementation accordingly.

For Lessons Learned, SAPMT shall define the plan for finding and implementing existing lessons learned from previous projects applicable to the current project. As a minimum, SAPMT shall search the Project Management's Lessons Learned database on the Saudi Aramco intranet at the beginning of each project phase (project proposal, detailed engineering, and construction) to review the latest lessons learned. Furthermore, SAPMT shall define plans for collecting new lessons learned during the life of the project. As a minimum, SAPMT shall collect and submit lessons learned at ERA (covering the Project Proposal phase) and Mechanical Completion (covering design, procurement, and construction phases) in accordance with [SAEP-329](#), Project Close-out Report.

3.9.3 Benchmarking

Summarize SAPMT plans for initiating a formal benchmarking analysis in accordance with [SAEP-14](#), Project Proposal. Identify when the benchmarking study will be conducted and by whom.

3.10 Project Safety and Environmental

3.10.1 Preliminary Hazard Analysis (PHA) and Hazard and Operability (HAZOP) Studies

- Plans and Objectives

Summarize SAPMT plan for implementing PHA and HAZOP studies. The objective in performing PHA and HAZOP studies is to identify any major hazards, improve process safety, and/or minimize operability problems. An additional goal is to provide further insight for risk management decisions by assigning a qualitative risk factor to each potential hazard or operability problem.

- Requirements and Timing

The SAPMT and Proponent, in conjunction with the Loss Prevention Department (LPD), and Process & Controls System Department (P&CSD) shall decide which projects and specific facilities require PHA and/or HAZOP studies. Duplicate facilities should not require new PHA and/or HAZOP studies. Only new or upgrade facilities that use, produce, process, transport, or store flammable, explosive, toxic or reactive substances in large quantities are candidates for PHA and/or HAZOP studies.

The PHA studies shall normally be conducted during the project proposal stage and the report shall be incorporated into the Project Proposal. The HAZOP studies, if required, shall be performed during the detailed design when the facility design is firm and no major design changes are forecasted. HAZOP study recommendations shall be incorporated into the final design of the facility.

- PHA and HAZOP Studies Execution

The PHA and HAZOP studies should be part of the project proposal or detailed design contract, if Saudi Aramco decides the Contractor is qualified to conduct the studies. If the Contractor is not qualified to conduct the study, a subcontractor can be used.

SAPMT shall notify LPD, P&CSD, and all other concerned parties at least six weeks in advance of any PHA or HAZOP study so that qualified personnel can be assigned and to participate.

A copy of the report shall be provided to LPD for review prior to release. SAPMT shall distribute copies of PHA and HAZOP study reports to all participants within four weeks after the study.

3.10.2 Environmental Assessment

Describe the plan for preparing the Environmental Impact Assessment as required by [SAEP-13](#), Project Environmental Impact Assessment.

3.10.3 Project Safety Program

Describe the safety program for the project. The program should describe the safety objectives for the project and how the program will be managed to ensure these objectives are met. Address the issues of accident prevention and contractor safety.

3.11 Contractor Saudization Plan

Address what actions will be taken to promote and support the hiring and training of Saudi Arab personnel by contractors working on the project.

3.12 Maximizing In-Kingdom Design Work

Address what actions will be taken to promote maximizing the IK design work. Also address the feasibility of performing portions of any planned LSTK OOK design work IK.

3.13 Projects within Existing Facilities (Non-Grass Roots)

Address what actions will be taken with regards to upgrade renovation or addition to existing facilities in the following areas.

Level of design work during the project proposal development.

Risk assessment for items that may impact the project cost estimate.

3.14 Areas of Concern

Address project concerns where corresponding plans of action or solutions have not been completely defined. Any unusual efforts or procedures required for successful project completion will be included in this section. Also, any anticipated problems that may affect operability, cost or schedule should be highlighted here.

3.14.1 Engineering Design

Highlight factors that may influence the project design (e.g., operations manning philosophy, operating reliability, capital versus operating costs, material sourcing premiums, labor premiums and location constraints, etc.). Provide action plans to address any concerns.

3.14.2 Construction

Highlight factors that can influence the project construction (e.g., site location, security, other projects, etc.). Provide action plans to address any concerns.

3.14.3 Company Interface

Summarize other Saudi Aramco activities that will be affected by the project (e.g., maintaining minimum production rates at existing facilities).

3.14.4 Government Interface

Identify anticipated interfaces with Saudi Arabian Government authorities including Land Permits and other required approvals. Address the timing and duration of all such activities.

3.14.5 Other Concerns

Identify other known factors that may impact efficient execution of the project and provide plans that address the concerns (e.g., SAPMT staffing restraints).

4 Responsibilities

4.1 Preparation

Preparation of the Abbreviated as well as Full PEP, coordination of reviews, and obtaining approval signatures are the responsibilities of the Project Manager. PPOD is available to explain this procedure and assist with PEP preparation and review.

4.2 Approvals

The Abbreviated PEP that is prepared prior to release of Preliminary Engineering funds (and all subsequent revisions) requires approval of the Project Management Department Manager. SAPMT shall submit a copy of the Abbreviated PEP to PS&CD/PC&ISU to verify the milestones and forward a copy to PPOD for information. Copies of all versions of the Abbreviated PEP shall also be included in the Preliminary Project Close-out report ([SAEP-329](#)).

For projects with a value \$25MM or below and where the Department Manager has elected to prepare a full PEP, the initial issues only require approval by the Project Management Department Manager.

For projects with a value between \$25MM and \$50MM, the initial full PEP requires approval by the Area General Manager after concurrence by the Proponent Admin Area Head.

For projects with a value over \$50MM the initial full PEP requires approval by the Vice President of Project Management after concurrence by the Proponent Admin Area Head (see approval sheet, Exhibit B).

A revised full PEP only requires approval by a Project Management Department Manager after concurrence by the Proponent Department Manager. A copy of the revised full PEP shall be forwarded to the signatory of the initial full PEP.

PS&CD shall review PPU comments on the status of Full PEP submittals at 30% preliminary engineering as an integral part of BISR reviews. Copies of all versions of the Full PEP shall be included in the Preliminary Project Closeout report ([SAEP-329](#)).

4.3 Distribution

It is the Project Manager's responsibility to distribute the signed-off PEP including initial and updated electronic or hard copies of both Abbreviated as well as Full PEP. Distribution includes the Project Proponent, Project Support and Controls Department and Materials Supply's Purchasing Department. In addition, copies of revised PEP's shall be distributed to signatories of Rev. 0 PEP's.

4.4 Confidentiality

In accordance with GI-0710.002, Classification of Sensitive Documents, PEPs are to be classified by the SAPMT as either "Restricted" or "Confidential" (for "major" expansions or developments) and marked and handled accordingly.

Revision Summary

31 August, 2004

Revised the "Next Planned Update".
Scheduled update to incorporate improvements.

Exhibits

Exhibit A – Table of Contents

SECTION	TITLE
-	APPROVAL SHEET
-	REVISION CONTROL
1	PROJECT SUMMARY
2	CONTRACTING
3	MATERIAL PROCUREMENT PLAN
4	PRECOMMISSIONING, COMMISSIONING, & STARTUP PLAN
5	PROJECT COST
6	PROJECT SCHEDULE
7	PROJECT ORGANIZATION AND INTERFACES
8	VALUE PRACTICES IMPLEMENTATION
9	PROJECT SAFETY
10	AREAS OF CONCERN
11	EXHIBITS

Exhibit B – Approval Sheet

(Refer to Section 4.2 for approval levels)

PROJECT EXECUTION PLAN

**BUDGET ITEM NO.
PROJECT TITLE**

PROJECT MANAGER
PROJECT MANAGEMENT DEPARTMENT

DATE

DEPARTMENT MANAGER
PROJECT MANAGEMENT DEPARTMENT

DATE

GENERAL MANAGER
AREA PROJECT MANAGEMENT

DATE

CONCUR:

DEPARTMENT MANAGER
PROPONENT ORGANIZATION

DATE

CONCUR:

VICE PRESIDENT/EXECUTIVE DIRECTOR
PROPONENT ORGANIZATION

DATE

APPROVE:

VICE PRESIDENT
PROJECT MANAGEMENT

DATE

Exhibit C – Revision Control

Date	Rev	Description

Exhibit D – Contracting Plan Matrix

CONTRACTING PLAN MATRIX

WORK SCOPE	PROJECT PROPOSAL	DETAILED ENGINEERING	MATERIAL PROCUREMENT	CONSTRUCTION
PACKAGE NO. 1	GES Service Order	LSTK CONTRACT Selective bid screened from SRC master bidders list IFB: mm/yy Award: mm/yy MC: mm/yy		
PACKAGE NO. 2	IFB: mm/yy Award: mm/yy Compl: mm/yy	GES Service Order IFB: mm/yy Award: mm/yy Compl: mm/yy	LSPB CONTRACT Open solicitation with selective bidding IFB: mm/yy Award: mm/yy MC: mm/yy	

Exhibit E – Comparison of Various Contracting Alternatives

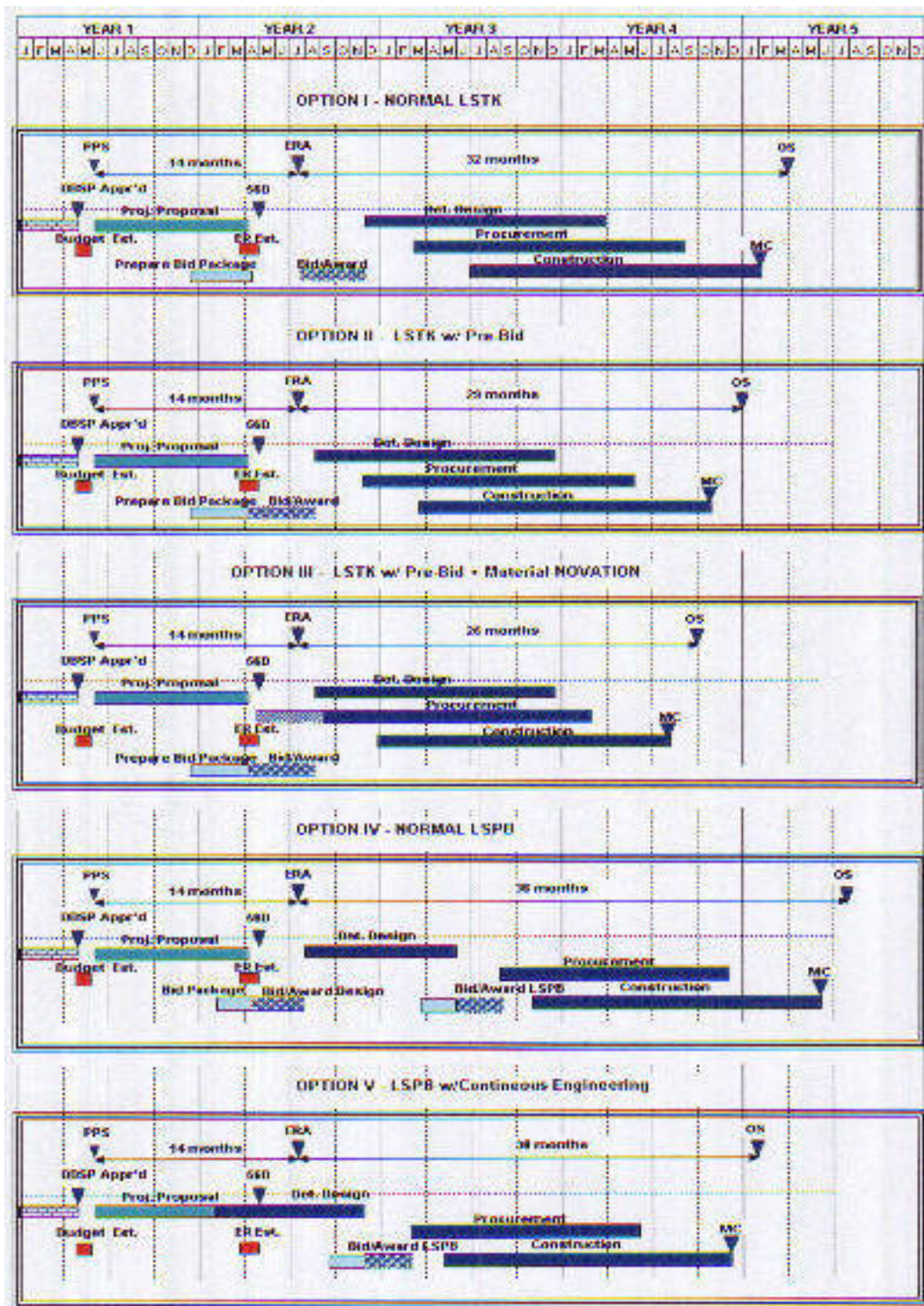


Exhibit F – Project Milestone Schedule

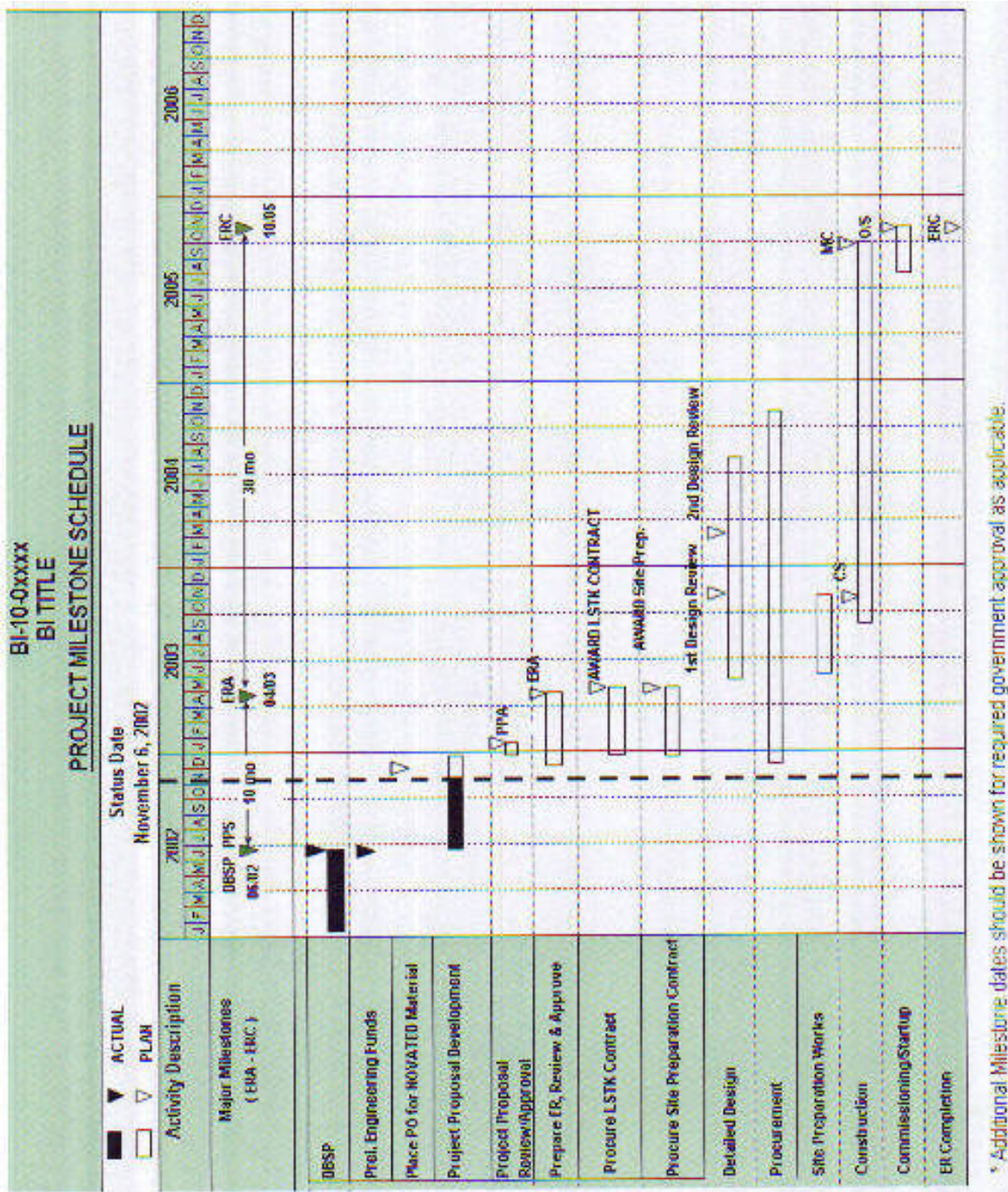


Exhibit G.1 – SAPMT Organization (Typical Design Phase)

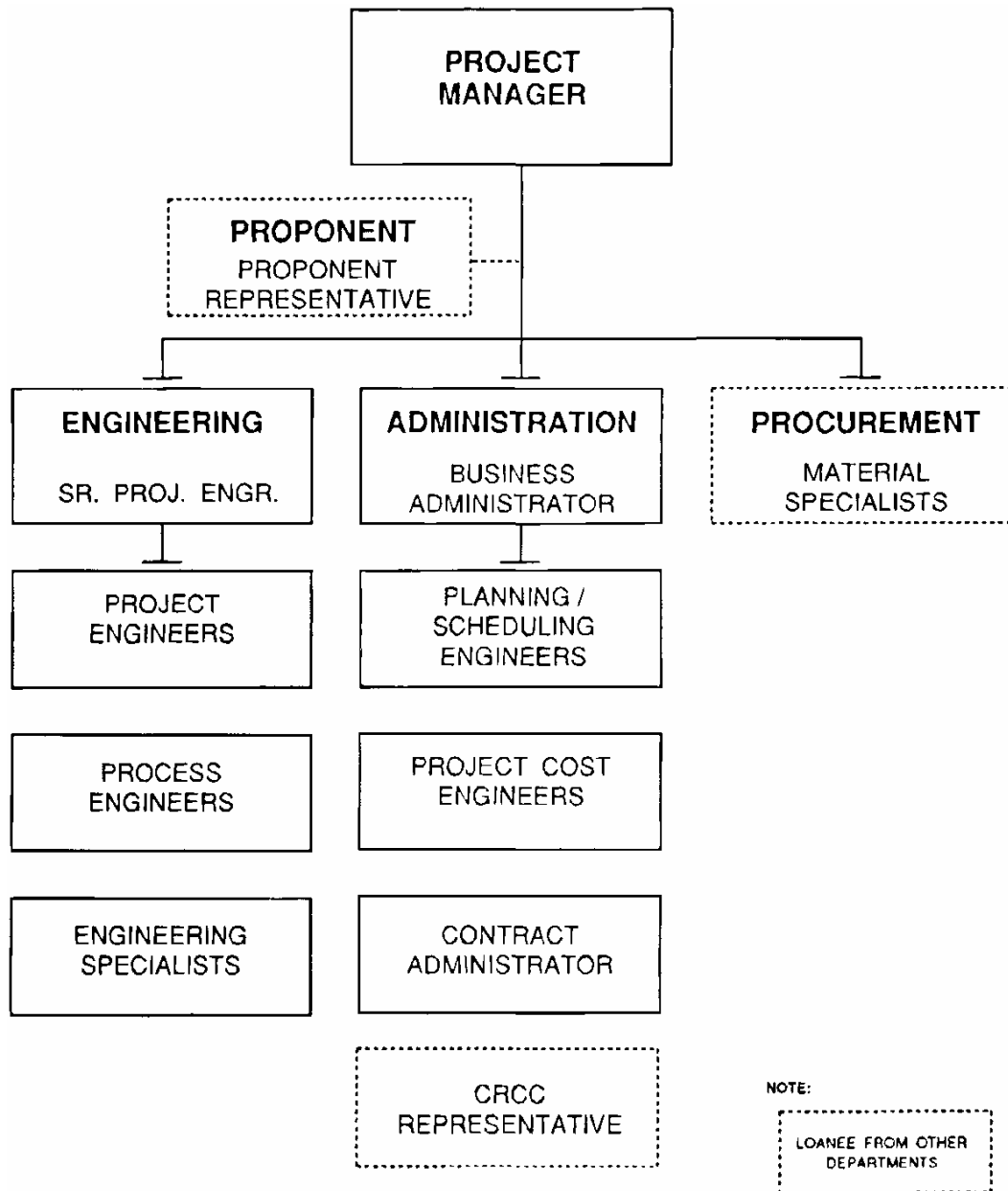


Exhibit G.2 – SAPMT Organization (Typical Construction Phase)

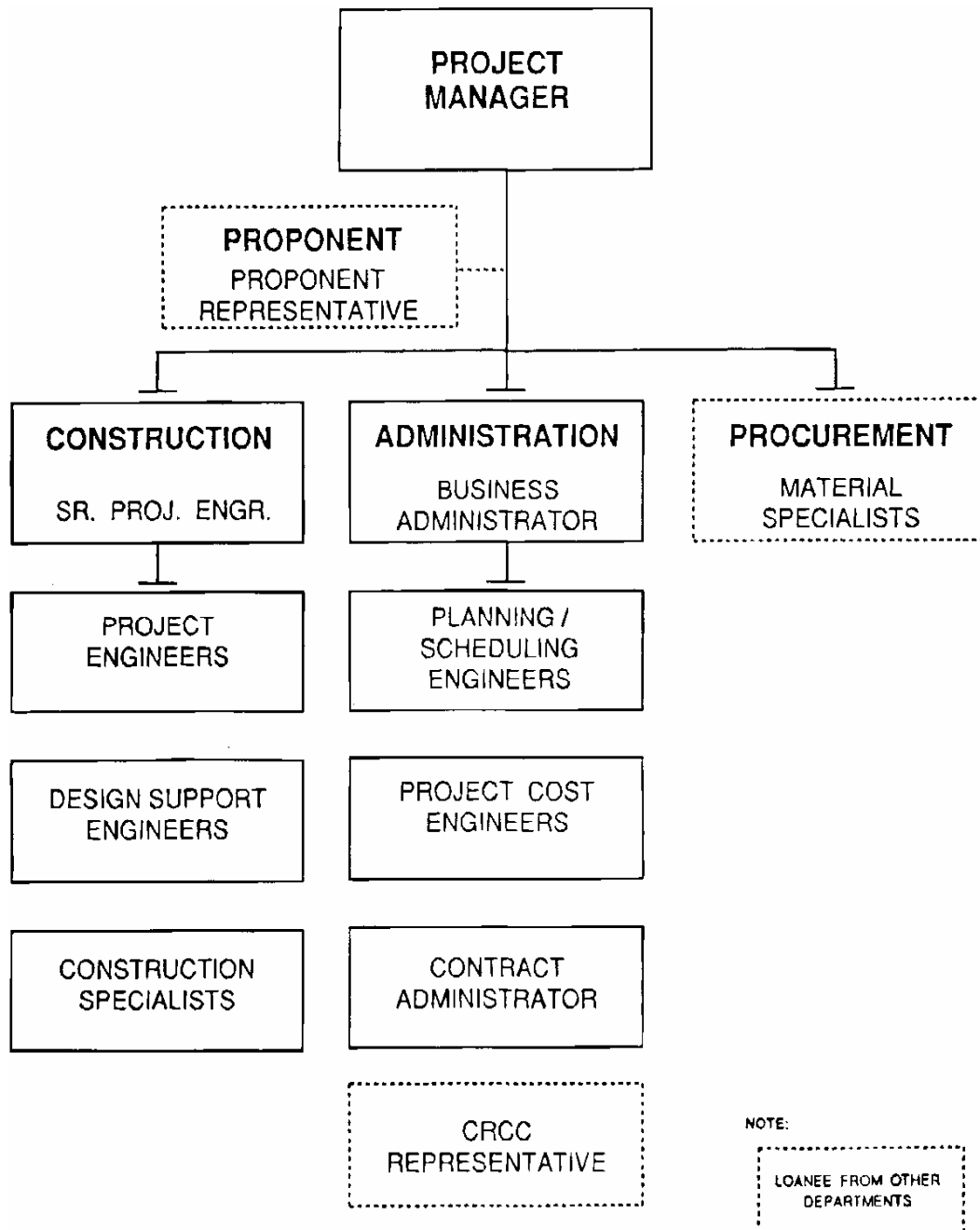


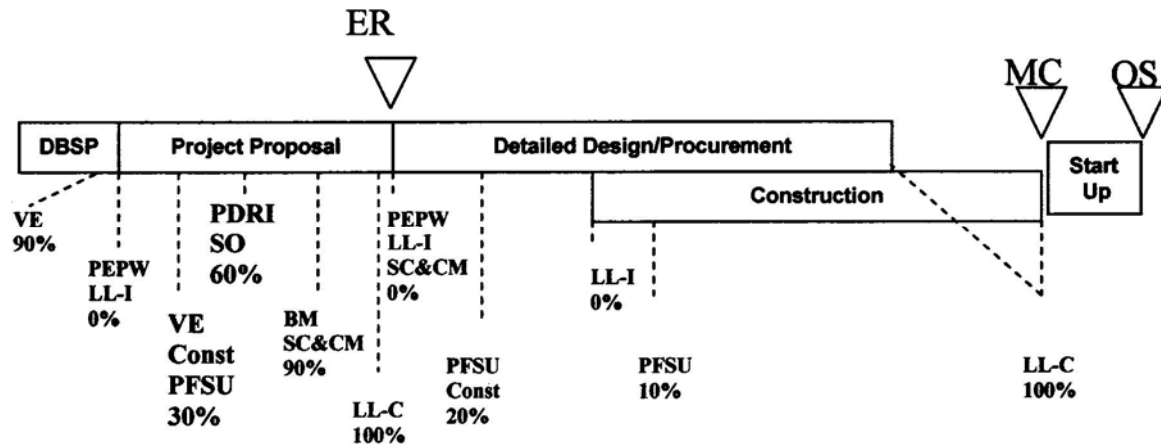
Exhibit H – Project Responsibility Matrix

Activity	Execute	Manage	Consult	Approve
Budget Brief	FPD/P	FPD	FPD	P
Design Basis Scoping Paper	FPD	FPD	FPD	FPD/P/PM/EPD
Project Execution Plan	PM	PM	P/PS&CD	EM
Project Proposal	C	PM	FPD/P/ES	EM
Expenditure Request	FPD/PM/PS&CD	PM	FPD/PS&CD	EXCOM
Engineering/Design	C	PM	P/ES	PM
Contracting	CD/PM	PM	CD	EM/SRC
Material Procurement:				
D.C. Material	C/PM	PM	MS	PM
SAMS Material	C/MS/PM	PM	MS	PM
Inspection	C/PMC	PM	ID	PM
Expediting	C/PMC	PMC/PM	MS	PM
Spare Parts	C	PMC/PM	MS	PM
Quality Control	C/PMC	PM	MS/ID	PM
Construction	C	PMC/PM	ID	PM
Turnover	C	PMC/PM	P	PM/P

Symbols Description

C	Contractor	ID	Inspection Department
CD	Contracting Department	MS	Materials Supply (SAO/ASC/AOC)
EM	Executive Management (SAO)	P	Proponent
EPD	Environmental Protection Department	PM	Project Management
ES	Engineering Services Organizations	PMC	Program Management Contractor
EXCOM	Executive Committee	PS&CD	Project Support and Controls Department
FPD	Facilities Planning Department	SRC	Services Review Committee

Exhibit I – Value Practices Schedule



<i>Value Improvement Practice</i>	Legend	Project Proposal	Detailed Design	Construction
Benchmarking	BM	mm/yy	N/A	N/A
Constructability	Const	mm/yy	mm/yy	N/A
Lessons Learned – Collect New	LL-C	mm/yy	mm/yy	mm/yy
Lessons Learned – Implement Existing	LL-I	mm/yy	mm/yy	mm/yy
Project Definition Rating Index	PDR I	mm/yy	N/A	N/A
Project Execution Planning Workshop	PEPW	mm/yy	N/A	N/A
Planning for Startup	PFSU	mm/yy	mm/yy	mm/yy
Scope Control & Change Mgt.	SC&CM	mm/yy	mm/yy	N/A
Schedule Optimization	SO	mm/yy	N/A	N/A
Value Engineering	VE	mm/yy	N/A	N/A
Other Best Practices		mm/yy	mm/yy	mm/yy