

Engineering Procedure

SAEP-14

29 January, 2003

Project Proposal

Document Responsibility: Project Support and Controls Dept.

Saudi Aramco DeskTop Standards

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1 Introduction

This procedure outlines the requirement for preparing the Project Proposal. The procedure is not intended to give instructions on the engineering effort, but to cover requirements that are important during the Project Proposal process. In summary it covers:

- Engineering specifications, standards and selected design requirements
- Quality, cost reduction and schedule improvement techniques, i.e., CII, benchmarking, value engineering and best practices
- Reporting, review, approval & waiver requirements

1.1 Definition

The Project Proposal is a document, which establishes the detailed design scope, cost estimate basis and schedule for a proposed facility from the conceptual requirements included in the Design Basis Scoping Paper (DBSP). This includes the proposed facility size, general layout and the appropriate functional and performance specifications including the recently published applicable standards & codes. Project Proposal shall be of sufficient detail to prepare a $\pm 10\%$ accuracy ER estimate, provide sufficient technical information for proponent review and (where applicable) provide sufficient information to obtain Lump Sum Turn Key (LSTK) or detailed engineering contract bids.

1.2 Purpose

The Project Proposal documents the agreement on, and commitment to, the project scope and design basis by the Saudi Aramco Project Management Team (SAPMT), the Project Proponent and other technical support groups. This is accomplished through careful evaluation of the project objectives during Project Proposal preparation to ensure the optimum results. The Project Proposal establishes the basis for Expenditure Request (ER) funding and is the benchmark from which all subsequently considered scope changes are measured.

1.3 Preparation Timing

Project Proposals must be completed and approved in time to support the Expenditure Request Approval (ERA) date.

1.4 Application

With the exception of Master Appropriation projects, Saudi Aramco requires a Project Proposal for all Capital, Non-Capital and Expense Projects, valued more than \$2 million, under the control of Engineering and Operations Services

(E&OS). The Project Proponent and the SAPMT shall agree and document the level of detail needed prior to start of the Project Proposal. Projects that combine the preparation of DBSP and Project Proposal into one effort shall ensure that the requirements identified in this document, which are relevant to the Project, are met at completion of the effort.

2 Applicable Reference Documents

Saudi Aramco Engineering Standards (SAESs)
Saudi Aramco Engineering Procedures (SAEPs)
Saudi Aramco Materials System Specifications (SAMSSs)
Saudi Aramco Drafting Manual
Saudi Aramco Standard Drawings
Saudi Aramco Library Drawings
Saudi Aramco Cost Manual
Saudi Aramco Planning and Scheduling Manual
Design Basis Scoping Paper (DBSP) and applicable Study Documents
Saudi Arabian Government Safety and Security Directives (SSDs)
Project Materials Manual/MSO User's Handbook
MVG076-01, DC Surplus Deferred Materials System
Saudi Aramco Materials System (SAMS) Excess Materials
Saudi Aramco Form 8362-ENG, Certification of Review of Saudi Aramco Materials Source Documents
Saudi Arabian Manufactured Materials IDG 4A Report
Purchasing Department
SAER-5437, "Guidelines for Conducting HAZOP Studies"
GI-0005.002, "Loss Prevention Policy Implementation"
Project Management Loss Prevention Program
Saudi Aramco Safety Manual
Corporate Loss Prevention Manual
Guideline for the Preparation of ER Estimates
Construction Industry Institute (CII) Publications

3 Proposal Contents

The following sections outline the items normally included in Project Proposals.

3.1 Table of Contents

3.2 Technical Requirements

3.2.1 Project Summary

This section provides a history of the existing conditions, a brief discussion of the proposed facilities and their justification, outlines the project objectives/scope, and briefly describes how these objectives will be achieved.

3.2.2 Project Description

This section provides scope and design information that establishes the process performance specification for the facilities process warranty waivers or limitations. It shall address details concerning the design basis, proposed facilities including sizes, capacities, location/layouts and other project related information. The list below provides common elements found in a typical scope.

- a) Facility/plant location and layout
- b) Facility/process description, design basis and performance specification
- c) Process Flow Diagrams (PFDs)
- d) Major mechanical, electrical, and utilities requirements
- e) Electrical one-line diagrams and electrical area classification drawings
- f) Piping and Instrumentation Diagrams (P&IDs)
- g) On-plot and off-plot facilities (on-plot underground facilities and temporary construction facilities)
- h) Site survey, topography and soil data
- i) Modifications to existing facilities/plants
- j) Operating variables (as required by OSPAS)
- k) Corrosion control
- l) Impact on and interface with other related projects

- m) Environmental assessment (see SAEP-13 "Project Environmental Assessment")
- n) Security, fire protection & safety provisions (if required; Hazard Identification Plan of Major Hazards, fire hazard zone drawings, and fire system layout drawings)
- o) Communications, and any government approvals if required
- p) Control systems (including SCADA)
- q) Project schedules
- r) Training requirements
- s) Land use permits for new facility sites or addition of facility within existing plants
- t) QA/QC strategy for projects compliance with inspection requirement

3.2.3 Scope Change from DBSP

SAPMT shall document all significant scope changes from the approved DBSP. Project Proposal milestone review submittals shall include a special section listing major scope changes from the approved DBSP.

A list of all significant scope changes with justification and the cost impact shall be included in the Project Proposal book. SAPMT shall inform FPD of all major scope changes with the cost impact and justification as soon as they are identified. This allows timely assessment by FPD of the impact of these changes to the project. Based on FPD's assessment, SAPMT and Proponent will determine if the change should be incorporated in the project scope.

A scope change shall be recorded if it meets any one of the following criteria:

Major Scope Changes – to be Reported to FPD	Scope Changes – to be Recorded in PP Book only
Cost deviation in excess of 5% of the BI budget estimate or \$1 million whichever is less	All major changes as reported to FPD
Change in facility unit capacity greater than 10% where quantities are stated in DBSP	Cost deviation between 1% and 5% of the BI budget estimate or between \$100,000 and \$1,000,000 whichever is less
Change in process, functions or location from that which was identified in DBSP	Any change that has a schedule impact of more than ± one month on the project proposal or project execution durations.

All changes shall be recorded to include, as a minimum, the following data: Item; Reason for Change; Cost Impact; Schedule Impact; Initiator (Proponent, Loss Prevention, SAPMT, etc.); Reference Document (if prepared); Date Initiated/Approved.

3.2.4 Communication Requirements

Saudi Aramco construction projects normally require both temporary (during construction) and permanent communication systems. As procurement approval for radio frequencies and materials involves long lead times, communication systems require early identification and coordination between Information Technology organization and SAPMT. To facilitate these requirements, the Project Proposal shall contain the following:

- a) Summary of temporary and permanent communication system requirements. Identification of additional communication facilities and/or modification to existing facilities necessary to meet the project requirements.
- b) Identification of communications requirements to be handled by Information Technology organization and those, which shall be provided and funded by the project.
- c) Schedule of communication material requirements with an estimated site required delivery date.
- d) Identification and implementation plans of all communication disaster recovery aspects of the projects.

3.2.5 Safety and Security Directive (SSD)

The SSD (reference SAES-O series) shall be adhered to by all projects in accordance with the directives given to Saudi Aramco by the Saudi Arab Government's Supreme Commission for Industrial Security. The SAPMT shall contact Consulting Services Department, Dhahran and the Safety and Industrial Security organization to obtain current safety and security requirements before proceeding with Project Proposal engineering. A separate section in the Project Proposal shall be devoted strictly to safety and security requirements.

3.2.6 Preliminary Hazard Analysis (PHA)

The objective in performing PHA studies is to improve process safety and/or minimize operability problems. The SAPMT in conjunction with

the Loss Prevention Department (LPD), and Environmental Protection Department shall decide which projects and specific facilities require PHA studies. Duplicate facilities shall not require a new PHA study. 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 studies. The PHA studies shall normally be conducted during the Project Proposal stage. The Hazard and Operability (HAZOP) studies, if required, shall be performed during the detail design when the facility design is firm and no major design changes are forecasted.

3.2.7 Environment Assessment

SAEP-13, "Project Environmental Impact Assessments," establishes the procedures necessary to prepare environmental assessments and shall be included in all Project Proposals. An environmental assessment describes and quantifies project actions; identifies those discharges and emissions regulated by environmental standards; predicts the environmental changes resulting from the project; and demonstrates compliance with applicable Saudi Aramco and/or Saudi Arab Government environmental standards and policies.

The full environmental report with appropriate calculations is to be included with the Project Proposals issued to [Process & Control Systems Department](#), Environmental Protection Department, Technical Information Center (TIC) Dhahran, and Corporate Information Center (ASC) Houston. All other volumes will contain a summary only.

3.2.8 Obtaining a Waiver from Saudi Aramco Engineering Standards and Materials System Specifications

Identify standards, procedures, equipment and materials that will require a waiver prior to incorporation into the facilities.

3.2.8.1 Projects shall meet the requirements of Mandatory Saudi Aramco Engineering Requirements (MSAERs), which are in effect on the Project Proposal approval date. Changes to MSAERs approved after the Project Proposal approval date shall be mandatory only when:

- Changes that affect safety, health, environment or security that are highlighted by the concerned organization. In this case, the impact of the changes on the project should be reviewed by the Proponent with Loss Prevention, Industrial Security [Operations](#), Engineering Services, [Information](#)

Technology, Project Management and others to determine applicability and extent of implementation.

- Changes that result in cost savings to the project. In this case, SAPMT, Proponent and Engineering Services shall review and decide on implementation.

A Project Change Request (PCR) shall be initiated to document and obtain approval to implement changes after project proposal approval date.

3.2.8.2 Include waivers (reference SAEP-302 - "Instructions for Obtaining a Waiver of a Mandatory Saudi Aramco Engineering Requirement") that shall reduce project cost without impacting design, safety or operational integrity of the facility. Describe the variation in sufficient detail to permit technical evaluation by the appropriate reviewing agency. Include copies of waiver applications and approvals.

3.2.8.3 Deviations from SSD requirements shall be submitted in a letter format as per SAES-O-100 that describes the variation in sufficient detail to permit technical evaluation by the appropriate reviewing agency.

3.2.9 Drawing Index and Drawings

This section provides a list and copies of the drawings that define the scope of the project. It shall include key drawings such as PFDs, P&IDs, plant and equipment layouts, electrical one-line diagrams and other necessary drawings that are required to establish the design basis and assist in producing an ER quality estimate.

3.3 Materials Related Requirements

3.3.1 General

The Project Proposal provides a table of major materials and equipment identified for the project. During preliminary engineering, the engineering contractor with guidance from the SAPMT, shall review the Company DC Surplus and SAMS Excess to identify all acceptable or substitute materials which are available in Saudi Aramco inventories for possible use on the project, with the objective of:

- a) Incorporating materials, which require the least new cash outlay to Saudi Aramco.

- b) Making maximum economic use of the materials available from DC surplus and SAMS excess inventories.
- c) Make maximum economic use of locally manufactured materials.
- d) Provide full justification for any proposed purchases of contingent quantities or non-installed spares.

During Project Proposal preparation, the SAPMT shall request review, and may request assistance from the Materials Supply (MS) on all portions of the plan that involve materials related aspects of the work. SAPMT will continue to be responsible to ensure that the purchase order is in acceptable technical compliance with relevant MSAERs during the time the Contractor is handling the order.

If procurement of major equipment and materials is on the critical path of the project schedule, SAPMT may elect to consider "novation" of these items to reduce their impact on the project schedule. "Novation" typically involves; 1) placement of purchase order by the Management Contractor or Project Proposal Contractor with commitment only for engineering; and 2) after ERA transfer the purchase order to the successful LSTK Contractor on contract award. The purchase order transferred to the LSTK contractor will cover the complete scope involving engineering and manufacture. Use of novated purchase orders should be approved by SRC either as part of the contracting plan or as an individual item.

3.3.2 Material Source List

The materials source list identifies major equipment and material items. Where possible, an estimated dollar value and quantity required shall be indicated. Also indicate responsibility for inspection, expediting, traffic and transportation. The Project Proposal effort shall develop Quotation Requests (QRs) for major engineered equipment and critical items, and issue these QRs to vendors on a "For Development Only" basis to determine prices and delivery schedules. For purpose of preparing the ER Estimate, the major equipment list shall include account number, the item number, a brief description, the data sheet, a requisition number if available, the estimated value and other pertinent information. The following areas shall be segregated:

- a) DC surplus materials
 - b) SAMS excess materials
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- c) Locally manufactured materials and vendor warehoused materials (LDOR)
- d) SAMS allocation
- e) DC purchases
- f) Contractor procurement Lump Sum Turnkey (LSTK) or Lump Sum Procure/Build (LSPB)
- g) Sole source materials & equipment

3.3.3 Use-up Target Values

The DC Surplus Inventory and the SAMS Excess Listings shall be reviewed to prepare the listing and estimated values of possible DC surplus and SAMS excess usage. During the Project Proposal development this list shall be further refined to set the target values for use-up of those items that shall be reported during the life of the project. LSTK or LSPB contracts shall use the same format and shall estimate total commodity (SAMS) and engineered (DC) material costs (regardless of originator) as the basis for determining use-up values. The target values are goals requiring extra effort to achieve rather than just a restatement of the original major items listed in section 3.3.2.

3.3.4 Locally Manufactured Material

During Project Proposal development, the SAPMT shall obtain a current list of approved locally manufactured products and sources from MS. This list shall be provided to LSPB & LSTK contractors to encourage use of locally manufactured materials.

3.3.5 Critical Plant Equipment Unit Spares

A list of proposed installed spares for critical plant unit equipment and a list of non-installed spares proposed for entry into SAMS Class 19 (CU24.6) shall be provided along with the estimated cost for each item and justification for purchase. Comparison shall be made between spares specified in the Design Basis Scoping Paper and spares specified in the Project Proposal.

3.3.6 Start-up Spare Parts

Proponent and SAPMT shall identify the start-up spares required which shall be concurred by MS.

Construct-only project materials furnished by Saudi Aramco need not address this subject because spares shall be furnished per SAEP-31

(Corporate Spare Parts Data Requirement). For Procure/Build contracts, the SAPMTs shall specify start-up spare responsibility including how they shall be provided, the financial impact of purchase and final disposition of residual spares.

The LSTK contractor is responsible for providing start-up spares. Residual and/or unutilized start-up spares remain contractor's property; such spares may not be purchased from the contractor by Project Management. Proponent at their discretion has the option to purchase these residual spares against their Operating Budget for future use. Operations shall communicate with MS (Materials Control Department) to ensure the spares are reviewed against overall inventory needs, and do not adversely affect existing supplies. Defined start-up spares may be turned over to Saudi Aramco in accordance with the contract requirements provided that the quantities and types are in accordance with the Saudi Aramco stocking policy. For LSTK and LSPB contracts, start-up spares responsibility for "free issue" equipment provided by Saudi Aramco shall be stated clearly in the contract.

SAPMT and the respective contractors are responsible for the spare parts as outlined under SAEP-31. In all cases the SAPMT/Contractors shall provide complete and accurate spare parts data packages necessary to support Saudi Aramco procurement of operating spare parts.

3.4 Scheduling & Estimating Requirement

3.4.1 Project Summary Schedule

This section contains a project summary schedule that shall be developed during the Proposal phase based on information from the Project Milestone Schedule developed during the DBSP. Project Summary Schedule serves as a "working" tool in the absence of a detailed schedule by Contractor. The Project Summary Schedule shall be used as a guide during technical evaluation of contractors and start-up planning.

Project Summary Schedule addresses all the project life cycle activities in a summary format. It must be logic driven, based on the Critical Path Method (CPM). This schedule shall form the basis for the original (Rev. 0) Project Completion Schedule (PCS). The Project Summary Schedule further expands the level of detail while still supporting critical and key milestone dates defined and prescribed in the contract (Schedule "B"). Project Summary Schedule is expanded to include critical milestone dates as well as any other key milestones that are provided by Contractors. The schedule shall include review time requirements specified in SAEP-303. Contact, Scheduling Engineering

Unit/PCD/PS&CD for more detail information on Project Summary Schedule.

3.4.2 Estimating Support Coordination

Final ER estimate and Saudi Aramco 56D forms are required by the Budget Director eleven to thirteen weeks before the ER Approval date. The final ER estimate package shall be prepared and jointly reviewed in parallel by SAPMT and Project Support & Controls Department (PS&CD) at least three weeks prior to the required submittal date to the Budget Director.

An important part of PS&CD's charter is to take an active role in setting out Saudi Aramco ER estimate preparation requirements and providing basic information to the contractor early in the Project Proposal phase. This normally takes the form of a kick-off meeting in the contractor's office, where the ER Preparation Guideline package is presented and discussed. ER estimate progress milestones are agreed upon with the contractor and SAPMT and progress is monitored as a basis for judging when it is appropriate for the PS&CD estimating team to participate. PS&CD shall be involved at the intermediate Project Proposal reviews to endorse the ER estimate.

When the ER estimate is over or under by more than 10% of the budget estimate, a cost comparison between the approved budget and the established ER estimate shall be prepared in conjunction with PS&CD. The cost comparison shall include a list of the scope changes and other changes and shall be included in the ER package.

3.5 Appendix

The Appendix shall include letters, minutes, land use permits and other pertinent documents written during Project Proposal development.

3.6 Numbering Project

All Project Proposals shall be numbered by the issuing office as follows:

Saudi Aramco	APP Series (Numbers assigned by the Technical Information Center, Dhahran)
ASC	TPP Series (Numbers assigned by the Corporate Information Center, Houston)

APP or TPP numbers shall be on the Project Proposal cover sheet.

4 Project Improvement Effort

This section comprises of activities that on implementation would optimize project cost & schedule, improve quality of the Project Proposal and assure project execution success.

4.1 Value Engineering

SAPMT shall initiate a formal Value Engineering study during the Project Proposal development stage when:

- The estimated BI value exceeds \$50 million, or
- The estimated BI value is between \$10 - \$50 million and a VE study was not conducted during the pre-planning or DBSP development stage, or
- The estimated BI value is between \$10 - \$50 million, and the pre-planning or DBSP stage VE report has recommended that a Project Proposal stage VE study is required.

Proposals resulting from VE studies that are accepted by the Proponent Organization and SAPMT, are to be reviewed by FPD, and shall be incorporated into the Project Proposal scope of work.

Value Engineering studies conducted in-Kingdom shall be coordinated with the Value Engineering Unit of the PS&CD. For OOK VE studies, Value Engineering Unit shall be given the opportunity to participate if time/resources permit. Otherwise a copy of the final report shall be distributed to the Manager, PS&CD.

4.2 Benchmarking

The objective of the benchmarking analysis, during the Project Proposal stage, is to identify high project risk, compare the projects with the industry against key project parameters and recommend changes to enhance project execution.

For all projects \$100 million and greater, SAPMT shall initiate a formal benchmarking analysis unless Vice President, Project Management has approved a waiver. The analysis shall be done at the appropriate stage of the Project Proposal development, but no later than 70% Project Proposal progress, comparing key parameters of the project with an external industry wide database. The Project Team should utilize the assistance of a consultant to carry out the quantitative analysis. The analysis would address key project outcomes and associated risk based on the Project Proposal effort to-date. As a minimum, the following areas should be addressed and compared to industry norms and best case:

- Status of front-end loading (FEL), i.e., project definition, at the time the benchmark analysis is prepared,
- Use of value improvement practices,
- The projected total installed cost (TIC) of the project,
- An analysis of the contingency requirement based on project scope and FEL,
- Engineering as a percentage of TIC,
- Time required for total project execution (ERA through Onstream),
- Time required for the construction phase, and
- Expected time required for start-up

For projects less than \$100 million, Project Management Department Manager may request a formal benchmarking analysis as required. If no formal benchmarking analysis is performed, SAPMT shall utilize the PDRI rating system to assess the Project Proposal scope definition for completeness. In addition, the Project must prepare the Project Leading Metrics report. These metrics are tools to provide visibility for possible areas of concerns and improvements. Instructions for completing this report can be found on the PS&CD/PCD Intranet web page.

A section shall be included in the Project Proposal book to include the summary benchmarking report prepared by an outside consultant, the final PDRI worksheet, and the project leading metrics report.

4.3 QA/QC Plan

SAPMT shall establish an overall QA/QC plan for the project. The QA/QC plan shall cover engineering, procurement, construction and pre-commissioning phases of the project. It shall prescribe the level of QA/QC required for specific stages of the project and cover details such as:

- Minimum inspection level required for each equipment type or grouping guided by Saudi Aramco Form 175 for that type of equipment
- Minimum number or percentage of the inspection workforce required for each class of activity (i.e., welding, structural steel, equipment, etc.)
- Special qualification requirements for inspectors inspecting special equipment and/or materials
- Key quality performance indicators to track and evaluate the Contractor (e.g., non-conformance reports, welder reject rate, repair rate, etc.)

- Special receiving inspection requirements for critical equipment.
- Identify equipment for which site inspection will be required if Contractor is not using Saudi Aramco approved vendors.
- Special inspection or quality requirements not covered in contract schedule "Q". These requirements shall be included as attachment 4 to Schedule "Q" for the contract.

4.4 Other Best Practices

Saudi Aramco is a member of the Construction Industry Institute (CII), which has developed best practices for its members with the mission to improve the safety, quality, schedule and cost effectiveness of the capital investment process. Saudi Aramco Project Management has piloted five of the most effective practices to be implemented for its projects – Pre-Project Planning, Scope Definition & Control/Change Management, Constructability, Schedule Optimization, and Planning for Startup. According to the project's unique needs, other best practices may be substituted or added.

As a minimum, the Project Definition Rating Index (PDRI) (from Pre-Project Planning) and Constructability concepts shall be implemented during Project Proposal development. SAPMT shall take full advantage to implement other CII best practices as necessary in developing the Project Execution Plan (PEP) to gain the maximum benefit from them.

When implementing CII best practices, SAPMT shall refer to the CII library of publications, as well as Saudi Aramco's database of lessons learned on previous projects. Saudi Aramco Project Management Organization maintains both of these resources and will help the project teams in their facilitation.

5 Reporting and Review Requirements

5.1 Project Proposal Distribution for Review and Meetings

Draft Project Proposals shall be distributed for review to the appropriate members of Saudi Aramco Management and attendees of the Technical Review and Project Proposal Meetings. Distribution of the Project Proposal narrative shall be in electronic format (in Microsoft Word), and the drawings shall be distributed electronically where feasible. SAPMT should utilize on-line electronic reviews by key reviewers wherever possible. The SAPMT and proponent are responsible for determining the recipients. As a minimum, the following represents a list of various organizations that shall be considered for receipt of the Project Proposal. However, only those organizations with direct involvement shall receive the Project Proposal.

Executive Management:

- Proponent Organizations, i.e.,
 - Ras Tanura Refining
 - Northern Area Producing
 - Southern Area Producing
 - Jeddah/Riyadh Refining
 - Yanbu Refining
 - Distribution Operations
 - Abqaiq Plants & Pipelines
 - Gas Operations
- Information Technology
(for projects requiring communications, SCADA, DCS, and environmental)
- Petroleum Engineering and Development
(for production-related projects)

General Management:

- Industrial Security [Operations](#)
- Proponent organization

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Management:

- Oil Supply Planning and Scheduling Department
(for all proposals related in any way to oil, gas, NGL and/or refined product movement and handling)
- Computer & Communications Engineering Department
(for all projects involving communications)
- Purchasing Department
- Power Distribution Department
(for all projects related to power facilities at 2.4 kV and above)
- Abqaiq, Dhahran or Ras Tanura Utilities Department
(for the area community projects only)
- Facilities Planning Department (mandatory)
- Project Support & Controls Department (for information only)
- Consulting Services Department

- Inspection Department
- Loss Prevention Department
- Environmental Protection Department
- **Process & Control Systems Department**
- Roads & Heavy Equipment Department
- Medical Services Organization
(for all projects related to Medical Organization)

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5.2 Technical Review Meeting

The Technical Review Meeting shall be held no sooner than fifteen (15) working days after distribution of the Project Proposal for review. Location, date, and time of the meeting shall be announced in the cover letter distributed with the Project Proposal. The Technical Review Meeting shall discuss all technical aspects of the Project Proposal, resolve technical questions, address environmental issues and review the Project Summary Schedule. Interim technical review meetings shall be conducted as required by SAPMT depending upon the type and complexity of the project. Items not resolved at the final technical review meeting shall be addressed in the Project Proposal Meeting. Substantive changes resulting from the technical review meeting shall be incorporated as appropriate into the Project Proposal documents.

The SAPMT shall prepare minutes of the Technical Review Meetings and distribute the minutes, electronically whenever possible, to all persons who either received the Project Proposal or attended the Technical Review Meeting. The minutes shall include the estimated cost and schedule effects of major changes from the DBSP/Project Proposal as originally prepared. Refer to 3.2.3 for definition of major scope change.

The subject of critical plant equipment unit spares (capital spares) per section 3.3.5 shall be addressed, and proposed purchases shall be reviewed.

5.3 Project Proposal Meeting

The purpose of the Project Proposal Meeting is to resolve any outstanding items remaining after the Technical Review Meeting and to finalize the project scope. The Project Proposal Meeting shall be scheduled no sooner than five (5) working days after distribution of the minutes of the Technical Review Meeting.

The delegated representatives of the Project Proposal approval authorities (section 6.1.1) shall attend this meeting in order to make decisions on matters not resolved in the Technical Review Meeting.

The Project Proposal Meeting shall include a review of the critical plant equipment unit spares (capital spares) list agreed upon during the Technical Review Meeting, and the list shall be endorsed or revised as appropriate. The minutes shall include this list.

The SAPMT shall be responsible for preparing and distributing the minutes of the Project Proposal Meeting to those persons who either received a copy of the Project Proposal or attended the Project Proposal Meetings.

5.4 Distribution & Storage of Approved Project Proposals

Following the approval of the Project Proposal, a final approved copy shall be distributed as follows:

5.4.1 ASC

An electronic copy of every Project Proposal shall be sent to Corporate Information Center (CIC), Houston.

5.4.2 Saudi Aramco

SAPMT shall send copies of the approved Project Proposal to:

- Facilities Planning Department (FPD) - one hard copy, to be used as a "working" document for five years or for the duration of the project, whichever is longer.
- Technical Information Center (TIC), Room E-3100, EOB, Dhahran - one electronic copy and one hard copy, for archival purpose.
- Project Support & Controls Department - one electronic copy, for input in the Electronic Image Document Management System.

The electronic file submissions shall be on CD-ROM and contain an index at the beginning of each file medium to facilitate retrieval of stored data. The electronic text, spreadsheet, and graphical data shall be in Microsoft format; and CADD data shall be in the approved Saudi Aramco standard of Intergraph Microstation DGN format. Scanned documents shall be in TIFF format in accordance with the corporate standard maintained by EDSD.

6 Approvals and Waivers

6.1 Approval Process

6.1.1 Approvals

The SAPMT shall be responsible for obtaining Saudi Aramco approval for the Project Proposal from the appropriate individuals listed. Executive Management may delegate the approval authority to General Management level. Obtaining these signatures constitutes full Project Proposal approval. The recommended order for routing and approval will be as follows, however SAPMT may seek parallel approval from more than one organization at the same time where appropriate.

- Manager, Facilities Planning Department
- Manager, Loss Prevention Department
- Manager, Power Distribution Department (for all projects related to power facilities at 2.4 kV and above)
- Manager, Consulting Services Department
- Manager, Oil Supply Planning and Scheduling Department (for all proposals related in any way to oil, gas, NGL and/or refined product movement and handling)
- General Manager, Industrial Security
- Vice President, Information Technology (for all projects requiring communications, SCADA, DCS, process computers, and environmental)
- Vice President, Petroleum Engineering and Development (for production-related projects)
- Vice President, Engineering Services
- Vice President/Executive Director, Proponent Organization
- Vice President, Project Management

6.1.2 Unresolved Items

If unresolved items exist that would preclude obtaining approvals as described in section 6.1.1, the SAPMT shall refer any unresolved item(s) through appropriate channels of authority until resolution is obtained. The Project Proposal minutes shall show the estimated cost and schedule effects of any major changes from the DBSP/Project Proposal as originally prepared. Refer to 3.2.3 for definition of major scope change.

6.1.3 Obtaining Changes to an Approved Project Proposal

For a project with an approved Project Proposal but which has not yet received Expenditure Request (ER) approval, scope changes shall be as follows:

- a) Scope changes that are not major shall be documented by SAPMT in meeting minutes (refer to 3.2.3 for definition of major scope change). Where applicable, representatives from Proponent, FPD, and other involved organizations shall approve the meeting minutes. The meeting minutes shall describe the proposed changes, the justification, and the cost and schedule impact. The required minimal approval authority for the meeting minutes is supervisory level. Approval of the meeting minutes by all concerned parties constitutes inclusion of the minor scope changes into the project scope.
- b) Major scope changes shall require an addendum to the approved Project Proposal (refer to 3.2.3 for definition of major scope change). The addendum shall describe the proposed changes the justification and the cost and schedule impact. Approval of the addendum shall be obtained from the original signatories before design work starts. The addendum shall be distributed to all those that received the original Project Proposal.

6.1.4 Contract Bid Package

After the approval of the Project Proposal, the SAPMT shall revise the Project Proposal's narrative, drawings, and specifications to incorporate substantive changes resulting from the Technical Review and Project Proposal Meetings before issuing the project bid documents. If this is not practical, an addendum to the bid package shall be prepared and issued to bidders at the earliest possible opportunity.

6.2 Project Proposal Waiver

6.2.1 Request

For selected projects, Project Management may request to waive the requirement for a Project Proposal and proceed directly with detailed design using TC-68 funds. This request will permit SAPMT to use TC-68 funds to carry out detailed design, perform selected project proposal requirements and to prepare an ER quality estimate for funding approval.

6.2.2 Approval

The following steps are required to obtain a waiver of project proposal and proceed with detailed design:

- SAPMT Department Manager shall prepare a formal letter requesting to carry out detailed design during Project Proposal. The letter shall

be addressed to Vice President, Project Management and Vice President Proponent. The letter should state the present situation, scope of work, justification for the waiver and identify what project proposal requirements, if any that will be performed during detailed design, i.e., value engineering, CII concepts, etc.

- SAPMT shall obtain Vice Presidents, Project Management and Proponent approval for this request.
- On receiving approval SAPMT shall prepare an Engineering Work Order Authorization for Project Proposal Preparation (Form 6891-ENG) to request approval of TC-68 funds to carry out detailed engineering and contract preparation based on GI-0202.451 (Engineering Work Order Authorization for Project Proposal Preparation).
- Approval is accomplished on obtaining the signature on Form 6891-ENG.

28 June, 2000
29 January, 2003

Revision Summary

Major revision.
Editorial revisions.