

Engineering Procedure

SAEP-122

31 July, 2005

Project Records

Document Responsibility: Project Support and Controls Dept.

Saudi Aramco DeskTop Standards

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1 Scope

Project Records provide a complete and current picture of Saudi Aramco plants and Industrial and Community Service Facilities at the time of construction completion. This Saudi Aramco Engineering Procedure (SAEP) outlines the method for establishing the Project Records. During the Project Proposal stage of each project, a list of proposed Project Records, their format, their contents and the number of copies must be identified depending on each project's specific requirement. This list shall be agreed to by the Facility Proponent prior to incorporation into the Project Proposal document and subsequent project execution contracts. Project Records typically include the following documents:

1.1 Drawing Books

Drawing Books include design data, as-built construction drawings and suppliers information as set forth in [SAEP-334](#) and prepared in accordance to [SAES-A-202](#). This data is used primarily by maintenance organizations and frequently by engineering or operations organizations for quick reference.

1.2 Facilities Operating Instructions Manual

The Facilities Operating Instructions Manual describes initial or revised operating procedures for all new facilities with mechanical equipment which requires regulation or control. The Manual shall be prepared as per the requirements of [SAEP-121](#).

1.3 Design Calculation Book

Design calculation books include all the design calculations, inclusive of equipment data sheets and safety instruction sheets per [SAES-A-005](#), generated during the design phase of the Project. Design calculations based on design software should include printouts of the inputs and outputs and information about the software utilized. Vendor Design Calculations shall not be included in this Book.

1.4 Vendor Equipment Operating Instructions & Maintenance Manuals

Vendor equipment operating instructions and maintenance manuals are required for all vendor supplied equipment, and are based on the specific Non-Material Requirements (NMR) attached to individual purchase orders or based on the scope requirements for LSPB and LSTK contract type projects.

1.5 Vendor Inspection Record Books

Vendor Inspection Record Books include all inspection records during manufacturing and any subsequent modifications for vendor supplied material.

1.6 Operating Instructions & Maintenance Manual for Process Automation Systems

The Operating Instructions and Maintenance Manual for Process Automation Systems shall be prepared per [SAEP-1640](#) and [SAEP-1642](#).

1.7 Plant Inspection Book

Plant Inspection books include vendor data and information required for planning future inspection of equipment and setting up the Equipment Inspection Schedule (EIS). The book shall further include field data to set the baseline for the operating Facility to perform future Corrosion Monitoring inspections to ensure the continued safety of the Facilities based on an approved On-Stream Inspection (OSI) Performance Program. The requirements of setting up both the EIS & OSI are listed in [SAEP-20](#).

1.8 Construction Inspection Records

Construction Inspection records reflect all inspection activities performed during the construction phase of a Project. The documentation of these inspection activities shall be as stated in contract Schedules "B" and/or "Q" of each contract and [SAEP-1150](#).

1.9 Precommissioning Record Book

Precommissioning Record books include all records of all precommissioning activities carried-out during construction prior to start-up.

2 **Applicable Documents**

The requirements contained in the following documents apply to the extent specified in this procedure.

2.1 Saudi Aramco Engineering Procedures

SAEP-20	<i>Equipment Inspection Schedule</i>	
SAEP-121	<i>Operating Instructions for New Facilities</i>	
SAEP-334	<i>Retrieval, Certification and Submittal of Saudi Aramco Engineering & Vendor Drawings</i>	
SAEP-1150	<i>Inspection Coverage on Projects</i>	
SAEP-1640	<i>Operating Instructions for Process Automation Systems</i>	
SAEP-1642	<i>Maintenance Manual for Process Automation Systems</i>	

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- 2.2 Saudi Aramco Engineering Standards
 - [SAES-A-005](#) *Safety Instruction Sheet*
 - [SAES-A-202](#) *Saudi Aramco Engineering Drawing Preparation*
 - 2.3 Saudi Aramco Standard Drawings
 - AA-036313 *Lettering for Covers and Backs of Photostat Books, Equipment Manuals & Inspection Record Books All Plants*
 - AE-036411 *Saudi Aramco Drawing Index Letters*
 - 2.4 Saudi Aramco General Instruction
 - GI-0002.710 *Mechanical Completion and Performance Acceptance of Facilities*
 - 2.5 Saudi Aramco Forms and Data Sheets
 - Form 3099A-ENG *Relief Valve Authorization*
 - Form 8020-611-ENG *ISS - Pressure Relief Valves Conventional Balanced Types*
 - Form 8281 *On Stream Insp. Gauge Point*
 - 2.6 Saudi Aramco Records Management Manual

3 Instructions

- 3.1 Composition and Format

Detailed composition of Project Records are specified in Appendix A.
 - 3.2 Identification

Project Records are identified by the Engineering Plant Number and by the name of the Facility. Titles shall be concise and descriptive conforming, where feasible, to the title used on the approved Expenditure Request.
 - 3.3 Binding

Completed Project Record Books shall be bound in accordance with Saudi Aramco Standard Drawing AA-036313.
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3.4 Distribution

Original and subsequent distribution of Project Record Books shall be made as follows and in numbers as agreed to by the Facility Proponent and SAPMT and incorporated into the Project Proposal:

3.4.1 Drawing Books:

Distribution to Proponent Manager
hard copies
1 electronic copy

3.4.2 Facilities Operating Instructions Manual:

Distribution to Proponent Manager
hard copies
1 electronic copy

3.4.3 Design Calculation Book:

Distribution to Proponent Manager
hard copies
1 electronic copy

3.4.4 Vendor Equipment Operating Instructions & Maintenance Manuals:

Distribution to Proponent Manager
hard copies
1 electronic copy

3.4.5 Operating Instructions & Maintenance manual for Process Automation Systems:

Distribution to Proponent Manager
hard copies
1 electronic copy

3.4.6 Vendor Inspection Record Books:

Distribution to Proponent Manager
1 electronic copy
Distribution to Inspection Department
1 electronic copy

3.4.7 Plant Inspection Book:

Distribution to Proponent Manager

hard copies

1 electronic copy

Distribution to Inspection Department

1 electronic copy

3.4.8 Construction Inspection Records:

Per [SAEP-1150](#), original Construction Inspection Records are provided to Project Inspection Department for their retention. An electronic version of the construction inspection records are to be retained in the project files for a minimum of 2 years per the Department Approved Record Management System as stated in the Saudi Aramco Records Management Manual.

3.4.9 Precommissioning Record Book:

Distribution to Proponent Manager

hard copies

1 electronic copy

3.5 Issue Schedule

Project Records shall be issued according to the following schedule:

3.5.1 Prior to Mechanical Completion per GI-0002.710

- o Red lined as-built key drawings
- o Vendor Equipment Operating Instructions & Maintenance Manuals
- o Facilities Operating Instructions Manual
- o Operating Instructions & Maintenance Manual for Process Automation Systems

3.5.2 Prior to On-Stream Date

- o Drawing Books
- o Vendor Inspection Record Books
- o Design Calculation Books
- o Precommissioning Record Books
- o Plant Inspection Books

o Construction Inspection Books

Projects affecting more than one functional organization shall have Project Record Books prepared and distributed to each affected organization.

Project Record Books shall be completed and transmitted in time to ensure receipt in SAO at least one month prior to plant start-up or as agreed in the Project Proposal. As-built drawings need not be included.

3.6 Contracts

The Project Records Requirements must be identified in each Contract to ensure that the right and complete Project Records are provided for each project.

3.7 Notification of Changes

Transmittal of changes to Project Records is the responsibility of the SAPMT.

4 Responsibilities

SAPMTs are responsible for the preparation of the original and revised Project Records in accordance with this SAEP. They are responsible for determining the applicability or nonapplicability of each document of the Project Records and obtaining agreement with the Facility Proponent before finalizing the list to be incorporated in the Project Proposal. If any Project Records, as agreed in the Project Proposal, do not meet the requirements, they will be returned to the responsible project personnel for remedial action. All cost for preparing Project Records are to be absorbed by the project.

Revision Summary

29 February, 2004

Complete revision of the procedure.

31 July, 2005

Revised the "Next Planned Update."

Editorial revision to delete referenced SAEP-111 from the reference area which has been cancelled and superseded by [SAEP-334](#).

Appendix A – Project Record Books

1.0 Binders

Drawing Book	Other Record Books & Manuals
Sectional post (2Post) end Lock binders with blue canvass covers for 290 mm x 432 mm sheets. Use cloth black edge containing title. See Saudi Aramco Standard Drawing AA-036313.	Blue black, loose leaf 3 ring binders for 216 mm x 280 mm sheets. See Saudi Aramco Standard Drawing AA-036313.

2.0 Size and Type of Sheets

Drawing Book	Other Record Books & Manuals
Finished size 380 mm x 432 mm. This includes binding margin of 38 mm at left side of sheet which must be free of written or printed matter.	Finished size 216 mm x 280 mm larger sheets shall be folded.

- 2.1 Prints of drawings larger than "A" size shall be sectioned and properly referenced. If full reductions are not legible or otherwise practical, certain large prints such, as plot plans, may be folded to 280 mm x 432 mm.
- 2.2 No book shall be more than 76 mm thick and filled to no more than 80% of capacity.
- 2.3 All drawings may be reduced in size to fit the 280 mm x 432 mm binder size.

3.0 Indexes

- 3.1 Design drawing index listings shall be used based on Saudi Aramco Standard Drawing AE-036411. These listings show all the design drawings prepared for the Plant, grouped numerically and by index letter.
- 3.2 Purchase order index computer listings shall be used. These listings show purchase order number, description and supplier. Where the purchase order is not generated by Saudi Aramco, a dummy Saudi Aramco purchase order number shall be used.
- 3.3 Foreign print index computer listings shall be used. These listings show all vendors drawings numerically. Designate with a check mark those included in the Record Books.

4.0 Assembly of Drawing Books

- 4.1 Design drawings shall be arranged numerically within letter group, in alphabetical sequence, as shown on the drawing index.
- 4.2 Foreign prints shall be arranged in order of the purchase order material class and increment number, as shown on foreign print index.
- 4.3 The design drawings and foreign prints shall be in separate sections, so labeled. If the number of sheets so indicates, design drawings shall be in one or more separate volumes and foreign prints in one or more separate volumes.
- 4.4 When a Plant is so large that individual letters or material class sections become excessively large, these sections shall be subdivided into logical sub groups and appropriate tabs inserted to identify sub groups.

Examples of this method are:

- 4.4.1 Power Plants: Subdivide electrical drawings (both design and foreign prints) into elementary, wiring, conduit layout, interconnection diagrams, voltage subdivisions, etc.
- 4.4.2 Any Plant with considerable instrumentation: Divide drawings (both design and foreign prints) into type of instrumentation, i.e., flow, level, pressure, conductivity, temperature, speed, etc.
- 4.5 Special arrangements may be used as determined, i.e., for electrical distribution plants, use substation number subdivisions. The Project Manager shall provide details of special arrangements for the foreign print file section.
- 4.6 Tabs on heavy paper shall separate all subdivisions by letter group or material class group and any other special subdivisions utilized.

5.0 Assembly of Vendor Inspection Record Books

- 5.1 Material as specified herein for the vendor inspection record book shall be arranged numerically within the letter group, in the alphabetical sequence per Saudi Aramco Standard Drawing AE-036411.
- 5.2 Within the system as defined in 5.1, specific records shall be arranged for each individual item or fixed equipment such as columns, drums, exchangers, furnace, etc., to include:
 - 1) Safety instruction sheet per [SAES-A-005](#);

- 2) Data sheets;
- 3) Equipment inspection schedule per [SAEP-20](#);
- 4) Hydrostatic test record;
- 5) Initial equipment ultrasonic thickness measurements; and
- 6) Inspection records may be provided in a general section under each equipment class for all non-equipment specific records such as approved waivers.

5.3 Tabs on heavy paper shall separate all subdivisions by letter group or material class group, and records for each equipment item shall have a similar tab to identify the specific records.

5.4 Each vendor inspection record book shall be assembled with binders filled to no more than 60% of capacity. The additional filing space in each book will be utilized by the facilities operations inspectors.

6.0 Additions

6.1 All additions to existing plants shall have drawings issued in addition to existing record books as otherwise described in 7.5.

6.2 Additional binders shall be prepared as requested by the operating organization and paid for by the requester.

7.0 General Notes

7.1 The prompt selection, preparation and organization of the subject matter in accordance with this procedure shall be the responsibility of the Project Manager. Where manufacturer prints, data and literature are required for record books, they should be included in the original purchase order.

7.2 Drawing controls, scopes of work and structural steel fabrication details shall not be included in the project record books, but listed on the drawing index.

7.3 Only drawings with the same plant number shall be included in a plant record book.

7.4 Combined drawing books shall be avoided unless it is expected that the Plant will never be expanded.

- 7.5 Separate Plant Record Books for additional facilities to an existing plant should be avoided, unless an addition covers a separate unit. However, if complete and up-to-date Record Books for existing plants or facilities are not available, new Record Books shall be prepared for the new facilities only. SAPMT is not responsible for "as-building" or re-creating Record Books for existing plants or facilities. Supplements to existing Record Books for additional facilities shall be issued with the original basic title of the plant. Revised sheets will be inserted to replace the old sheets by the book custodians.