CONTENT

This Instruction defines the purpose and use of a Project Change Request (PCR) and describes the PCR approval process. GI 20.520-1, *Instructions for Preparing a Project Change Request*, contains specific instructions for preparing the PCR in the SAP system. Further details and training is available from the online e-learning course 40070329, *PCR Submissions with Workflow*, from Training & Development.

The Capital Programs Division (CPD) will interpret the application of this General Instruction.

The text includes:

1. Definitions
2. Purpose and Use
3. Timing of a PCR
4. Initiating a PCR
5. Routing and Approving a PCR
6. Distribution
7. Related Instructions, Manuals & Guides
8. Related Forms

ABBREVIATIONS & ACRONYMS

BI	Budget Item
BISI	Budget Item Supporting Information
CA	Contract Amendment
CO	Change Order
CPD	Capital Programs Division, FAD
ESD	Estimating Services Division, PMOD
ER	Expenditure Request
ERA	Expenditure Request Approval
ERC	Expenditure Request Completion
FPD	Facilities Planning Department
FAD	Financial Accounting Department
HAZOP	Hazard and Operability Studies
MA	Master Appropriation
MC	Mechanical Completion
MCC	Mechanical Completion Certificate
MPU	Monthly Project Update
PAC	Performance Acceptance Certificate
PAER	Prior Approval Expenditure Request
PCR	Project Change Request
PCS	Project Completion Schedule
PE	Preliminary Engineering
PMD	Project Metrics Division, PMOD
PMOD	Project Management Office Department
PMT	Project Management Team
SAER	Subsequent Action Expenditure Request
SRC	Service Review Committee
VAR	Value Assurance Review

1. DEFINITIONS

1.1. **<u>Scope:</u>** Refers to the set of requirements for an engineered project or equipment purchase Budget Item to deliver a plant, a facility or service in order to meet specific objectives and targets, also referred as Scope of Work.

Engineering project scope includes: 1) facility purpose, 2) facility description (including physical characteristics, equipment quantities, attributes and location), 3) design basis, and 4) schedule. The approved Project Proposal will be the scope baseline and serves as the final source against which all scope changes are measured, and represents the approved scope. A summary of the proposed scope is contained in the ER Brief and the BISI.

Equipment purchase scope includes: 1) equipment purpose, 2) equipment type, 3) installation or use location, and 4) quantity or number of items for purchase. The equipment list in the Project Proposal serves as the baseline against which equipment purchase scope changes are measured.

A scope change is defined as any change to a feature required for the plant, facility or service to expand or reduce its functionality as described in the approved Project Proposal, including but not limited to, the facility purpose, physical characteristics, throughput, attributes, location (as a whole), and schedule. The detail engineering development may result in changes in stand-alone, asset-type, material or equipment quantities which represent a scope change. Changes in raw material specification or quantities (excluding quantities of tagged equipment) and its corresponding construction activities within the same approved scope and intent of the ER should not be considered as a scope change, provided the raw material is not a major component of the project scope and is not specifically listed in the ER package (i.e. if the main scope is a pipeline, significant changes in pipeline size and diameter will be considered a scope change). Adding or deleting material required for the project may result from the detail engineering development; consequently, the construction agency, which is either PMT or the Proponent, must be vigilant with Contractors and exercise caution as considerable cost increases may result from these actions, which may not be attributable to the Company. Cost increases as a result of addition of raw material, which may be attributable to the Company, require the review of CPD.

1.2. **<u>Mechanical Completion Certificate (MCC):</u>** The Proponent approves the MCC (SA-7213) when the facility defined in the approved scope, construction documentation, drawings, specifications and material requisitions has been installed and tested (pre-commissioned) and is available for commissioning and start-up.

Following MCC approval, no scope changes, additions or equipment purchases can be made on the project. The MCC may contain exception items that need to be completed; these are the only items that PMT may implement. However, after MCC, the construction agency is responsible for providing an agreed number of contractor and vendor commissioning and start-up assistance personnel up to 60 days. No other charges should then be initiated against the project, except costs associated with commissioning.

For equipment purchase BIs, the MCC most often is used to signify that the BI is complete and a PAC is not required.

1.3. **On-Stream Date:** The On-Stream Date is referred as the ERC Date indicated in the approved ER package. The facility is considered on-stream when the MCC has been approved, the system has been energized or product has been introduced into the facility, and it has been successfully operated during the initial start-up period, although design capacity or specification targets have not yet been attained. The facility specification performance acceptance is defined in the PAC definition. Minor exception items may be outstanding at the On-Stream Date, which will be handled as exception items. PCRs are not required for start-up modifications or to correct commissioning deficiencies because this work is required to attain the original approved scope. PCRs are required to extend the On-Stream Date, regardless if the project has achieved MCC. Refer to GI 2.710 for further information concerning MCC and On-Stream Date clarifications.

1.4. **Performance Acceptance Certificate (PAC):** The Proponent approves the PAC (SA-7214) when it has been demonstrated via tests that the facility can operate successfully at the performance standards and under the design conditions established in the approved project scope, as specified in the Project Proposal, Expenditure Request, Master Appropriation Release or approved PCR. The PAC signifies that the facility is accepted for commercial operation. Minor scope elements may be outstanding at PAC approval, which will be handled as exception items. PCRs are not required for start-up modifications or to correct commissioning deficiencies because this work is required to attain the approved project scope.

1.5. **Scope Change Threshold:** Is a maximum cumulative scope change that may be approved by PCRs. This threshold is defined by the following guidelines:

- Cumulative cost changes of scope additions as well as deletions are limited to the lesser of $100 million or 10% of the approved ER Amount;
- Cumulative scope changes include the current and all previous PCRs;
- Scope additions and scope deletions are considered separately and are neither netted nor offset (within Corporate Management approval authority); and
- Cumulative scope additions represent the sum of all capital and expense scope additions.
- Cumulative scope deletions represent the sum of all capital and expense scope deletions.

Scope additions and deletions are not netted because this would mask the effect of significant offsetting changes, which may trigger an ER Redefinition. Exception is provided for scope additions and deletions, whose netted or aggregate value does not exceed $100 million, and falls within the President & CEO's approval authority only. Refer to the Management Guide, Section 4 – Approval Authority, Item III – Budgets & Appropriations.

The following three scenarios may be taken into account when processing a PCR:

1. If the Scope Change Threshold is exceeded and no additional funding is necessary, an ER Redefinition subsequent action is required.

2. If the Scope Change Threshold is exceeded and additional funding is necessary, an ER Redefinition & Supplement subsequent action is required.

3. If the Scope Change Threshold is exceeded and costs are reduced, an ER Redefinition & Partial Cancellation subsequent action is required.

1.6. **Cost Overrun Threshold:** Is a maximum cost overrun within the original scope of an ER that may be approved before an ER Supplement is required. The threshold is reached at the lesser of 10% of the approved ER Amount or $100 million. Refer to GI 20.500 for further information concerning expenditure control.

Exceeding the Cost Overrun Threshold always triggers an ER Supplement subsequent action. It may or may not occur in conjunction with a Scope Change Threshold overrun, which requires an ER Redefinition subsequent action.

1.7. **Construction Agency:** Normally PMT, or the Proponent for non-PMT projects (Proponent-managed projects).

1.8. **Proponent:** The Saudi Aramco organization which will own the constructed facilities or purchased assets.

2. PURPOSE AND USE

2.1. A PCR is a mandatory requirement to document and approve scope changes (changes that are less than $100 million or 10% of the approved ER amount, whichever is less) that are directly related to, and were not part of, the original agreed upon scope and intent of an ER as described in the Project Proposal, as explained in Paragraph 1.1. It is also a mandatory requirement for extending the current approved On-Stream Date. It is essential to approve changes to the On-Stream Date to ensure that the PMT and Proponent are committed to the revised date. Scope changes not directly related to the original scope and intent of the ER, whether or not they impact cost, must be executed under a separate Budget Item.

2.2. A Change Order (CO), or a Contract Amendment (CA), are mandatory requirements to document and approve contract changes and instruct Contractors to perform any activity not included in the signed Contract, but within the same approved scope and intent of the ER, which may alter the contract's original scope, cost or schedule, or a combination of these. Refer to the Saudi Aramco Procurement Manual, as part of the Supply Chain Management Manuals, for guidelines and thresholds related to COs/CAs.

2.3. PCRs are internal change control mechanisms and are neither shared nor transmitted to the Contractor. COs/CAs on the other hand, are the formal change approval mechanisms to amend contracts and are agreed upon and transmitted to Contractors to perform the required changes.

2.4. PCRs for scope or On-Stream Date changes shall be initiated as soon as the change is identified. Depending upon the nature of the additional work required or the scope change, a PCR may or may not be required. If required, the PCR must be submitted and routed for approval prior to issuing a CO/CA to the Contractor to perform the required scope change. If the PCR is not required, the required scope change can be directly authorized through a CO/CA, following SRC's approval thresholds.

2.5. It is ultimately the construction agency's responsibility to initiate the PCR, if required, based on the guidelines described in Paragraphs 1.1, 2.1 and 2.2. For On-Stream Date changes, date extension or reductions, PCRs must be prepared and routed for approval prior to the expiry of the approved On-Stream date. For any doubt, the construction agency shall consult with CPD for ruling.

2.6. All PCRs will eventually generate a CO/CA; however, not all COs/CAs require a PCR.

2.7. PCRs apply to regular ERs, Master Appropriations and all subsequent actions (Supplements, Redefinitions, Partial Cancellations and combinations thereof). PCR's are not applicable to Prior-Approval Expenditure Requests (PAER) and to BI-19: *Miscellaneous Projects and Purchases Master Appropriations*. Refer to GI 20.620 for instructions concerning BI-19.

2.7.1. PCRs apply to fixed-scope ERs for both scope changes and On-Stream Date delays. Although a change might affect only a single or limited number of Job Orders within the ER, the PCR must address the impact of the change upon scope, schedule and cost of the entire ER.

2.7.2. PCRs for scope additions representing spare capital equipment must be filed before the 90% Detailed Design milestone is completed. Refer to the Accounting Manual, Section 300 – General Provisions, for further discussion on capital spares and equipment acquired for standby purposes as essential insurance for continuity of operations.

2.7.3. PCRs for scope changes justified on the basis of:

- Safety & Security
- Standards & Specification Updates
- Maintainability, Reliability or Operability
- Design or HAZOP Review Changes
- Preferential (Beneficial) Site Conditions

must be filed before 30% of the Construction is completed and before 80% of the project funds have been committed. These are items 1.1 through 1.5 of the Reasons for the Project Change Request section on page 5 of 11 of the GI 20.520-1, supplement to this GI 20.520. Beyond either the 30% Construction milestone or 80% commitment of project funds, PCR's justified for these reasons are not permitted. In the event of a "required" scope change, approval from the President & Chief Executive Officer would be necessary.

2.7.4. Scope elements which were added to a project through a PCR must be completed before the MCC is approved. Such scope elements may not be considered as "no exception" items for purposes of the MCC. Refer to GI 2.710, under "Exception Items" for further details.

2.7.5. PCRs are required for all cases where the minimum requirements of the Saudi Aramco Engineering Standards are exceeded, and which imply a cost impact.

2.7.6. PCRs apply to Master Appropriations and releases as follows:

- PCRs are only used for Master Appropriations to extend the On-Stream Date of the underlying Master Appropriations.

- A PCR will be required when a release of the underlying open (not closed) Master Appropriation exceeds the current On-Stream Date. PCR should be prepared and approved in accordance with Sections 3 & 4 and routed for approval simultaneously with the release. The PCR should be referenced in the release document. Approval of the release will not change the current approved On-Stream Date of the underlying master Appropriation.

- All Job Orders impacting the On-Stream Date of the underlying Master Appropriation must be referenced and listed in the PCR, including the reason for the delay and the plans for completion. In addition, the status of all Job Orders with partial MCC approved must also be reported. Refer to GI 20.500, *Expenditure Requests*, for ruling about maximum numbers of active Master Appropriations.

- Redefinition releases used for scope changes can extend the On-Stream Date of a release if the new On-Stream Date is within the underlying Master Appropriation's On-Stream Date.

- Redefinition/Supplement ER for the underlying Master Appropriation extends the On-Stream Date of the Master Appropriation.

- PCRs are not to be used to add or delete scope to previous releases under an open or expired Master Appropriation.

2.8. Approval of a PCR does not change approved ER funding, nor does it approve a cost overrun. In addition, reference to cost overruns should also be read with reference to GI 20.500 or the Management Guide.

- PCRs where the Current Forecast exceeds the Approved Funds must be submitted with an approved Cost Overrun letter attached in the SAP workflow system.

- Project cost overruns or scope changes up to 5% of approved funding and not exceeding $10 million are approved by Executive Management.

- Project cost overruns or scope changes up to 10% of approved funding and not exceeding $20 million are approved by Corporate Management.

- Project cost overruns or scope changes up to 10% of approved funding and not exceeding $100 million, are approved by the President & Chief Executive Officer. Please consult the CPD for guidance regarding this procedure.

- Project cost overruns greater than the lesser of 10% or $100 million of approved funding require a ER Supplement subsequent action. If project scope changes are involved, an ER Redefinition & Supplement subsequent action would be required. Please consult the Facilities Planning Department (FPD) for guidance on the development of ER subsequent actions.

- Projects with approved funds greater than $100 million, Partial Cancellation ERs are required when the forecasted cost underrun is greater than 10% of approved funds or exceeds $100 million.

  Projects with approved funds up to $100 million, Partial Cancellation ERs are required when the forecasted cost underrun is greater than 10% of approved funds and exceeds $10 million.

2.9. If a change to a single ER affects other ERs, individual PCRs must be approved for each ER, regardless of which ER generates the change.

2.10. PCRs for ERC Date extensions, cumulative from the original ERC Date, will be subject to the following approval levels:

- Level 2, one month extensions are approved by the Department Manager
- Level 3, two months extensions are approved by the General Manager
- Level 4, three months extensions are approved by the Administrative Area Head
- Level 5, more than three month extensions are approved by the Business Line Head

Refer to GI 20.520-1, Instructions for Preparing a Project Change Request, "Approval Levels Tab", for complete approval authority information.

3. TIMING OF A PCR

3.1. A PCR should be issued immediately after necessary changes to the scope or the On-Stream Date have been identified. PMT should provide ample time to process the PCR in order to:

- Complete the analysis, including the PCS, Saudi Aramco Form 6974, whenever time extension is included in the PCR
- Route the PCR through FPD as necessary and CPD
- Route the PCR for signature, based on the approval authority listed above

PCRs have to be routed and approved prior to the expiration of the On-Stream Date. If a PCR could not be initiated and approved before the expiration of the On-Stream Date the construction agency (PMT or Proponent) shall write a letter to their respective Vice President (VP), explaining the "after the fact processing" of the PCR

3.2. Any extension to the approved On-Stream Date, after obtaining a MCC, still requires a PCR. In other words, if the MCC was obtained on time (i.e. according to the currently approved completion date) and the On-Stream Date could not be achieved by the current approved On-Stream Date, then the construction agency has to process a PCR.

4. INITIATING A PCR

4.1. PCRs are initiated by the construction agency, which is either PMT or the project proponent. The PCR should be created in the SAP PCR system using transaction ZNPCR01. Refer to GI 20.520.1 for details. If PMT executes the project, preparation of the PCR and supporting documentation is a joint effort with the Proponent.

For projects executed by PMT, PCRs initiated by the Proponent may be declined by PMT. If PMT declines to proceed with the PCR, PMT's ruling may be appealed to the VP – Project Management, who will accept the PCR and request PMT to proceed with it, or decline it.

The initiator of the PCR is responsible for coordinating the effort, which provides the following information:

- Scope of work for the change, if applicable.
- Budget quality ±40% cost estimate. The cost amount on the PCR must agree with the amount of the cost estimate. As an additional control, the initiator of PCR in the SAP system is required to confirm that the PMOD approvals have been received by checking "PMOD approval" SAP system box. If the PCR is approved, a ±10% cost estimate should be prepared for the Bid Review Team to compare against the commercial bids.
- Scope additions have costs associated with them and that cost should be reflected on the PCR, even if the additional scope can be completed within the approved level of funding and no additional funding is requested.
- Proposed scope changes of $2 million or more should be supported by economic evaluation and analysis. It is the PCR initiator's responsibility to develop this economic evaluation and analysis with the assistance and review of FPD. Refer to paragraph 5.4 below.
- PCS (Form SA-6974) to support the revised On-Stream Date (Construction Agency's Responsibility). For approved ERs reporting Monthly Project Updates (MPU) with On-Stream Date changes, the PCS must be endorsed by PMOD. For approved ERs not reporting MPU with On-Stream Date changes, the PCS does not require PMOD endorsement. The PCS should be approved prior to initiating the PCR to revise the On-Stream Date and should be attached to the PCR in the SAP system before the PCR is circulated for approval.

4.2. The Budget quality ±40% cost estimate must be endorsed by PMOD's Estimating Services Division (ESD), if value of the cost change is $2 million or more, positive and negative considered separately, and regardless of whether the cost change involves scope changes or is purely cost driven. This cost estimate endorsement should be obtained before the PCR is submitted in the SAP system for the review and endorsement of CPD. If the value of the cost change is less than $2 million, signatures from two project team members are required.

4.3. The magnitude of the change for the individual PCR being processed and the relationship of the current cost and schedule forecast to the ER Amount and/or On-Stream Date (original or redefined) determine the approval authority level. Refer to GI 20.520-1 for details.

5. ROUTING AND APPROVING A PCR

5.1. After the PCR is entered into the SAP system and the “submitted” box is checked, the PCR is routed to the Proponent’s Division Head for notifying and to the Proponent’s Department Manager for approval. Then the PCR is reviewed and endorsed by FPD (if required), and CPD. After the post approval from CPD, any higher level approvals required are obtained.

CPD is responsible to ensure that:

- The proposed scope changes are closely related to the approved scope and intent of the ER. CPD may contact FPD for consultation, if required.
- A compelling business case justification is presented. The proposed project scope and/or schedule changes should be clearly and adequately supported.
- The budget quality ±40% cost estimate is attached in the SAP system.
- The capital or expense nature of any cost changes is properly identified.
- Proper approval levels are indicated.
- Consistency with the definition of scope change requirements as defined in Paragraphs 1.1 & 2.2.
- Scope and cost change thresholds have not been exceeded.
- Reason(s) for scope or On-Stream Date changes are properly identified.
- PCS endorsement is attached in SAP system.

5.2. If the PCR does not cause the Scope Change Threshold to be exceeded and the other requirements mentioned above are met, CPD will endorse the PCR in the SAP system. Then the PCR is routed for any required higher Management approvals.

5.3. Where cost changes are $2 million or greater or if the PCR includes Capital Spare Parts, the PCR should also be routed to FPD for review and endorsement of the supporting economic analysis. FPD will:

- Review the business case justification.
- Verify the supporting economic analysis.
- Review the impact of the change with respect to other projects under consideration or construction.
- Ensure that the changes are consistent with the Design Basis Scoping Paper (DBSP) and Project proposal (PP) or other project scope document and the changes are consistent with the original intent of the ER and VAR endorsed recommendations.
- FPD endorsement, if required, should be obtained by a Work Director and prior to routing a PCR to CPD.

5.4. PCR's do not have authority for implementation unless CPD endorsement, and FPD endorsement of changes of $2 million or larger, has been obtained.

5.5. If a PCR causes the Scope Change Threshold to be exceeded, CPD will advise the organization executing the project that an ER Redefinition should be brought forward for approval with the assistance of FPD.

5.6. Approval of an ER subsequent action returns the PCR cumulative scope and schedule changes to zero.

6. DISTRIBUTION

PCRs may be viewed in the SAP system using transaction ZPCRN3 and ZPCR04. All supporting documentation are stored in SAP system for future reference.

7. RELATED INSTRUCTIONS, MANUALS & GUIDES

- GI 2.710 *Mechanical Completion & Performance Acceptance of Facilities*
- GI 20.500 *Expenditure Requests*
- GI 20.520-1 *Instructions for Preparing a Project Change Request*
- GI 20.620 *Miscellaneous Projects & Purchases Master Appropriation (BI-19)*
- GI 202.309 *Allocation of Costs – New Facilities start-Up*
- SAEP 328 *Authorization for Expenditure*
- SAEP 14 *Project Proposals*
- Accounting Manual, Capital Assets, Section 300 – 310
- Engineering & Project Management Cost Manual
- Management Guide

8. RELATED FORMS

- SA-7213 *Mechanical Completion Certificate*
- SA-7214 *Performance Acceptance Certificate*
- SA-6974 *Proposed Project Completion Schedule*

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