



Exploration & Production

GENERAL SPECIFICATION

PROJECTS & CONSTRUCTION

GS EP PJC 501

Requirements for Contractor Quality Management

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1. Purpose

This specification defines the requirements for the Quality Management System that CONTRACTOR shall establish and maintain during each phase of the WORK (e.g.: Design, Engineering, Procurement & Supply, Construction, Installation, Hook-up, Commissioning, Start up).

These requirements are also applicable to CONTRACTOR controlled SUB-CONTRACTORS and VENDORS through the complete supply chain.

The aim of Quality Management is to give confidence to COMPANY that the activities (or processes) under the CONTRACT will be planned, executed, monitored and recorded in a controlled manner to meet all contractual requirements to COMPANY full satisfaction, especially for the operability of the deliverables with due respect to Health, Safety and Environment in operating conditions.

This **Quality Management system specific to the CONTRACT** must be documented in a **Quality Plan**, based on CONTRACTOR perennial Quality Management system (supposed to be effective regardless the CONTRACT) and on COMPANY contractual requirements pertaining to the deliverables, the execution processes and to the Quality Management itself.

2. External references

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
ISO 9000	Quality Management system - Fundamentals and vocabulary
ISO 9001	Quality Management system – Requirements
ISO TS29001	Petroleum and natural gas industries – Sector specific Quality Management system
ISO 10002	Quality Management systems – Customer satisfaction – Guidelines for complaints handling in organizations
ISO 10005	Quality Management systems – Guidelines for quality plans
ISO 10006	Guidelines for Quality Management in projects
ISO 19011	Guidelines for quality and/or environmental management systems auditing

**Professional Documents**

Reference	Title
Not applicable	

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
GS EP PJC 502	Requirements for Contractor criticality rating of a Unit
GS EP PJC 503	Requirements for Contractor Quality Surveillance

The terms in BLOCK letters refer to the definition of Total standard contracts.

NB: the term "SUPPLIER" mentioned in the definition of [ISO 9000](#) has been replaced by the contractual defined term of "SUB-CONTRACTORS and VENDORS".



3. Quality Management requirements

3.1 Perennial Quality Management system

CONTRACTOR perennial Quality Management system, that exists regardless of the CONTRACT, must meet the requirements of the international standard [ISO 9001](#) as interpreted in § 4 and shall be documented in CONTRACTOR Quality Manual.

The issue of other Quality Management standards is addressed in paragraph 6 of the present General Specification.

3.2 Contractual specific Quality Management system

The Quality Management system covering specifically the CONTRACT activities must meet the requirements of the international standard [ISO 9001](#) as interpreted in § 5 and must be documented in a CONTRACTOR Quality Plan for each phase of the WORK.

CONTRACTOR Quality Plan must mainly contain the description of specific quality objectives, organisation, resources and management practises aiming at achieving quality for all the deliveries of the WORK.

CONTRACTOR Quality Plan must be supplemented by the Quality Control (QC) Plans describing CONTRACTOR operational reviewing, verification, (qualification in case of innovative product), inspection and testing activities throughout all phases of the WORK.

A Quality Control Plan is sometimes termed "Inspection and Test Plan" during Construction and Installation phases.

The **Quality Plan must be developed with 3 main milestones:**

- **Preliminary version "P"**, submitted to COMPANY for Tender evaluation
- **Intermediate version "I"**, submitted to COMPANY for review
- **Applicable version "A"**, submitted to COMPANY for approval.

Requirements of § 5 below, which are preceded with "P", must already be met by the preliminary version of the Quality Plan.

3.3 Submission of Quality Management documentation

The Quality Management documentation must be submitted to COMPANY as follows:

- Enclosed with the offer, for competitive evaluation:
 - CONTRACTOR perennial Quality Manual
 - Quality Management system certificate of compliance with [ISO 9001](#), obtained from an accredited independent body (Third Party), mentioning validity dates and activities covered
 - "Control of (project activities) documentation and records" documented procedure
 - "Internal audit" documented procedure and list of qualified auditors
 - Quality Plan in preliminary version "P".
- At a date stipulated in the Exhibit H of the CONTRACT (normally 20 calendar days after the EFFECTIVE DATE) for review:
 - Quality Plan in version "I", developed for implementation in all phases of the WORK

- Preliminary Quality Control Plan(s), presented in accordance with the requirements of **GS EP PJC 503**.
- At a date stipulated in the Exhibit H of the CONTRACT (normally 40 calendar days after the EFFECTIVE DATE) for approval:
 - Quality Plan in applicable version "A"
 - First version of the Quality Control Plan(s), incorporating COMPANY Quality Surveillance points and presented in accordance with the requirements of **GS EP PJC 503**.

The applicable version "A" Quality Plan must be implemented, maintained and revised as necessary by CONTRACTOR during the WORK and as a minimum once a year.

Major modifications to the Quality Plan must be submitted to COMPANY for approval prior to CONTRACTOR implementation.

The Quality Control Plan(s) must be revised or supplemented to incorporate the Quality Surveillance activities of CONTRACTOR upon its SUB-CONTRACTORS and VENDORS, the COMPANY (2nd Party Quality Surveillance) and the Quality Certification Authority (3rd Party Quality Surveillance), where applicable.

Each revision of the Quality Control Plan must be submitted to COMPANY for review and approval as for the first version.

4. Application of ISO 9001 to project construction activities

4.1 Introduction and objective

Although the **ISO 9001** standard has been set as the standard for CONTRACTOR perennial Quality Management system, it is deemed useful to clarify and supplement some of its sections to ease their application to project construction activities.

Interpretations (written in italics) and supplements are given hereafter with the same numbering of sections, sub-sections and headings as the ones of **ISO 9001**, for immediate cross-reference.

The requirements of the **ISO 9001** standard are structured in 5 sections, numbered from 4 to 8:

- 4) Quality management system
- 5) Management responsibility
- 6) Resources management
- 7) Product realisation
- 8) Measurement, analysis and improvement.

Sections 4, 5 and part of 8 of **ISO 9001** contain requirements for CONTRACTOR perennial Quality Management system; they are *interpreted (in italics)* and/or supplemented in this § 4 of the present General Specification.

Sections 6, 7 and the remaining part of 8 of **ISO 9001** contain requirements for CONTRACTOR Quality Plan which are addressed in following § 5 of the present General Specification.



4.2 ISO 9001 "Section 4 - Quality Management system"

4.2.1 Heading 4.2.4 - Control of records

The documented procedure required either belonging to the perennial Quality Management documentation or attached to the Quality Plan, must describe:

- The different types of records to be generated by CONTRACTOR during each phase of the WORK (including manufacturing records as relevant)
- The different supporting media used for these records
- The handling by CONTRACTOR of records to be generated by SUB-CONTRACTORS and VENDORS
- The control of subcontracted process if any in the field of records management
- The retention time and the retrieval procedure for each type record.

4.3 ISO 9001 "Section 5 - Management responsibility"

4.3.1 Sub-section 5.5 - Responsibility, authority and communication

When CONTRACTOR organises its activities as a project, the role of the perennial (or "Corporate") Quality Management system manager in the project activities must be described and his(her) relationship with CONTRACTOR Project Manager and the Project Quality representative (if independent) must be clarified in terms of responsibilities and authorities.

In the event CONTRACTOR organisation is especially created for the fulfilment of the CONTRACT, with wide independence from main organisation, the Quality Management system of this dedicated structure may be entirely designed and implemented for meeting COMPANY requirements on deliverables; in that case, the Quality Manual must be issued at the same time as the Quality Plan and may incorporate the latter.

In case of joint venture, the Quality Management system of the leading member shall be the only one documented as the basis of the contractual Quality Plan.

4.3.2 Sub-section 5.6 - Management review

When CONTRACTOR organises its activities as a project, the respective functions of perennial ("Corporate") CONTRACTOR Management review and dedicated project Management review must be clarified, together with the interrelationship between these 2 management processes.

4.4 ISO 9001 "Section 8 - Measurement, analysis and improvement"

This section contains requirements pertaining mainly to the perennial Quality Management system, and more precisely to CONTRACTOR general Quality Improvement process, with the exception of sub-sub-sections 8.2.1 and 8.2.2 which are developed below.

Other requirements more directed to the execution of the CONTRACT (other sub-sub-sections 8.2 and sub-section 8.3) are developed in § 5.4.

4.4.1 Heading 8.2.1 - Customer satisfaction

CONTRACTOR must, in this respect, comply with the provisions of International Standard [ISO 10002](#). The "customer complaints handling" process forms part of the overall Quality Management system process.

CONTRACTOR must put in place a customer complaints handling process for the CONTRACT, comprising several sections: planning, design, operation, updating and improvements.

This process must be designed to fulfill a number of objectives:

- improving customer satisfaction by creating a customer-focused environment that is open to customer feedback (including complaints)
- a commitment to resolve complaints while strengthening the ability of CONTRACTOR to improve its products and its customer service
- a commitment from the management of CONTRACTOR through the adequate acquisition and deployment of resources, including employee training
- recognition and consideration of the needs and expectations of the complaining party
- provision of an open, effective and easy-to-use complaints handling system for use by complaining parties
- analysis and assessment of complaints in order to improve product quality and customer service
- complaints handling process audits
- reviews of the effectiveness of the complaints handling process.

The process must be implemented, maintained and revised, where necessary, by CONTRACTOR throughout the period of the WORK, and at least once per year. CONTRACTOR must organize regular "customer complaints handling" meetings with COMPANY.

Furthermore, CONTRACTOR must measure the satisfaction of COMPANY at the closure of contractual activities, preferably in a debriefing meeting at the convenience of COMPANY where COMPANY REPRESENTATIVE may suggest improvements to CONTRACTOR perennial organisation.

4.4.2 Heading 8.2.2 - Internal audit

Internal audits must follow the provisions of International Standard [ISO 19011](#) as guidelines.

The "internal audit" documented procedure shall include the qualification criteria for auditors.

As a supplement to the requirements on audit process, a schedule of internal audits pertaining to the WORK and a list of qualified auditors must be produced and maintained.



CONTRACTOR must provide COMPANY with copy of internal audit reports, carried out on the WORK.

5. Application of ISO 9001 to project construction Contract

5.1 Requirements for the Quality Plan

The remaining sections of [ISO 9001](#) shall be used as standard requirements for the CONTRACT Quality Plan, interpreted (*in italics*) and/or supplemented as follows.

CONTRACTOR Quality Plan must be a practical document used as a common reference by all those involved into the CONTRACT; therefore its style shall be simple, direct and adapted. It shall contain or make reference to a general description of the Project including key data that must be known by all the personnel involved, like chief milestones.

The Quality Plan must be part of CONTRACTOR DOCUMENTS.

The documented procedures or description mentioned below must be annexed to the Quality Plan; a comprehensive list must summarise the objective and the field of application of each applicable document properly entitled and referenced.

5.2 ISO 9001 "Section 6 – Resources management"

5.2.1 Sub-section 6.2 – Human resources

(P) CONTRACTOR must describe how the personnel is assigned to the WORK with due consideration given to:

- Internal allocation process
- Recruitment process in urgent situation
- Hiring of personnel
- Contracting of independent specialised services.

(P) The contractually required organisation charts shall indicate the Quality Management and Quality Surveillance and Inspection positions for each phase of the WORK with the names of the corresponding assignees documented with their relevant professional resumes. The designation of the Project Quality Manager, who shall be CONTRACTOR representative towards COMPANY for all matters relating to Quality in the frame of the CONTRACT.

5.2.2 Sub-section 6.3 – Infrastructure

(P) *The different workspaces that are planned to be used for each phase of the WORK shall be clearly identified, especially if outside the usual CONTRACTOR facilities.*

The allocation of material resources and supporting services at workspaces shall be depicted.

5.3 ISO 9001 "Section 7 – Product realisation"

In this section, the term “product” designates the set of deliverables resulting from the project construction activities or processes forming the WORK.

5.3.1 Sub-section 7.1 – “Planning of product realisation”

*This section contains the **core elements for establishing the CONTRACTOR Quality Plan** that shall contain as a minimum the following elements considered as necessary for fulfilling the contractual requirements:*

- **(P)** *CONTRACTOR measurable Time, Cost and Quality objectives for the WORK, signed both by CONTRACTOR project Manager and CONTRACTOR executive management.*
- **(P)** *The specific organisation implemented for each relevant phase of the WORK with relevant responsibilities and authorities and management interfaces with permanent CONTRACTOR organisation, including perennial (“Corporate”) Quality team.*
- **(P)** *The CONTRACTOR'S organisation in the domain of Risk Management and specific terms in the frame of the CONTRACT, drawn up to manage these.*
- *Specific documented procedures and work instructions, as listed below in sub-sections 7.2 to 7.5 shall be controlled documents, with a controlled distribution within CONTRACTOR organisation and to relevant SUB-CONTRACTORS and VENDORS, COMPANY, Certifying Authority and/or Marine Warranty Surveyor, as appropriate. Electronic version shall be distributed in a format preventing uncontrolled modification.*
- *Provisions for review, verification, (qualification in case of innovative product), validation, monitoring, inspection and test activities specific to CONTRACTOR processes and deliverables (Quality Surveillance and Inspection activities), as detailed below in section 8.*
- **(P)** *Specific additional provisions for quality records, as a supplement to the provisions of the perennial control of records (see above § 4.2 for further details and refer to **GS EP PJC 503**).*

5.3.2 Sub-section 7.2 – Customer related processes

For this sub-section, the term “Customer” designates COMPANY.

(P) CONTRACTOR must provide a documented procedure describing the review process of CONTRACT requirements related to product.

This procedure shall cover the control of changes either at COMPANY request or subsequent to CONTRACTOR proposal.

The communication lines with COMPANY on Quality related subjects during the whole CONTRACT execution must be described.

5.3.3 Sub-section 7.3 – Design and development

For this sub-section, the terms “design and development” designate conceptual design, basic and detailed engineering activities that are parts of the WORK.

CONTRACTOR shall provide a documented procedure describing internal reviews, verification process and validation steps, indicating those calling for the presence of a COMPANY representative and the control of conceptual design and engineering changes.

Design and developments documents must be verified by competent personnel who have not been involved in the production of those documents.



5.3.4 Sub-section 7.4 – Purchasing

For this sub-section, the term “purchasing” designates all sub-contracting, supplying and procurement activities that are part of the WORK.

The term “customer” designates COMPANY, the term “organisation” designates CONTRACTOR and the term “SUPPLIER” designates SUBCONTRACTORS and VENDORS of any level in the supply chain.

(P) CONTRACTOR must provide a documented procedure describing the process of assessing its SUPPLIERS and shall provide the corresponding list of usual SUPPLIERS intended to be involved in the performance of the WORK in addition to the COMPANY recommended SUBCONTRACTORS and VENDORS.

SUPPLIERS ranking system, if any, shall be clearly defined and results visible in the SUPPLIERS list.

(P) CONTRACTOR must provide a documented procedure describing the purchasing process and the selection criteria used, including those related to SUPPLIER Quality Management system. The criticality rating of the sub-contracted or procured part of the WORK shall meet the requirements of **GS EP PJC 502**.

The purchasing documentation provided to SUPPLIERS shall include the present requirements for Quality Management for cascading transmission throughout the entire supply chain.

CONTRACTOR must provide a documented procedure describing the Quality Surveillance of SUBCONTRACTORS and VENDORS by CONTRACTOR (witnessing or direct inspection and/or Quality audit) and the verification of purchased material, equipment or services. This procedure must also explicit the selection of the level of surveillance exercised by the CONTRACTOR, in the form of the criticality of the object or service purchased as indicated in **GS EP PJC 502**.

(P) Contracting of Inspection and QS services must be clearly identified and potential SUB-CONTRACTORS nominated; the Quality Management system of such SUB-CONTRACTORS must be recognised by a certificate of compliance with **ISO 9001**, obtained from an accredited independent body (Third Party).

5.3.5 Sub-section 7.5 – Production and service provision

For this sub-section, the term “production and service provision” designates the manufacturing, construction, installation, hook-up and commissioning processes which are part of the WORK, with the exception of “design and development” and “purchasing”, subjects of sub-section 7.3 and 7.4 respectively.

The way of controlling those processes and the relevant interfaces between contributing activities shall be documented.

Identification and traceability of materials incorporated into PERMANENT WORKS and identification of functional systems shall be described in a documented procedure.

CONTRACTOR must identify those processes where the resulting output cannot be controlled by subsequent measurements (like welding or marine operation) and shall describe the specific arrangements to be implemented in a documented procedure, focussing on the qualification of personnel, process and equipment.

The raw material and equipment provided to CONTRACTOR by COMPANY must be controlled, stored and preserved as any critical purchased item.

5.3.6 Sub-section 7.6 – Control of monitoring and measuring device

The monitoring and measuring devices used in the production processes and Quality Control activities must be identified and listed; the controls on those devices shall be documented.

5.4 ISO 9001 "Section 8 – Measurement, analysis and improvement"

5.4.1 Sub-section 8.2 – Monitoring and measurement

The Quality Surveillance activities shall be detailed in sequence, forming one (or several) Quality Control Plan(s) as necessary for meeting contractual requirements for deliverables for the various "design and development", "purchasing" and "production and service provision" processes, discussed in the previous § of the present Specification.

In the case of multiple Quality Control Plans, the relationships between those plans must be depicted in a comprehensive structure.

The Quality Control Plan(s) must be presented in accordance with **GS EP PJC 503** - "Requirements for Quality Surveillance" with the aim of making visible COMPANY own Quality Surveillance points (2nd Party Quality Surveillance) and, if relevant, Certifying Authority Quality Surveillance points (3rd Party Quality Surveillance).

The Quality Control Plan(s) must incorporate key verification activities carried out by CONTRACTOR as elements of its own Quality surveillance upon SUBCONTRACTORS and VENDORS; the intensity of Quality surveillance upon SUBCONTRACTORS and VENDORS activities and on resulting purchased equipment, materiel or service shall meet the requirements of **GS EP PJC 502**.

In the case of an innovative product, a dedicated global qualification plan must be produced to COMPANY approval.

5.4.2 Sub-section 8.3 – Managing a non-conforming product

The ISO 9001 required documented procedure must clearly identify CONTRACTOR Quality Representative and COMPANY intervention steps in the process of controlling non-conforming product at any stage of the realisation processes:

- *Deviation request (or derogation) for departing from requirements before product realisation*
- *A proposal for corrective action should the product be non-conform,*
- *Where applicable, derogation request to accepting a non-conforming product.*

This documented procedure shall clarify the non-conforming criteria, especially for application in the Design and Engineering phases, and the record format ("derogation request" and "concession request" respectively).

The notion of non-conforming item must include the purchased material, equipment or services provided by CONTRACTOR SUPPLIERS.

All detected non-conforming products at any stage of the realisation processes (even if accepted after concession or brought back to conformity), must be recorded independently of the Quality Control record in specific files allowing immediate tracking of the treatment history, including the correction proposed and that implemented.



A global “NC” register compiling all non-conforming files through-out the CONTRACT must be kept up-dated by CONTRACTOR and handed over to COMPANY at the PROVISIONAL ACCEPTANCE.

6. Other Quality Management standards

As a replacement of the [ISO 9001](#) standard, CONTRACTORS who are specialised in the oil and gas business are encouraged to use and submit the [ISO TS29001](#) standard which supplements the [ISO 9001](#) standard in the specific industry context.

Furthermore, when the object of the CONTRACT requires a “project” type organisation for the CONTRACTOR, it is recommended to implement the [ISO 10006](#) standard for the CONTRACT specific Quality Management system.

When drafting the content and requirements of the CONTRACT Quality Plan, CONTRACTOR must also refer to the [ISO 10005](#) standard – guidelines for quality plans.