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Project Quality Plan Guidelines

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34

Project Quality Plan Guidelines

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Table of Contents

1.0	PURPOSE		
2.0	SCOPE		
3.0	DEFINIT	IONS	5
4.0		NCES	
_			
5.0	RESPO	NSIBILITIES	6
5.1	Contractor Quality Department		
5.2		ıality Department	
5.3	Entity Project Director		
5.4	•	Manager	
5.5	Quality E	Quality Engineer	
6.0	PROCES	SS	7
6.1		ion	
6.2		and Acceptance	
6.3	Revision		7
7.0	CONTEN	NT OF THE PROJECT QUALITY PLAN	7
7.1	Scope		7
7.2	Normativ	re References	7
7.3	Terms a	nd Definitions	8
7.4	Context	of the organization	8
	7.4.1	Understanding the organization and its context	8
	7.4.2	Understanding the needs and expectations of interested parties	8
	7.4.3	Determining the scope of the quality management system	8
7.5	Leadersh	nips	
	7.5.1	Leadership and commitment	
	7.5.2	Policy	
	7.5.3	Organizational roles, responsibilities and authorities	
7.6			
	7.6.1	Actions to address risks and opportunities	
	7.6.2	Quality objectives and planning to achieve them	
7.7		D	
	7.7.1	Resources	
	7.7.2	Competence	
	7.7.3	Awareness	
	7.7.4	Communication	
7.0	7.7.5		
7.8	Operatio 7.8.1	n Operational planning and control	
	7.8.2	Requirements for products and services	
	7.8.3	Design and development of products and services	
	7.8.4	Control of externally provided processes, products and services	
	7.8.5	Production and service provision	
	7.8.6	Release of products and services	
	7.8.7	Control of nonconforming outputs	
7.9		ance Evaluation	
	7.9.1	Monitoring, measurement, analysis and evaluation	
	7.9.2	Internal audit	
	7.9.3	Management review	
7.10		ment	
	7.10.1	General	
	7.10.2	Nonconformity and corrective action	
	7.10.3	Continual improvement	



1.0 PURPOSE

The purpose of this procedure is to provides guidelines to help Contractors in the preparation, review, approval and revision of Project Quality Plan (PQP) covering as applicable, design, procurement, construction and testing & commissioning activities in projects related to governmental entities across the kingdom of Saudi Arabia.

A Project Quality Plan may also be used where a documented Quality Management System does not exist, in which case detailed procedures may need to be developed to support the Project Quality Plan.

2.0 SCOPE

The scope of this procedure is to be followed and implemented by contractors who are having infrastructure projects with governmental entities within the territory of the Kingdom of Saudi Arabia.

It is intended for use as guidance to a Contractor organization meeting the requirements of ISO 9001 requirements and contractual obligations.

This procedure SHALL be a part of the contract terms and conditions signed between the governmental entities and construction contractors.

3.0 DEFINITIONS

Definitions	Description
Audit	Quality Audit - A comprehensive review of work execution in a pre-defined area of a project to ensure that quality standards and contractual obligations are being maintained.
Deficiency	A general term covering any defect, discrepancy, omission or lack of conformance to requirements.
ECMS	Enterprise Content Management System
Non-conformance	A defect, deficiency or other condition averse to quality. A structure, system, component or product that does not conform to specified requirements. Non-conformances identified during quality assurance audits are recorded as Non-conformance Reports.
Non-Conformance Report (NCR)	Report identifying nonconformities. Can include the approval of remedial works, designer's opinion, inspection of repairs, etc
Observation	Comments, concerns, suggestions and/or recommendations for the benefit of the auditee; such as, opportunities for improvement, including situations with the potential to become non-conformances.
QE	Quality Engineer
QM	Quality Manager
Quality Assurance (QA)	Part of quality management focused on fulfilling quality requirements. Quality assurance is a way of preventing errors and avoiding problems when delivering solutions or services to customers.
Project Quality Plan	Document specifying which procedures and associated resources shall be applied by whom and when to a specific project, product, process or contract
QMS	Quality Management System
Remedial Action	Steps taken to correct a specific instance of deficiency, non-conformance, error or violation of requirements, typically as identified in a NCR.
Hold Point	Inspection or Test may not proceed without attendance of the governmental quality representative
Surveillance	The act of monitoring or observing to verify whether items or activities conform to specified requirements.
Witness Point	Inspection or Test may proceed without attendance of the governmental quality representative



4.0 REFERENCES

- EPM-EQ0-PR-000002 Project Quality Execution Procedure
- EPM-EQ0-PR-000003 Non Conformance and Corrective Action Procedure
- EPM-KCQ-PR-000006 Project Construction Control of Non-Conforming Items Procedure
- EPM-KCQ-PR-000005 Project Construction Quality Management System Procedure

5.0 RESPONSIBILITIES

In general, contractor has overall responsibility for the development and implementation of the Project Quality Plan in accordance with EXPRO Project Quality Plan Document, contractual requirements and project Specification requirements.

On the other hand, entity will review and approve the contractor's Project Quality Plan and Inspection and Test Plans in accordance with contractual requirements and will monitor and asses the implementation of the plan. Below are detailed roles and responsibilities in the development of the Project Quality Plan:

5.1 Contractor Quality Department

- Developing the Project Quality Plan (PQP).
- Ensuring all the governmental entity requirements are met.

5.2 Entity Quality Department

- Reviewing the Project Quality Plan (PQP).
- Conducting the audit and surveillance, to ensure the contractor is following entity requirements.

5.3 Entity Project Director

- The Project Director is responsible for the implementation of the Project Quality Plan (PQP)
- The Project Director has overall authority in the determination of all matters affecting the implementation and operation of the project

5.4 Quality Manager

- Reviewing and authorizing the Project Quality Plan (PQP).
- Assigning quality responsibilities to all project personnel.
- Ensuring all project personnel are suitably trained, and possess the necessary skills to undertake their designated quality responsibilities.
- Continually monitoring of quality performance to ensure compatibility and continued effectiveness with the Governmental Entity's policy and objectives.
- Communicating quality performance to the Project Director.
- Providing sufficient funds, materials and equipment to ensure the PQP objectives are achievable.
- Participating in the review of the quality system and other relevant quality meetings and programs.

5.5 Quality Engineer

- Ensuring the Project Quality Plan is correctly implemented to meet the requirements of the project.
- Allocating project staff to perform inspections duties.
- Ensuring non-conformance is reported.
- Ensuring a non-conformance is dispositioned within the required time-frame and that
- Disposition/remedial solutions are effectively implemented.
- Reviewing inspection reports are ensuring any actions required are initiated.
- Ensuring contractors fulfil their quality system obligations.
- Attending meetings called to discuss quality issues.
- Identifying and documenting quality system problems.
- Assisting with the updating of the Project Quality Plan.
- Reviewing and approving Inspection and Test Plans, Project Forms/Checklists.
- Liaising with the quality assurance representative from the contractors.
- Assisting in the auditing/assessment of suppliers/contractors.



6.0 PROCESS

6.1 Preparation

- The PQP shall be prepared by the contractor quality department as per EXPRO Project Quality Plan guidelines.
- It is recommended to make the PQP consistent with ISO 9001:2015 requirements.
- the processes applicable to the contract shall be defined and documented. These should originate from each discipline or department within the Contractor's organization and combined to form the Quality Management System with a scope to match the scope of the project.
- When the Contractor intends to subcontract portion(s) of the work, the sub-contractor(s)' Project
 Quality Plan(s) should be made part of the contractor's Project Quality Plan as the project evolves.
 Therefore, it is often necessary for the Contractor to develop additional procedure(s) describing the
 Contractor's control over the Sub-Contractor.
- The PQP should indicate, either directly or by reference to appropriate documented procedures or other documents, how the required activities will be carried out.
- As a minimum cover sheet of the PQP, it shall state the entity name and logo, Contractor Name and Logo, Document Title, Project Title, and the Contract Number.
- List of the "Project Quality Plan" controlled copy holders shall be identified.

6.2 Review and Acceptance

- The PQP should be reviewed for adequacy and formally accepted by contractor authorized function, i.e., Quality Manager, Project Director, etc.
- Upon approval of the PQP by Contractor management, it shall be forwarded to entity quality department for review and approval.
- The PQP shall be submitted no later than 30 calendar days after the effective date of the Contract. Where the project is conducted in phases, the Contractor shall submit the PQP for each project phase no later than 30 days prior to the start of that phase as agreed on the overall Quality Procedures of the project during the project proposal.
- Procedures referenced in the PQP and work instructions are an integral part of the plan and must be submitted to the entity with the PQP.

6.3 Revision

- The Contractor should revise the PQP as appropriate to reflect changes on the project or quality practices. (Re-issue of organization charts should be stand-alone documents to minimize need for updates of the PQP.)
- All changes should be reviewed for impact and adequacy by the same authorized function which conducted the review of the original PQP.
- Proposed changes to the PQP must be submitted to the entity for review and acceptance prior to implementation.

7.0 CONTENT OF THE PROJECT QUALITY PLAN

7.1 Scope

Example: The intent of this Project Quality Plan is to construct (Identify the project name) in accordance with requirements in contract number: ######## and all applicable regulatory requirements. (Clearly to define the product that this Project Quality Plan is to be applied on and this should indicate the phase if it is Procurement, engineering, Construction and testing and commissioning)

7.2 Normative References

Contractor to list all the applicable references that are applicable in the subject project either if it is project-base reference, regulatory reference or international reference.

Examples:

Contract Number Saudi Building Code - General Saudi Construction Code Saudi Electrical Code ######## (SBC 201) (SBC 301-306) (SBC 401)

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Saudi Mechanical Code (SBC 501)
Saudi Energy Code (SBC 601-602)
Saudi Sanitary Codes (SBC 701-702)
Saudi Fire Code (SBC 801)
Saudi Green Building Code (SBC 1001)

7.3 Terms and Definitions

Example: For the purpose of this Project Quality Plan the following terms and definitions in addition to terms and definitions given in ISO 9000:2015, Contract, and Saudi Building Code shall apply and have the meaning indicated in this section.

7.4 Context of the organization

7.4.1 <u>Understanding the organization and its context</u>

Example: The contractor has been awarded contract Number: ##### by entity (name) to execute the project (brief about the project requirements)

The below organization chart is developed by the contractor to handle the project (Organization hierarchy to be added and counterpart from the entity for each position)

7.4.2 Understanding the needs and expectations of interested parties

Example: The contractor has determined the below internal and external issues and organizations that can affect the delivery of the project on the required timeline. (List of all issues and organizations that are potential to create a delay or compromise the performance of the project)

In order to avoid any unnecessarily negative impact to the project, contractor has agreed with the entity to utilize the below approach to overcome any encountered issue (List the steps or personnel who are in charge to resolve the issues).

The list of issues and organizations shall be developed frequently upon mutual agreement with the entity.

7.4.3 <u>Determining the scope of the quality management system</u>

Example: This Project Quality Plan (PQP) specifies the Quality Management System used to direct project (Name) with regards to quality. The PQP describes the structure, procedures and processes along with associated roles and responsibilities of both the entity and the contractor that are required to implement an effective Quality Management System for the project.

7.5 Leaderships

7.5.1 Leadership and commitment

7.5.1.1 General

Example: The leadership of the contractor is committed to the development and improvement of the quality management system by:

- Communicating the importance of meeting entity, regulatory, and legal requirements by (identify how this information is communicated).
- Establishment of a quality policy and objectives (identify the quality policy and quality objectives for this project.)
- Conducting management reviews in accordance with Paragraph [reference paragraph number] of this Project Quality Plan.
- Ensuring the availability of necessary resources in accordance with Section [reference Section number] of this Project Quality plan.

7.5.1.2 Customer Focus

Example: Contractor ensures entity satisfaction by:

- Reviewing contract requirements, Quality Management System, and procedures for compatibility and submit modifications as appropriate.
- Allocating trained and qualified staff resources in accordance with entity requirements to perform project tasks.
- Schedule and reporting progress in sufficient detail to control project cost.
- Training personnel as required.

3VL 7VF

Project Quality Plan Guidelines

- Performing management reviews and internal quality audits as specified in paragraph [reference paragraph number] of the project quality plan.
- Establish a program for problem identification and resolution and problem prevention.
- Maintaining data control systems and records of project activities.

(List other activities performed by contractor as appropriate to ensure customer satisfaction.)

7.5.2 Policy

The contractor has a policy regarding the quality of the goods and services it offers to the governmental entities. The policy shall be approved by the contractor's project director and communicated and understood by the contractor's personnel and interested parties. The policy shall be appropriate to the purpose of the awarded job. it includes a commitment in meeting the entity requirements and in improving the delivery of the contractor's services. it is reviewed for relevancy and appropriateness of objectives and communicated to those performing the work on frequent basis.

The contractor shall also establish quality objectives that are reasonable to be met during the lifecycle of the project. The quality objectives shall be reviewed and approved by the governmental entities representatives.

7.5.3 Organizational roles, responsibilities and authorities

Example: The (contractor) is organized in the following manner (include a general organization chart for the company and a specific project organization chart). (Name) is responsible for maintaining the organization charts. The (title) shall have organizational authority at least to that of the line managers responsible for the execution of the work. All quality personnel shall functionally report to the person in charge of assuring and controlling the quality of the project. While assigned to the project, quality personnel shall be fully dedicated to the work related to quality field and not assigned to handle tasks that could lead to a conflict of interest situation.

The (contractor) has assigned responsibilities and authority in the following manner: (Use functional titles instead of names to reduce the number of PQP revisions and Focus on description of activities)

- Project Director Responsibilities:
- Project Manager Responsibilities:
- Project Quality Manager Responsibilities:
- Project Engineer Responsibilities:

7.6 Planning

7.6.1 Actions to address risks and opportunities.

Example: The (contractor) has a program to identify potential risk, which anticipates the potential causes of nonconformities and works to reduce or mitigate these potential causes.

A risk register for potential risks shall be established and is included in this Project Quality Plan. The procedure identifies potential risks, identified causes, their probability to happen, consequences, determination of mitigation plan needed.

7.6.2 Quality objectives and planning to achieve them

Example: Top management of (contractor) has identified the following quality objectives for the project. The objectives are measurable, consistent with policy, relevant to the successful completion of the project, and attainment of objectives is considered as part of our effort for improvement. (Identify the quality objectives. Include such things as meeting contract requirements, resource allocation, cost control, schedule control, other relevant quality objective.)

- NCR per Month
- Closure of NCR Duration.
- Acceptance of RFI.
- Etc.



7.7 Support

7.7.1 Resources

7.7.1.1 General

Example: Contractor is responsible to assess organizational and project needs including oversight functions and develop resource requirements in order to assure resources necessary to implement and improve the processes of the Quality Management System (QMS) and address entity satisfaction issues are provided in a timely manner.

7.7.1.2 People

Example The contractor is determined to provide the persons necessary for the effective implementation of its QMS and for the operation and control of its processes. The contractor is obligated to follow the identified competency as provided in section 7.7.2 in hiring their workforce. Contractor is also obligated to remove incompetent personnel from the project site and replace them with acceptable performance employees.

7.7.1.3 Infrastructure

Example: Contractor provides a work environment suitable for it to achieve its business objective and satisfy project requirements. (Address in general terms workplace and associated facilities, equipment, hardware, software, and support administrative services. Consider work space, work environment, accessibility to computers, appropriate software, and other tools necessary to assure acceptable Work).

7.7.1.4 Environment for the operation of processes

Example: Contractor is obligated to provide a healthy environment that is necessary for the operation of its processes and to achieve conformity of entity requirements. Contractor is obligated to ensure full adherence to the labor law of ministry of human resources and social development in terms of working hours and different session situations.

7.7.1.5 Monitoring and measuring resources

Example: contractor has determined the following resources needed to ensure valid and reliable results when monitoring or measuring is used as per section 7.9.1 to verify the conformity of products and services to entity requirements (list resources)

7.7.2 **Competence**

Example:

- The contractor has developed position descriptions for those personnel performing activities affecting quality that identify competency requirements. (List below the job titles and the minimum required competency).
- The contract shall identify training needs and assure training is performed. Personnel lacking required competencies shall receive training such as formal, informal, or on-the-job. Contractor will provide training as deemed appropriate to satisfy competency needs or utilize external training sources. (Include in this paragraph the type of training performed for personnel on this project.)
- The contractor shall maintain records of education, training skills, and experience for personnel
 effecting quality. (Department) is responsible to ensure appropriate record including records of
 training activities and subject matter of the training are maintained.

7.7.3 Awareness

The contractor employees and sub-contractors shall be made aware of the project quality policy, requirements and how their work activities contribute to the achievement of the quality objectives and the implications of not conforming with the quality requirements. (Describe how this is achieved. Consider awareness presentations to personnel and subcontractors, project kickoff meetings, project position descriptions, project organization charts.



7.7.4 Communication

Example:

- The (Quality Manager/Project Director) ensures the processes of the Quality Management System (QMS) and their effectiveness are communicated internally throughout the organization by (Identify methods of communication, for example, distribution of work instruction, project requirements, etc.)
- The (Project Director) shall identify with the governmental entities the required communication tools (Example: emails, letters, system, etc.) and identify the people who can communicate and what to communicate and when.

7.7.5 Documented information

Example: The (contractor) has established the following documented information for its quality management system:

- Quality policy and quality objectives
- This Project Quality Plan
- Planning, operation, and process control documentation such as:
 - Inspection & Test Plans (ITP)
 - Inspection and test reports
 - Internal/external audit reports
 - Non-Conformance Reports and Corrective action.
 - The following records: (list as appropriate)

The contractor decided to use the system(Name) to create and update the documented information. The contractor shall decide on the storage and preservation, storage and preservation.

7.8 Operation

7.8.1 Operational planning and control

Example: The (Contractor) shall plan and document the project execution process. The quality objectives for the (design, procurement, construction activities, etc.) are identified in (consider the contract, internal quality objectives, etc.).

The (design, procurement, construction or testing and commissioning) processes, documentation, resources, and facilities shall be established for this project. (Describe compliance with this requirement. Consider reference to other section of this Project Quality plan, other documentation). Verification and validation are incorporated into the planning process as follows: (describe how verification and validation activities are incorporated. Consider design review, acceptance testing, planned inspections, approval, etc.) Acceptance criteria for the work will be developed where appropriate. Records showing to conformity of process and resulting Work shall be maintained by (title). Records include:

- Inspection reports and certificates
- Disposition reports
- Internal quality audit results and closures
- Internal quality audit results and closures

7.8.2 Requirements for products and services

Example: The contractor will consider a proper communication channel with the entity, the communication with entity shall include, but not limited to, provide required information related to the specification and standards of the projects, handling the entity enquires appropriately, inform the entity of any change order that is potential to happen in advance, proper handling the entity properties, proper closing of the entity complains and feedback that are within the contract.

The (Contractor) will review the (contract agreement) to determine customer requirements. (Title) will evaluate these requirements and determine any additional requirements including regulatory and legal ones, which may not have been identified by the entity, and need to be implemented to support the delivery of the Work.

The contractor shall handle any change order in the project and amend it within the contract with prior approval from the entity, and inform all individuals relevant to that change on timely manner.



7.8.3 Design and development of products and services

7.8.3.1 General

Note: This section is only applicable to contractors with design responsibilities.

7.8.3.2 Design and Developing Planning

Example: The (Contractor) shall plan and control the design and address staging, review, verification, and validation activities; personnel responsibilities and authorities, interfaces between discipline and entities; and any update in this plan during the project. (Describe your methods of executing this planning process. reference to the project organizational chart and description of personnel duties and responsibilities, coordination with subcontractors, inspection, testing labs, interdisciplinary review, coordination of construction crafts, etc.).

7.8.3.3 <u>Design and development inputs</u>

Example: Contractor shall be responsible to develop (how) and transmit (how) written design criteria to the (design staff). (This can be done by supplying the design staff with a list of design criteria for example, codes, standards, specifications, drawings, technical information, etc.)

Contractor is responsible to ensure the design schedule is developed, maintained, evaluated for deviations, and adjusted as necessary in order to ensure the task milestones in the contract are met.

Design calculations shall be developed to written criteria. Assumptions shall be delineated. Those that require confirmation before finalization of the calculation shall be identified.

Contractor is responsible to evaluate all design inputs for adequacy and assure any unclear or conflicting requirements are resolved.

7.8.3.4 Design and development controls

Example: (Contractor) is responsible to assure the output meets the design inputs. (Describe the methods of performing this activity such as checking function, sealing of design drawings, etc.)

A constructability review (shall or shall not) be performed as part of this contract. (If performed, describe the methods to be employed or reference a procedure, and include the procedure in the PQP).

Records of verification activities shall be maintained by Contractor.

The (contractor) has developed a system to assess if the design was constructible and met entity requirements (if computer simulation is used, provide details).

7.8.3.5 Design and development Output

Example: Outputs of the design process are documented in a manner that enables verification against design inputs.

Outputs are those deliverables required by the entity in accordance with the contract and include but are not limited to studies, reports, analysis, scope development, designs, and specifications.

Contractor is responsible to ensure the deliverable addresses the input requirements, is comprehensive in addressing the entity's intended use, is constructible, and that the deliverables are approved as required by the contract.

7.8.3.6 Design and development changes

Example: (contractor) is responsible to provide the interface with entity Representative during execution of the contract. Supplements or addenda developed during this period shall receive the same level of review as the original document and will be reviewed by (contractor) prior to issue.

Revisions to project design documents shall be controlled. Methods (describe) have been established to ensure revisions are reviewed to the same level as the original document for the area of change, and previous versions of the documents undergoing change have been appropriately controlled (how) to prevent inadvertent use. Records of these activities are maintained by (contractor)



7.8.4 Control of externally provided processes, products and services

Example: Where subcontractors and suppliers are engaged to work on this project, their capability to perform the assigned scope of work is evaluated by (contractor) in accordance with entity requirements. Physical surveys, when needed shall be performed by a qualified auditor and supported by a technical specialist for the equipment under consideration, unless otherwise exempted by the entity's project management team. Evidence of qualification of subcontractors and suppliers shall be provided to entity upon request.

Records of subcontractor and supplier performance shall be maintained by (contractor). Subcontractors and suppliers with a record of poor performance shall be excluded from future consideration. Evaluation criteria are defined.

Contractor, in some cases, shall follow contractual obligations in case of forbidding utilization of subcontractors or entity's directive to purchase certain materials or services from decided companies.

Purchase orders with subcontractors and suppliers will define service or product requirements, Quality management system requirements, applicable procedures, and processes, equipment, and personnel qualifications in sufficient detail to ensure the work performed meets the purchase order requirements. All requisitions shall be reviewed by contractor specialists for technical and quality requirements prior to submitting to entity for review. Contractor shall describe what and how this is done in a procedure and attach to the Project Quality Plan.

Work performed by the suppliers and sub-suppliers shall be reviewed for conformance to contract requirement and accepted by (contractor) and documented by (describe how work of subcontractors is accepted).

(Contractor) is responsible to ensure that the equipment and materials ordered for this project under this contract meet contract requirements and are delivered on time.

Certain Equipment/material (identified by entity and listed below) and delivered for use on the project shall be inspected by (contractor) at the supplier/sub-supplier facilities in accordance purchase order requirements. Rejected material shall not be allowed to ship. Non-conforming material shall be returned to originator or marked in a manner that shall prevent its use.

7.8.5 Production and service provision

7.8.5.1 Control of Production and Service Provision

Example: The (contractor) has established the following controls applicable to construction and construction management activities. These activities are reflected in the detailed Inspection and Test Plans and form part of this Project Quality Plan

- Activities are planned.
- · Activities are scheduled.
- Acceptance criteria are defined.
- Adequate resources (tools, equipment, trained personnel) are available to perform the work.
- The work environment is safe and conforms to health and safety requirements in the contract.
- Procedures, work instructions, and/or installation instructions are available to the workforce.
- Codes, standards and other references, including portions of the contract are available to the workforce.
- Standards of workmanship are implemented.
- Where required, licensed or certified personnel are assigned to the project to perform activities requiring such license or certification.
- A program to monitor the effectiveness of these process controls is in place and implemented.
- Criteria for release, approval, and acceptance are established.

(Identify the controls implemented on the contract and identify the title(s) of those responsible to see that commitments made in the plan are implemented and documented

7.8.5.2 <u>Identification and traceability</u>

Example: (Contractor) shall develop and maintain a system to identify, design, or report documents so they remain traceable to their originator and contain customer identification, as may be required by the contract. (Describe the system to be employed on the project.)

34

Project Quality Plan Guidelines

(Contractor) shall develop and maintain a system to identify construction materials and equipment to the extent required by the contract or applicable codes and standards. Nonconforming material shall be identified or removed to prevent inadvertent use.

For this contract, the following shall be included:

- (Describe the system to be employed to identify equipment and material on the project. Consider, tagging, marking, color coding as appropriate.)
- To the extent traceable in a contract requirement, (contractor) shall develop and maintain a system
 for unique identification of the work or batches. (Title) is responsible for implementing the system
 and retaining appropriate records. Nonconforming material shall be identified or removed to prevent
 inadvertent use.
- For this contract, the following shall be included: (Describe the system to be employed on the project.)

7.8.5.3 Property belonging to entity or external providers

Example: The (contractor) shall develop and maintain a system to receive, log, and maintain entity or external providers – supplied documents, data, material, or equipment. (Title) is responsible for this function and shall advise the entity Representative of any items that are unsuitable for use, lost, or damaged.

All entity or external providers supplied material shall be inspected against the shipping documents for accuracy and damage by (title) and stored in such a way to prevent damage or deterioration.

(Title) is responsible for the final disposition of supplied items at the conclusion of the project in accordance with contract requirements.

Note: (If no data, equipment, or materials are provided by entity or external provider, this section does not apply and a statement to that effect should be include in the Project Quality Plan

7.8.5.4 Preservation

Example: During the development of the plans and specifications, the (contractor) shall evaluate construction material and equipment and include in the plans and specifications any requirements for handling, storage, packaging, preservation, and delivery necessary to ensure requirements are met. (Title) is responsible for this activity. Equipment suppliers shall be requested to provide storage and preservation procedures for purchased equipment. (Describe specific methodology for this project.)

(Title) shall review the construction contract and ascertain through the inspection process that requirements for handling, storage, packaging, preservation, and delivery necessary to ensure requirements are being implemented by the contractor, subcontractor, and suppliers. Nonconforming conditions shall be documented.

(Describe specific methodology for this project.)

(Contractor) shall establish, maintain and implement a program for handling, storage, and preservation of equipment and material for this project.

(Describe specific methodology for: handling, storage, and preservation.)

7.8.5.5 Post-delivery activities

(Contractor) shall meet requirements for post-delivery activities associated with the products and services by considering the following:

- statutory and regulatory requirements
- the potential undesired consequences associated with its products and services;
- the nature, use and intended lifetime of its products and services;
- · customer requirements;
- customer feedback.
- (List other activities performed by contractor as appropriate to ensure post-delivery activities)

NOTE: Post-delivery activities can include actions under warranty provisions, contractual obligations such as maintenance services, and supplementary services such as recycling or final disposal.

7.8.5.6 Control of changes

Contractor shall review and control changes for production or service provision, to the extent necessary to ensure continuing conformity with requirements. Contractor shall inform entity management in-advance of any changes that are potential to occur. Contractor shall develop as-built drawing as per contract

3VC

Project Quality Plan Guidelines

requirements. As-built drawing shall be independently reviewed by entity to ensure field-marked prints and other sources of as-built information have been correctly translated onto the original document. The contractor shall retain documented information describing the results of the review of changes, the person(s) authorizing the change, and any necessary actions arising from the review.

7.8.6 Release of products and services

The contractor shall implement planned arrangements, at each stage gate, to verify that the attributed stage gate deliverables and service requirements have been met. The movement from a stage gate to the next one shall be upon mutual agreement between the contractor and entity. The contractor shall not move to the next stage without prior approval from the entity project management team. The contractor shall establish a systemized methodology to identify, track and monitor the status of the deliverables at each stage gate and share it with the entity on agree frequent bases.

7.8.7 Control of nonconforming outputs

Example: (Contractor) has a program to detect and correct nonconforming conditions and relating to work output of its own staff or others under contract to the (contractor).

Any nonconformance discovered in the project shall be handled and processed by (title).

(Describe the NCR program for this project in a documented procedure. Address elimination of the nonconformity, requirements for product release or acceptance under concession, actions to avoid recurrence, re-verification after correction, and program to mitigate the effects of installing or using defective product. Where sub-contractors use their own NCR procedure, specify how this procedure fits into the prime contractors' NCR program).

Example: In design, a nonconformance in work output occurs when errors are discovered in output documents issued as final documents. Final documents are signed and dated and ready to be issued for construction or procurement.

During procurement and construction, any conditions that do not meet contract requirements and that cannot be corrected by the end of the workday shall rejected and documented. (Title) shall track the condition (how) until restoration to the designed conditions.

Example: (Title) shall track the condition (how) until restoration to the designed conditions or until the "asinstalled" condition is accepted by governmental entities.

Example: All procurement and construction nonconformities shall be documented in written form by (title) and tracked to closure. Documentation shall be a nonconformance report.

Governmental entities shall be addressed of all (contractor and subcontractor) nonconformance reports within 48 hours of issuance and prior to closing of the NCR.

Corrective action shall be implemented as described in paragraph 7.10.2

7.9 Performance Evaluation

7.9.1 Monitoring, measurement, analysis and evaluation

Example: The project execution processes described in Section 7.8 of this Project Quality plan necessary to achieve entity requirements are measured and monitored as follows: (Describe the measuring and monitoring methods to assure your processes are acceptable. Consider internal audit results, nonconformance reports, etc.)

These methods shall confirm the continuing ability of each process to satisfy its intended purpose. When planned results are not achieved, corrective actions shall be taken to assure conformity.

Example: Contractor shall establish, maintain, and implement a program to control procurement, inspection and acceptance of equipment, material, and construction activities performed by contractor's own work forces or its subcontractors. Records shall be maintained.

Example: (Title) shall ensure that critical incoming equipment and materials, that are identified by entity, are inspected and accepted for project use prior to incorporation into construction. When material is received without Inspection Release, the (title) shall perform inspection against the purchase order requirements and verify that the equipment and material meets the specified standards. The process shall



requirements and verify that the equipment and material meets the specified standards. The process shall be documented (Specify what methods will be used to document the process, Material Acceptance Report, signed delivery ticket, signed invoice or bill of lading, etc.)

Example: During construction (title) shall inspect the quality of the construction effort through regular inspections of the work in progress, as agreed to in the respective Inspection and Test Plans. Activities shall be recorded via inspection and test reports attached to relevant procedures and work instructions and acceptance verified against written acceptance criteria obtained from applicable contract documents or referenced codes and standards. (Title) shall notify entity by initiating Requests for Inspection (RFI) for all inspection points identified as Witness or Hold.

Example: All test results shall be documented on forms appropriate for the tests, and dated and signed by the test personnel. Results shall be issued as required by the contract.

(Title) is responsible to supervise and accept or reject all contractor-performed inspections and tests.

Example: contractor shall frequently analyze the outcome of the monitoring and measurement activities and evaluate if there is any improvement can be implemented

7.9.2 <u>Internal audit</u>

Example: The (contractor) has established, and will maintain, and implement an internal quality audit program to verify that quality activities and related results comply with planned contractual arrangements and to determine the effectiveness of the quality program and associated procedures. The internal quality program has the following attributes:

- Internal procedures govern these activities
- Internal audits shall be scheduled based on 15%, 50% 90% of the project completion progress.
- The schedule shall be transmitted to entity Representative within 30 days of the effective date of the contract.
- The entity project management director has the right to change the audit intervals as per the contractor quality performance or ask for unplanned audits
- Personnel conducting internal audits shall be conducted by contractor quality personnel and accompanied by quality representative from the entity.
- Reports of internal audit results shall be generated and issued to affected departments. entity
 management shall receive copies of report within two weeks of audit completion.
- Corrective action shall be monitored and brought to a close.
- Follow-up internal audits shall be conducted as appropriate, to ensure implementation of corrective action, and the results reported to entity project management team.
- The activities of subcontractors working under this quality management system will be included in the audit program

Note: A procedure that addresses the responsibilities and requirements for planning and conducting internal audits and for reporting results and monitoring records is required and must be included in this Project Quality Plan.

7.9.3 Management review

The contractor shall review the quality aspects of the project with the entity quality representative on maximum bi-weekly meetings. The meeting shall discuss the following items:

- Internal quality audit results
- · Quality issues and concerns
- Nonconformity reports
- Corrective action status
- Process performance results
- Quality objective results
- Performance of subcontractors and suppliers
- Adequacy of resources
- Potential risks to the projects.
- Opportunities for improvement
- Overall status of the project quality aspects
- · Action items from previous meetings



Contractor shall document the outcome of the meeting and share it with the entity quality representatives within two days of the meeting.

7.10 Improvement

7.10.1 <u>General</u>

Example: The contractor shall utilize previous lesson learned provided by the entity or through EXPRO website. New lesson learned shall be issued and shared with the quality head of the entity on quarterly bases

7.10.2 Nonconformity and corrective action

Example: The (contractor) has established a Nonconformity and corrective action program to eliminate the causes of the nonconformity and prevent its recurrence. Corrective action will be appropriate to the severity of the nonconformity identified.

A documented procedure for nonconformity and corrective action has been established and is included in this Project Quality Plan. The procedure addresses nonconformity identification (including customer complaints), cause determination, action to prevent recurrence, identifying and implementing the corrective action, recording results, determining if the corrective action was implemented and effective in resolving the nonconformity. (Detail the corrective action program or reference the procedure number. Identify who is responsible to implement the corrective action program. Mandate the contractor to share all nonconformity and corrective actions reports to the entity management upon issuance of each one)

7.10.3 Continual improvement

Example: The (contractor) facilitates continual improvement of the Quality Management System (QMS) and acting upon the following: (Identify what you use to facilitate improvement of the QMS. Consider quality policy changes, goal/objective changes, implementation of the results of management review, audit findings, analysis of nonconformities, corrective action and preventive actions implemented.)