

PROGRAMMING OF THE WORKS

1.1 PROGRAMMING OF THE WORKS

1.2 Programming constraints

1.2.1 General

The contract programme, progress reports, subsequent updates, revisions and supplementary programmes as detailed in this section are an essential part of the project control system used by the Project Manager for managing the works and in monitoring the progress of the work under the contract. Key Dates and Completion Dates as defined in the Contract Data are incorporated into the programme.

1.2.2. Programme Submission

The Contractor's detailed programme, which complies with the requirements as indicated in the Works, is to be submitted in both hard and soft copy forms. The Project Manager for planning purposes on the contract is using Primavera version 3.1. The contractor is to use **Microsoft Projects** or a suitable computerised planning package, as approved by the Project Manager, which is compatible with **Microsoft Projects**.

1.2.2.1 Programme network, structure and methodology

1.2.2.2. Network

The Critical Path Method (CPM) technique of planning and scheduling is to be used for the contract. The Contractor provides schedules showing the critical path(s), together with a total float report for acceptance by the Project Manager.

The programme network is to have a no fewer activities than the technical and commercial breakdowns listed in the activity schedule.

Networks are constructed to reflect the possible sequences of activities using resource scheduling to stagger the performance of activities into the most probable sequence.

The activity durations are estimated in working days and are to be realistic and based on quantities and applied resources.

The calendars used are based on normal working hours per day and working days per week or as prescribed by the Project Manager in accordance with the contract.

1.2.2.3 Structure and Methodology

The Programme layouts are to take into account the approved Facility Breakdown Structure (FBS) reflecting the manner the works are to be performed. The following levels of programme are to be used for this contract:

- **Level 1 Master Schedule** – defines the major activities and interfaces between engineering, procurement, fabrication and construction, transportation, installation, and pre-commissioning, commissioning, and start-up. This is a high level summary schedule, and is included in the monthly progress report.
- **Level 2 Project Schedule** – summary schedules “rolled up” from the level 3 project schedule. The structure and layout is to be in accordance with the FBS as defined in the level 3 schedule.
- **Level 3 Project Schedule** – detailed schedules, which are generated for tracking and control of various activities and deliverable for all phases of the project. The activities are to be coded in accordance with the FBS. Various layouts and corresponding filters can be developed to reflect the requirements of the contract.
- **Level 4 Project Schedule** – This detailed discipline specialty level programme is developed and maintained by the Contractor and generated for tracking and control of various activities and deliverables for all phases of the contract. This programme utilizes the FBS structure and relates to the scheduled activities in the pricing activity schedules or groups of activities. The programme represents the day-to-day activities by discipline that are work unit based and become summarized in the level 3 activities.

1.2.3. Progress Reporting and Reports

1.2.3.1 Reporting and monitoring

To demonstrate the actual progress and forecast completion of the works under the contract the contractor is to, on a weekly basis, update and submit to the Project Manager the latest accepted programme and progress report including histograms and s curves.

Monitoring and review of the progress of the works under the contract is to consist of an assessment of all activities currently in progress to determine percentage complete, forecast completion dates, manning histogram showing plan versus forecast, deviations from the target programme and actions required for remedy.

Weekly progress review meetings to be conducted in order to report and assist control of the work under the contract.

1.2.3.2 Reports

- **Level 4 Programme** – updated weekly showing 2 separate bars for each task i.e. the primary bar reflects the current forecast dates and the secondary bar the latest accepted programme.
- **3 week look ahead schedule** – in the same format as above updated and issued weekly.

- **Manpower histogram** – updated and issued weekly showing actual, forecast and planned.
- **S-curves** – updated and issued weekly showing actual % complete verses planned % for the overall contract utilizing the earned values as calculated by the detailed progress report.
- **Detailed progress report** – updated and issued weekly utilizing a spreadsheet to calculate earned progress of activities, as reflected on the level 4 programme, based on installed quantities. Activities are to be weighted using man-hours. The report indicates progress ‘this report’ and ‘progress to date’.
- **Weekly report** – a narrative report consisting of an executive summary, area/facility synopsis of work in progress and critical action items (top 10). The report is to be accompanied with a 3 week look a-head schedule and s- curve.
- **Monthly report** – a narrative status report submitted a week before the last Friday of each month, or as required by the Project Manager. The report is to include the following planning information but is not limited to:
 - o Summary of progress achieved during the reporting period
 - o Latest updated programme
 - o Project Milestones table – planned versus actual and forecast.
 - o Status and performance of on-site works
 - o Status and performance of off-site works
 - o Histograms and s-curves
 - o Critical action item list (top 10)
 - o Deviations from the current Accepted Programme and action plans to minimize impact on Project key dates.

QUALITY ASSURANCE REQUIREMENTS

1.1 QUALITY ASSURANCE REQUIREMENTS

In undertaking the works (including all incidental services required), the Contractor is to follow the requirements of the General Quality Requirements for Suppliers and Contractors.

1.1.1 The Contractor maintains and demonstrates the use of Quality Management system to the **Project Manager** to satisfy the requirements of all related paragraphs of this document as required for the performing of the works. The Contractors Quality Management System is to conform to International Standard ISO 9001 (or an equivalent accepted by the **Project Manager**)

1.1.2 The Contractor submits his Quality Management System documents to the Principal Agent as part of his program including details of:

- Quality Plan (Project Quality Plan) for the contract
- Quality Policy
- Index of Procedures to be used
- A schedule of internal and external audits during the contract

1.1.3 The Contractor develops and maintains a comprehensive register of documents that are to be generated throughout the contract and includes all quality related documents as part of the Quality Plan.

1.1.4 The **Project Manager** states that those documents required to be submitted for information, review or acceptance and the Contractor performs such requirements within his register of documents. The register indicates the dates of issue of the documents with the Project Manager responding to documents submitted by the Contractor for review or acceptance within the period for reply prior to such documents being used by the Contractor.

1.1.5 The Quality Plan means the Contractor's statement, which outlines methodology, resources allocation, Quality Assurance, and Quality Control coordination activities to ensure that the works meet the standards stated in the Works Information.

1.1.6 Due consideration is to be given to the deliverables required to execute and complete the contract as per the Quality Management Standard, General Quality Requirements for Suppliers and Contractors) stated above and should include, but not limited to:

- Project Quality Plan for the contract
- The Contractor's Quality Policy
- Index of procedures to be used during the contract
- Audit Schedule for internal and external audits during the contract
- Organogram of staff indicating QA/QC staff for Site
- Approved Subcontractors and Suppliers list
- ISO 9001 certification status

- Quality Manual
- Typical Quality Control Plan
- Typical data book index
- Curriculum Vitae for Quality Management representative for the contract and Site QC Staff

The Project Manager reserves the right to perform quality audits or participate as an observer in Supplier/Contractor audits to verify compliance with the contractual requirements. Audits are to be conducted as per the Contractor's Quality Management System on Sub-suppliers prior to the commencement of any work to ensure the requirements of the contract are met.

1. Introduction

This Specification outlines the minimum requirements to ensure that products and services supplied to the project are manufactured, provided, constructed or installed in accordance with all specified requirements as defined in the Contract, all associated specifications, drawings, codes and standards.

2. Definitions

Term, Abbreviation	Meaning
Project Quality Plan (PQP)	A document that outlines the Supplier/Contractor's strategy, methodology, resources allocation, Quality Assurance and Quality Control coordination activities to ensure that Goods and Services supplied meet or exceed the requirements defined in the Contract, drawings, codes and standards.
Quality Control Plan (QCP)	A document outlining specific manufacturing/construction inspection and testing requirements, including responsibilities, test acceptance criteria, nomination of witness and hold points.
Supplier/Contractor	For the purposes of this document, the term Supplier/Contractor has the same meaning as applied to the term Sub-Supplier/Sub- Contractor
Supplier/Contractor Data Requirements	This refers to the documentation required to be submitted by the relevant Supplier/Contractor in terms of the Contract. These requirements are generally tailored to suit the particular Scope of Work, although it also addresses the manner in which the documentation is required to be submitted, e.g. Hard copy, electronic copy etc.
Technical Query Note (TQN)	This refers to a document used by the Supplier/Contractor to formally clarify a Technical Query related to the scope of work/supply. This should not be used where a non-conformance has already been initiated.
Data	All drawings/documentation/information/DP's and IOM's required to be supplied under the Contract
Data Pack (DP)	A compilation of manufacturing data, certification, inspection and testing records prepared by the Supplier/Contractor to verify compliance with the Contractual requirements.
Employer	For the purposes of this document, the term Employer has the same meaning as applied to the term Client.
Field Inspection Checklist (FIC)	A document that details the checks, requirements and test parameters for each type of equipment to permit field installation and pre-commissioning of the equipment.
Project Manager	Project Manager is the Employer's Nominated Agent in terms of the Conditions of Contract.

Term, Abbreviation	Meaning
Inspection Release Report (IRR)	A document issued to the Supplier/Contractor by the Principal Agent advising release of the Materials for shipment. This does not relieve the Supplier/Contractor of its obligations in accordance with the Terms and Conditions of the Contract.
Inspection Waiver Report (IWR)	A document issued to the Supplier/Contractor by the Principal Agent advising that the Project Manager has waived final inspection for the materials listed in this document. The issue of this Report does not preclude further inspection by the Project Manager, is issued without prejudice and does not relieve the Supplier/Contractor from the guarantees and obligations included in the Contract.
Installation and Operating Manual (IOM)	A document prepared by the Supplier/Contractor providing relevant information applicable to the installation and maintenance of the specific equipment, including consumables i.e. oil, etc.
Inspection Waiver Report (IWR)	A document issued to the Supplier/Contractor by the Principal Agent advising that the Project Manager has waived final inspection for the materials listed in this document. The issue of this Report does not preclude further inspection by the Project Manager, is issued without prejudice and does not relieve the Supplier/Contractor from the guarantees and obligations included in the Contract.
Installation and Operating Manual (IOM)	A document prepared by the Supplier/Contractor providing relevant information applicable to the installation and maintenance of the specific equipment, including consumables i.e. oil, etc.

3. Applicable Documents

3.1 General

All work performed shall comply with the requirements of this Specification, the documentation referenced in the Contract and the latest revision/edition of the relevant Codes and Standards herein.

3.2 Statutory Regulations

Occupational Health and Safety Act, Act No. 85 of 1993 and Regulations as amended.

3.3 Codes and Standards

Document No.	Title
ISO 9001	International Standard Series Quality Systems

4. Quality System

4.1 General

The Supplier/Contractor shall be responsible for all quality activities necessary to ensure the Work meets the requirements specified in the Contract, and shall manage and coordinate all Quality aspects of Work in accordance with the requirements of this Specification, and the Supplier/Contractor's PQP and QCP's once reviewed and approved by the Project Manager.

4.2 Supplier/Contract Quality System Requirements

The Supplier/Contractor shall have, maintain and demonstrate its use to the Project Manager, its documented Quality Management System. The Supplier/Contractors Quality Management System should be in accordance with the International Standard ISO 9001.

The Supplier/Contractor shall submit its Quality System documentation to the Principal Agent at the time of tender and at Contract Phases as detailed below:

- * Project Quality Plan
- * Quality Policy
- * Index of Procedures to be used
- * Programme of internal and external audits

4.3 Supplier/Contractor Documentation Requirements

The Supplier/Contractor shall develop and maintain a comprehensive register of documents that will be generated throughout the project, and shall include all quality related documents. The register shall be submitted to the Project Manager for review.

The **Project Manager** shall indicate those documents to be submitted for information/review and/or acceptance and this shall be indicated in the Supplier/Contractors' Document Register. The register shall indicated the dates of issue of the documents taking into account sufficient time to allow the **Project Manager** review/acceptance cycle prior to the document being required for use.

5. Quality Assurance

5.1 Project Quality Plan

Where specified, the Supplier/Contractor shall submit a PQP to the **Project Manager** within 28 days after the Contract start date. The PQP shall detail how the Supplier/Contractor's Quality System will be applied to the Scope of Work specified in the Contract, and shall address the following:

- * Satisfying the technical and quality requirements of the Supplier/Contractor's Scope of Work, and relevant elements of the applicable ISO 9001 standard.
- * Include all quality activities relevant to the Scope of Work, identifying all procedures, reviews, audits, controls and records used to control and verify compliance with the specified Contractual requirements.
- * Include a listing of all special processes (e.g. welding and non-destructive testing, cube testing etc.) envisaged for use, including confirmation of personnel certification as required.
- * Include all proposed method statements (for site based work activities)
- * Include a description of the Supplier/Contractor's project organization, with key positions and responsibilities identified and individuals named. The organization structure shall also indicate the resources committed to the management/coordination of QA/QC activities.
- * Include a listing of all Quality Control Plans (QCP's), and associated Field Inspection checklists (FIC's) as applicable.
- * Identify in the Project Quality Plan any Sub-Supplier/Sub-Contractor work, Sub-Supplier/Sub-Contractor plans shall be approved by the Supplier/Contractor, and a copy forwarded to the Project Manager.
- * Include the proposed Authorised inspection Authority (where applicable – for pressurised equipment and systems).
- * Include a schedule of proposed quality records.

The PQP shall be controlled and re-submitted for approval when required to incorporate any change necessary during the Contract duration to ensure that the document is maintained as an effective control, change, management and records. The change management will be done to an agreed policy or procedure.

Note: Where the Supplier/Contractor is required to provide a PQP, no work shall commence until the PQP is approved by the **Project Manager**.

5.2 Procedures

The Supplier/Contractor's PQP and procedures shall address the system elements and activities appropriate to the Scope of Work, in compliance with the specified Quality Standard.

Where specified, the Supplier/Contractor shall submit copies of Quality Procedures for review. In addition, the Supplier/Contractor shall ensure that copies of all Procedures relevant to the Scope of Work are available for reference by the **Project Manager** at each work location.

These will include, as applicable, the following:

5.2.1 Document Control

The Supplier/Contractor's Project Quality Plan shall provide a description of how the Project Manager provided, Supplier/Contractor and Sub-Supplier/Sub-Contractor documents are to be managed. The description shall address as a minimum:

- * Management tools and databases
- * Receipt, registration and maintenance
- * Internal and external distribution to the Project Manager, third parties and Sub-Contractors
- * Management of Codes, Standards and Specifications
- * Internal review and approval routines and authorities
- * How it is ensured that the correct revisions of documents are available at the point of use including retention periods for all documentation.

5.2.2 Design Control

Where the Supplier/Contractor is responsible for any aspect of design related to their Scope of Work, the Quality Plan shall describe the Supplier/Contractor's methods and procedures for the control of these design activities.

5.2.3 Procurement

Where the Supplier/Contractor is responsible for any aspect of procurement related to their Scope of Work, the Quality Plan shall describe the Supplier/Contractor's methods and procedures for the control of these activities.

5.3 Supplier/Contractor Audits

The Supplier/Contractor shall:

- * Carry out audits in accordance with its Quality System at its own and Sub-Supplier/Sub-Contractor's facilities to ensure project quality requirements are being achieved.
- * Include a QA Audit Schedule in the Supplier/Contractor PQP submitted to the Project Manager prior to commencement of the Scope of Work. The Audit Schedule shall include all audits to be implemented by the Supplier/Contractor and Sub-Supplier/Sub-Contractor during the execution of the Contract.
- * Where stipulated in the Contract performs an audit within three months after the Contract start date and thereafter at a minimum frequency of three months. Audit reports shall be submitted to the **Project Manager** at the completion of each Audit. Where unsatisfactory performance is evident, additional audits shall be performed by the Supplier/Contractor as directed by the **Project Manager**

5.4 Project Manager Audit

The **Project Manager** reserves the right to perform quality audits or participate as an observer in Supplier/Contractor audits to verify compliance with the Contractual requirements. The Supplier/Contractor shall within a time frame as agreed upon correct any adverse audit finding advised by the **Project Manager**.

6. Inspection and Testing

6.1 General

The **Project Manager** may, at its discretion perform surveillance inspection at the Supplier/Contractor's premises, Sub-Supplier/Sub-Contractor's premises or at the location of the Scope of Work.

Dependent on the nature of the Scope of Work and the frequency of inspections, the **Project Manager** may elect to have inspection personnel resident at the place of manufacture, fabrication or assembly.

The Supplier/Contractor shall ensure free entry and access is given to the **Project Manager**, certifying authorities and statutory authorities to inspect the Scope of Work and review procedures and quality records at all parts of the Supplier/Contractor's and Sub-Supplier/Sub-Contractor's premises, or at the location of the Scope of Work while any work or test is in progress.

While the **Project Manager** is at the Supplier/Contractor's premises, the Supplier/Contractor shall provide, free of charge, reasonable facilities including office facilities and reasonable access to a telephone, facsimile machine and computer connection point.

The Supplier/Contractor shall provide notice in writing a time frame as agreed upon, to allow the attendance of the **Project Manager** and other representatives at nominated witness and hold points.

6.2 Quality Control Plans

The Supplier/Contractor shall prepare and submit QCP's to the **Project Manager** for review in accordance with the requirements of the Contract and PQP

QCP's shall identify all inspection, test and verification requirements to meet the Contractual obligations, specifications, drawings and related details including destructive and non-destructive testing, witness and hold points.

The Supplier/Contractor shall not commence fabrication or manufacture prior to review and approval of the applicable QCP by the **Project Manager**.

QCP's shall include reference to all tests specified in the Contract Document.

A typical format for a QCP is shown in Appendix A. The supplier/Contractor may use its own format providing **all information** shown in Appendix A is included.

6.3 Inspection Points

The QCP shall identify points in the fabrication, manufacturing and/or installation process that are selected for inspection and shall be denoted by the following inspection codes:

*Hold Point (H)	Inspection points in the manufacturing cycle, beyond which work shall not proceed without the specified activity, work or function being witnessed. Hold points require written notification to the Project Manager .
*Witness Point (W)	An inspection point in the manufacturing cycle that will be witnessed or verified. If the Project Manager confirms it is unable to attend after being provided with the written notification then manufacture may proceed. Witness points require written notification to the Principal Agent .
* Review Point (R)	A Point at which products and quality records are verified and endorsed. <u>Review points are not notifiable points.</u>
*Surveillance (S)	An inspection point in the manufacturing cycle during which any activity, work or function is observed. No formal notification is required.

The Supplier/Contractor shall maintain the status of testing and inspection by progressively having the QCP's signed off.

6.4 Revision to Quality Control Plans

Revision of the QCP shall be subject to the same submission, review and acceptance routines as described for the original QCP issue.

After the Contract start date, and prior to manufacture, the Project Manager will require a Kick off Meeting with the Supplier/Contractor to discuss fully the implications of meeting the Project Manager's quality requirements. This meeting may be held as part of the Contract Kick-off meeting for each package or may be a separate meeting, subject to the critical or complex nature of the work. This requirement for a pre-inspection meeting may be repeated when sub-Supplier/Contractor of key equipment is engaged.

After mobilization of the Contractor, and prior to the commencement of any construction activities, the **Project Manager** will arrange for a Quality kick-off meeting to discuss fully the implications of meeting the project's quality requirements. This meeting may be held as part of the formal kick-off meeting for each contractor/sub-contractor, or may be a separate meeting subject to the critical or complex nature of the work.

6.5 Schedule of Inspection

The Supplier/Contractor shall submit a Schedule showing the proposed dates for inspections and tests nominated in the QCP where witness and hold points are required. The Schedule shall be regularly updated with progress and issued to the **Project Manager** to show the current inspection and tests status.

6.6 Field Inspection Checklists

For site installation and construction activities, the Supplier/Contractor shall prepare Field Inspection Checklists (FIC's) to permit inspection and testing of installed equipment and constructed facilities in accordance with the respective QCP's

FIC's shall be provided to the **Project Manager** for initial review, and shall be used to record the results of inspection and testing (where applicable), and on completion be submitted to the Project Manager to confirm satisfactory completion of the tests and inspection at nominated QCP witness and hold points.

6.7 Inspection Notification

The Supplier/Contractor shall notify the **Project Manager** in writing at least two calendar weeks prior to the advent of inspections or tests that require witnessing.

For inspections or tests within the country, arrangements shall be confirmed at least two working days before the event. For inspection and tests outside of the country, arrangements shall be confirmed at least seven working days before the event.

Inspection notifications shall include the following essential information:

- * Contract Number
- * Location of inspection or Test
- * Nature of inspection or Test
- * Date and Time of Inspection or Test
- * Name and telephone number of the Supplier/Contractor's Representative.

6.8 Inspection and Testing

The Supplier/Contractor is responsible for the conduct of all Supplier/Contractor inspections and tests, and includes:

- * Documenting inspection and tests results in the QCP's and relevant FIC's
- * Progressively inspecting the quality of the Scope of Work performed, including that of all Sub-supplier/Sub-Contractors
- * Inspecting to meet all Contractual requirements, in number, type and form.
- * Inspecting day to day activities, material receipts, issue of material for installation, in-process inspections, and final inspections.

Completed original QCP's and FIC's shall be submitted to the **Project Manager** in the DP.

6.9 Inspection Release

At completion of the Scope of Work, either in total or in phases, the **Project Manager** may issue an Inspection Release Report (IRR) or a waiver of inspection.

The issue of either an inspection release or waiver of inspection does not relieve the Supplier/Contractor of its obligations under the Contract. The Supplier/Contractor shall ensure a copy of the release note and final expediting release note for transport, where appropriate, is attached to the delivery docket and accompanies the Work to the designated destination indicated in the Contract. Items delivered to the **Project Manager** without a copy of these documents may not be accepted.

A copy of the inspection release or waiver of inspection shall be included in the DP.

6.10 Special Processes

It is the Supplier/Contractor's responsibility to ensure that all processes which require pre-qualified procedures and/or work methods are tested and qualified before work begins. This typically covers such activities as welding, non-destructive testing, special fabrication techniques and painting. Unless specified such procedures are the Supplier/Contractor's responsibility and do not require submission to the **Project Manager** before work begins. When such procedures are requested, no work shall commence until procedures are approved by the **Project Manager**.

It is the Supplier/Contractor's responsibility to ensure all operators are qualified for the processes in accordance with the procedure and/or applicable standards. Records of qualification of operators shall be maintained by the Supplier/Contractor and made available to the **Project Manager** when requested.

Records of qualification of procedures and processes shall be maintained by the Supplier/Contractor in accordance with the applicable procedure or code.

6.11 Material Traceability

Where, and to the extent that material traceability is required, the Contractor shall provide its procedures for the maintenance of material identification throughout all phases of manufacture. Methods of identification, routines for re-stamping or stencilling as appropriate shall be defined and agreed with the **Project Manager**.

Adequate records shall be maintained throughout construction enabling traceability of key materials from final product back to original material certificates. The material traceability records shall form part of the DP.

The Contractor shall prepare a schedule of materials and equipment that are subject to traceability requirements.

6.12 Material Certification

Where specified in the Contract the following certificates shall be provided to the **Principal Agent** and included in the DP.

Type A: A Supplier/Contractor's certificate of compliance with the Contract. This certifies that the goods or services are supplied in compliance with the Contract without mention of any tests results.

Type B: A certificate issued by a laboratory or test facility independent of the Supplier/Contractor's works. It shall quote test results carried out on the product supplied and state whether compliance with the relevant technical standard, code etc. has been complied with.

Type C: The same as type B, the tests are to be witnessed by a third party.

7. Non-Conforming Products

7.1 General

The Supplier/Contractor shall establish and maintain procedures to control material or products that do not meet the specified requirements.

All Supplier/Contractor product and/or materials identified as not conforming to requirements shall be dealt with promptly as follows:

* If the Supplier/Contractor discovers material or product which is not in accordance with the requirements of the contract, i.e. a non-conformance (NCR), the Supplier/Contractor shall promptly initiate the non-conformance procedure in terms of the Supplier/Contractor's Quality Management system, advise the Project Manager promptly, and provide a copy of the NCR to the **Project Manager**.

* If the **Project Manager** or its agent identifies a non-conformance item a **Project Manager** NCR may be raised.

Originals of all closed out NCR's shall be included in the DP.

7.2 Corrective and Preventative Action

If the Supplier/Contractor proposes a disposition of any non-conforming materials or product which varies from the requirements of the Specification or Contract, such a proposal shall be submitted in writing to the **Project Manager** whose decision on the proposal shall be obtained in writing before the non-confirming material or product is covered up or incorporated into the Works, or is the subject of any other disposition.

The disposition of non-conformances which do not vary the requirements of the Contract, specification or drawings may be approved by the Supplier/Contractor following discussion and agreement with the **Project Manager**.

8. Concession Requests and Technical Queries

8.1 Concession Requests

Where a Supplier/Contractor requests a Concession to deviate from the requirements of the Contract or specified requirements, the Supplier/Contractor shall raise the request with the **Project Manager** using the format as shown in Annexure B.

The Concession Requests shall clearly identify all elements of the proposed deviation together with any resulting technical, commercial and/or schedule impacts.

Completed original Concession Requests shall be included in the DP

8.2 Technical Queries

For clarification of technical issues (Only), Supplier/Contractor may submit a Technical Query Note (TQN) to the Project Manager in accordance with the Contract.

The TQN shall clearly identify all elements of the query, and all supporting documentation and/or drawings shall be attached where appropriate.

Completed original TQN's shall be included in the DP.

9. Inspection, Measuring and Test Equipment

9.1. Calibration

The Supplier/Contractor, including its Sub-Supplier/Sub-Contractors shall ensure the calibration of test and measuring equipment is performed and maintained in accordance with the relevant Supplier/Contractor procedures and/or the equipment manufacturer's specifications.

Where calibration is required by an external laboratory, the Supplier/Contractor shall ensure that the facility selected for calibration possesses current certification. Calibration certificates shall contain a statement that the test equipment is accurate to within specified tolerances.

The Supplier/Contractor shall establish the frequency of calibration for each item of equipment (including jigs, fixtures or templates) and record the details in a 'Measuring and Test Equipment Register' (or similar).

9.2 Use of Inspection, Measuring and Test Equipment

The Supplier/Contractor shall ensure that authorised equipment users:

- * Use the equipment in accordance with manufacturer's instructions, and accepted industry practices
- * Ensure the equipment is covered by a current calibration certificate
- * Conduct the measurements or tests in accordance with the equipment manufacturer's specifications or other relevant specification.
- * Prior to commencement of each inspection or test activities:
 - Identify the measurements to be made
 - Determine the accuracy required
 - Select the appropriate inspection, measuring or test equipment for the scope of work.

9.3 Verification of Previous Test Results

Where the calibration status of the equipment is unknown, expired or has doubtful accuracy, the equipment shall immediately be quarantined, and tagged according to Supplier/Contractor's Quality System procedures. The Supplier/Contractor shall then arrange for either in-house or external calibration, and:

- Review all previous tests results associated with the suspect equipment

- Identify the inspections, measurements or tests required to re-validate the results
- Ensure that suitable re-testing is performed with calibrated equipment
- Document the results of the re-testing on the respective inspection and test documentation.

10. Quality Records

Supplier/Contractors shall maintain Quality Records necessary to provide objective evidence that demonstrates and verifies achievement of the QA/QC requirements associated with the Scope of Work. All Quality Records, including original source material test certificates and non-destructive test reports, shall be retained by the Supplier/Contractor during the project, and be provided to the **Project Manager** at the times, and in the quantities specified in the Contract.

The Supplier/Contractor shall collate all quality records in the DP and submit the DP to the Project Manager in accordance with the Contract and all referenced standards and specifications. This DP shall be compiled progressively, and shall be available for review at all phases of manufacture or construction activities.

The Scope of Work shall not be complete until the Supplier/Contractor's DP including the quality records from Sub-Supplier/Sub-Contractors have been reviewed and accepted by the **Project Manager**.

The DP shall be compiled progressively during the execution of the Scope of Work and shall be made available for review by the **Project Manager** as required.

Annexure A – Sample Quality Control Plan

QUALITY CONTROL PLAN NO:		REV:	DATE ISSUED:		
CONTRACT NO:			DESCRIPTION:		ITEM NO:
SUPPLIER/CONTRACTOR:					LOCATION:
Activity No	Activity Description	Procedure Reference/ Code Specification	Specification Acceptance Criteria	Verifying Document/Report Certificate	Verification/ Witness
	Supplier/Contractor or Action		Principal Agent Sign	Employer Action	
Rev	Date	Reason for Revision		Drawn	Checked
ACTION: H – Hold, Mandatory Hold Point R – Review (Verify) Only W – Witness S – Surveillance					

Annexure B – Request for Concession

Request for Concession No:.....Page 1 of 2	
A. SUPPLIER/CONTRACTOR SUPPLIED INFORMATION	
SUPPLIER/CONTRACTOR NAME: CONTRACT NO:	
SUPPLIER/CONTRACTOR CONCESSION NO: DATE:	
Required concession applicable to: (item/Material/Equipment/Area)	
Quantity Affected:	
Original Requirements:	
Description of Concession – Revised Requirements:	
(NOTE: This concession will be rejected if the following information is not provided):	
(i) VALUE OF BENEFIT TO CLIENT	(ii) AGREE TO AN EXTENSION OF THE WARRANTY
R.....	IF “YES” WHAT PERIOD?
(iii) ANY IMPACT ON SCHEDULE?	
Original Requirements reference:	

Drawing No:.....Rev:.....Specification

No:.....Rev:.....

Drawing No:.....Rev:.....Specification

No:.....Rev:.....

Drawing No:.....Rev:.....Specification

No:.....Rev:.....

Requested by: (Supplier/Contractor)

Name:.....Title:.....Signature :.....Date:.....		
B: SITE ADMINISTERED CONTRACT ? Yes, No Go to Section “D”		
Possible QC implications:.....		
Recommended	Rejected	
Recommended with the following Conditions:		
Site Construction Manager:.....Signature:..... Date:.....		
Site Engineer :.....Signature :..... Date :.....		
C : RECOMMENDATION BY CONTRACT ADMINISTRATOR :		
Name :.....Signature :..... Date :.....		
D : RECOMMENDATION BY ENGINEERING :		
Recommended	Rejected	Conditional, with the following
Recommendations:.....		

Package Engineer :Signature : Date :			
Lead Discipline Engineer:Signature : Date :			
Engineering Manager:Signature: Date:			
Comments:			
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