



# ANNEXURE D

## TRANSNET

### GENERAL QUALITY REQUIREMENTS FOR CONTRACTORS AND SUPPLIERS

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## 1. Purpose

This Specification outlines the minimum requirements to ensure that products and services supplied to TRANSNET 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 / Abbreviations

Term, Abbreviation	Meaning
Contract:	Formal document evidencing agreement between Employer and Contractor for supply of on site or off-site services (generic term used for Purchase Orders, Contracts and Service Orders in this Standard).
Contractor:	The party to a contract that provides services to the Employer (Generic term used for Vendors, Suppliers, Contractors, Consultants, etc.).
Contractor Documentation Schedule (CDS)	A schedule specifying the Employer's requirements for the document types to be submitted by the Contractor at various stages of the Contract and the timing of the submissions.
Data:	All drawings/documents/data/information/DPs and IOMs required to be supplied under the Contract.
Data Pack (DP):	A compilation of manufacturing data, certification, inspection and testing records prepared by the Contractor to verify compliance with the Contractual requirements.
Employer:	The party to a Contract or Purchase Order to whom the goods are supplied or for whom the work or services are performed. In the context of this document, Transnet Capital Projects is the Employer.
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
Inspection Release Report (IRR):	A document issued to the Contractor by TRANSNET advising release of materials for shipment. This does not relieve the Contractor of its obligations in accordance with the Terms and Conditions of the Contract.
Inspection Waiver Report (IWR):	A document issued to the Contractor by TRANSNET advising that TRANSNET has waived final inspection for the materials listed in this document. The issue of this report does not preclude further inspections by TRANSNET. It is issued without prejudice and does not relieve the Contractor from the guarantees and obligations included in the Contract.
Installation and Operating Manual (IOM):	A document prepared by the Contractor providing relevant information applicable to the installation and maintenance of the specific equipment, including data relating to consumables (e.g., Oils, etc.)
ISO 9001:2015 terms	"shall" indicates a requirement
Non-Conformance (NC)	Material, product or workmanship which is not in accordance with the requirements of the Contract.
Non-Conformance Report (NCR):	A document initiated by either TRANSNET or the Contractor advising that certain materials/products/workmanship provided by the Contractor do not conform to the required standards and specifications.
Project Quality Plan (PQP):	A document that outlines the 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.



<b>Term, Abbreviation</b>	<b>Meaning</b>
Quality Assurance (QA):	A formal methodology designed to assess the quality of products or services provided.
Quality Control (QC):	A set of activities intended to ensure that quality requirements are being met.
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.
Technical Query Note (TQN):	A document used by the Contractor to formally clarify a Technical Query related to the scope of supply. This should not be used where a Non-Conformance Report has already been initiated.
TRANSNET:	Transnet SOE Limited
Works Information:	Refers to the Works Information as defined in the Contract

### 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 referenced herein.

#### 3.2 Statutory Regulations

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

#### 3.3 Codes; Standards and Procedures

<b>Document No.</b>	<b>Title</b>
ISO 9001: 2015	Quality management systems – Requirements
ISO 10005:2018	Quality Management systems- Guidelines for Quality plans
PROCEDURE 014	Contractor Management

### 4. Quality System

#### 4.1 General

4.1.1 The Contractor will 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 the Work in accordance with the requirements of this Specification, together with the Contractor's PQP and QCPs once reviewed and accepted by TRANSNET.

#### 4.2 Contractor Quality System Requirements

4.2.1 The Contractor shall have and maintain a documented Quality Management System. The Contractor may be required to demonstrate its use to TRANSNET. The Contractor's Quality Management System should be in accordance with the requirements of International Standard ISO 9001:2015 Clause 4.4.1 Quality Management System and its process.

#### 4.3 Kick Off Meeting

4.3.1 After the Contract start date, and prior to manufacture or construction activities, TRANSNET will require a Kick-Off Meeting with the Contractor to discuss fully the importance of meeting TRANSNET'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-Contractors of key equipment are engaged.

Note: The above requirement must be applied in conjunction with ISO 9001:2015 Clause 8.4.3

#### 4.4 Contractor / Supplier Documentation Submittal Requirements

4.4.1 The Contractor shall make a formal submission of his Quality Documentation on award of the Contract and at the times defined in the Contractor's Documentation Schedule, included in the Works Information for the Contract.

4.4.2 The Contractor's responsibilities are defined in terms of DOC-STD-0001 which outlines the standard requirements for preparation, submission, receipt, review, and collection of Technical and (or) Deliverable Documentation, as detailed in the Contractor Documentation Schedule (CDS).

4.4.3 TRANSNET uses the Contractor's Documentation Schedule (CDS), included in the Works Information for the Contract, to indicate those documents required to be submitted for information/review and/or acceptance.

4.4.4 The Contractor shall develop and maintain a comprehensive register of documents (Contractor's Documentation Register – CDR) that will be generated throughout the project. The CDR includes all quality-related documents. The CDR is a 'live' document and is submitted to TRANSNET for review following each revision by the Contractor. The CDR indicates the dates of issue of the documents considering sufficient time to allow for the TRANSNET review/acceptance cycle prior to the document being required for use. A sample of a CDR (DOC-FAT-0002) is issued by TRANSNET at the start of every contract.

Note: The above requirements must be applied in conjunction with ISO 9001:2015 Clause 8.4.3 Information for external providers

#### 4.5 Project Quality Plan

4.5.1 Where specified, the Contractor submits a PQP to TRANSNET within the period stated in the CDS and in any event not later than 28 days after the Contract start date. The PQP details how the Contractor's Quality System will be applied to the Scope of Work specified in the Contract, and shall address the following:

- a) Satisfying the technical and quality requirements of the Contractor's Scope of Work, and relevant elements of the applicable ISO 9001:2015 standard and should be developed with the reference to ISO 10005:2013 Guidelines.
- b) Include all quality activities relevant to the Scope of Work, identifying all procedures, reviews, audits, controls, objectives, and records used to control and verify compliance with the specified Contractual requirements.
- c) 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.
- d) Include all proposed method statements (for site-based work activities).
- e) Include a description of the Contractor's project organisation, with key positions and responsibilities identified and individuals named. The organisation structure shall also indicate the resources committed to the management and coordination of QA / QC activities.
- f) Include a listing of all Quality Control Plans (QCPs), and associated Field Inspection Checklists (FICs), as applicable.
- g) Identify in the PQP any Sub-Contractor/Sub-Supplier work. Sub-Contractor/Sub-Supplier plans are approved by the Contractor, and a copy forwarded to TRANSNET for information.
- h) Include the proposed Authorised Inspection Authority (where applicable - for pressurised equipment and systems).
- i) Include proposed quality records.

4.5.2 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 Contractor is required to provide a PQP, no work shall commence until the PQP is accepted by TRANSNET.

Note: The above requirements must be applied in conjunction with ISO 9001:2015 Clause 8 Operations

## 4.6 Procedures

4.6.1 The 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.

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

4.6.3 These will include, as applicable, the following:

- a) Document Control, the Contractor's PQP shall provide a description of how documents provided by TRANSNET to the Contractor are to be managed. The description shall address as a minimum:
  - Management tools and databases
  - Receipt, registration and maintenance
  - Internal and external distribution to Employer, 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

Note: The above requirement must be applied in conjunction with ISO 9001:2015 Clause 7.5 Documented Information

- b) Design Control procedure, where the Contractor is responsible for any aspect of design related to the Scope of Work, the Quality Plan shall describe the Contractor's methods and procedures for the control of these design activities.

Note: The above requirement must be applied in conjunction with ISO 9001:2015 Clause 8.3 Design and development of products and services

- c) Procurement procedure, where the Contractor is responsible for any aspect of procurement related to the Scope of Work, the Quality Plan shall describe the Contractor's methods and procedures for the control of these activities.

## 5. Quality Audits

### 5.1 Contractor Audits

5.1.1 The Contractor shall Carry out audits in accordance with its Quality System at its own and Sub-Contractor's facilities to ensure project quality requirements are being achieved.

5.1.2 The Contractor shall include a QA Audit Schedule in the Contractor PQP submitted to TRANSNET prior to commencement of the Scope of Work. The Audit Schedule shall include all audits to be implemented by the Contractor and Sub-Contractor during the execution of the Contract.

5.1.3 The Contractor shall, where stipulated in the Contract, perform an audit within three months after the Contract start date and thereafter at a minimum frequency of three months. Audit reports are submitted to TRANSNET at the completion of each Audit. Where unsatisfactory performance is evident, TRANSNET will direct the Contractor to perform additional audits.

Note: The above requirements must be applied in conjunction with ISO 9001:2015 Clause 9.2 Internal Audit

### 5.2 Transnet Audit

5.2.1 Upon the appointment of the Contractor, the project Quality Officer will schedule and conduct the QMS Audit at the contractor's head office to assess the Contractor's ISO 9001:2015 Quality Management System status.

5.2.2 TRANSNET reserves the right to perform quality audits or participate as an observer in Contractor audits to verify compliance with the Contractual requirements. The Contractor shall, within the time frame as agreed upon, correct any adverse audit finding advised by TRANSNET.

5.2.3 The Employer may, at own discretion, require a Quality Audit of sub-contractor(s) to ensure that the sub-Contractor(s) have the necessary management, facilities, skilled staff, and quality control facilities to carry out the Works to ensure compliance with the Works Information.

## 6. Quality Control Plans

Note the of requirements of 6.1 to 7.7 must be applied in conjunction with ISO 9001:2015 Clause 8.5 Production and Service; ISO 10005:2018

### 6.1 Quality Control Plans

6.1.1 The Contractor shall prepare and submit QCPs to TRANSNET for review in accordance with the requirements of the Contract and PQP.

6.1.2 QCPs must clearly identify all inspection, test and verification requirements to meet the Contractual obligations, specifications, drawings and related details including destructive and non-destructive testing, acceptance criteria, witness and hold points.

6.1.3 The Contractor shall NOT commence fabrication or manufacture prior to review and approval of the applicable QCP by TRANSNET.

6.1.4 QCPs shall include reference to all tests specified in the Works Information.

### 6.2 Intervention Points

6.2.1 The QCP identifies points in the fabrication, manufacturing and/or installation process that are selected for inspection. These points are denoted by the following inspection codes:

- |                      |   |
|----------------------|---|
| a) 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 TRANSNET.   |
| b) Witness Point (W) | An inspection point in the manufacturing cycle that will be witnessed or verified. If TRANSNET confirms it is unable to attend after being provided with the written notification, then manufacture may proceed. Witness points require written notification to TRANSNET. |
| c) Review Point (R)  | A point at which products and quality records are verified and endorsed. Review points are not points that require notification to TRANSNET.  |
| d) Surveillance (S)  | An inspection point in the manufacturing cycle during which any activity, work or function is observed. No formal notification is required.   |

### 6.3 Field Inspection Checklists

6.3.1 For site installation and construction activities, the Contractor shall prepare Field Inspection Checklists (FICs) to permit inspection and testing of installed equipment and constructed facilities in accordance with the respective QCPs.

6.3.2 FICs are used to record the results of inspection and testing (where applicable). On completion, FICs are submitted to TRANSNET to confirm satisfactory completion of the tests and inspections at nominated QCP witness and hold points.





## **7. Inspection and Testing**

### **7.1 General**

7.1.1 Inspection means all activities such as measuring, examining, testing, gauging one or more characteristics of material or service and comparing these with specified requirements to determine conformity.

7.1.2 TRANSNET may, at its discretion, perform surveillance inspections at the Contractor's premises, the premises of any Sub-Contractor or at the location of the Scope of Work.

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

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

7.1.5 The Contractor shall provide TRANSNET with all necessary tools, calibrated measuring equipment, safety equipment and workspace to verify or witness tests in progress.

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

7.1.7 The Contractor shall provide written notice within a time frame as agreed upon, to allow the attendance of TRANSNET and other representatives at nominated witness and hold points.

### **7.2 Schedule of Inspection**

7.2.1 The 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 TRANSNET to show the current inspection and test status.

### **7.3 Contractor's Inspection**

7.3.1 The Contractor shall, as a minimum, carry out the inspections as detailed in the Quality Control Plan and maintain the required records for verification by the Employer and/or Third-Party Inspection Authority.

7.3.2 For sub-contracted material or services, the Contractor shall ensure that controls are effective, including, where necessary, monitoring of the Subcontractor's works and retention of the necessary records.

7.3.3 Signing-off of the Quality Control Plan progressively by all relevant parties is a mandatory requirement following the indicated inspection activity.

### **7.4 Readiness for Inspection**

7.4.1 Material or services shall be deemed ready for inspection by the Employer and/or Project Manager only when:

- a) The Contractor has firstly carried out his own inspection at the stage identified on the relevant Quality Control Plan and is satisfied that material, workmanship and services meet the specified requirements. Documented evidence shall be maintained by the Contractor including signing-off the Quality Control Plan.
- b) The Contractor shall ensure that the latest revisions of approved drawings and/or procedures with evidence of acceptance by Transnet, his nominated representative or Third-Party Inspection Authority are available.



## 7.5 Inspection Notification

7.5.1 The Contractor shall notify TRANSNET in writing for inspections or tests within the country, arrangements are confirmed at least two working days before the event. For inspection and tests outside of the country, arrangements are confirmed at least seven working days before the event.

Inspection notifications 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 Contractor's Representative.

## 7.6 Cancellation of Inspection

7.6.1 Contractors are advised that it is a condition of Purchase / Contract that all costs of Employer's representative and/or Third-Party Inspection Authority will be passed on to the Contractor for cancellation of inspection visits.

7.6.2 A visit is considered cancelled if:

- a) The Contractor advises "readiness" for inspection and upon arrival of Employer's representative or Third-Party Inspection Authority, the material, or Services and/or the associated documentation is not ready; or
- b) If Employer's personnel identify that material or services are to specification such that the Contractor's Inspector should have identified the non-conformity prior advising readiness for Employer's or Third-Party Inspection Authority inspection.

## 7.7 Inspection Waiver

7.7.1 Any Employer's Witness, or review or Hold point may, at the sole discretion of Employer, be waived, which will be followed by an inspection waiver report.

# 8. Fabrication Process and Factory Acceptance Test

## 8.1 Fabrication Process

8.1.1 It is the Contractor's responsibility to ensure that all processes which require prequalified procedures and/or work methods are tested and qualified before work begins at the manufacture's premises. This typically covers such activities as welding, non-destructive testing, special fabrication techniques and painting. When such procedures are requested, no work shall commence at the manufacturer's premises until procedures are approved by TRANSNET.

8.1.2 It is the 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 Contractor and made available to TRANSNET when requested.

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

8.1.4 The Employer's representatives are also required to do inspections during fabrication to ensure that the fabrication process is in accordance with the designs, specifications, and standards to ensure the work meets the requirements specified in the Contract.

8.1.5 Where the Contractor's Scope of Work includes fabricated weldments, Welding Procedure Specifications (WPS) defining the method, preparation and sequences to be adopted to achieve a satisfactory welded joint shall be provided for all weld types required in the execution of the Contractor's Scope of Work. The procedure shall only be submitted to TRANSNET when requested in the Contract.



8.1.6 WPS includes all welding essential and non-essential variables for each process used, including appropriate test results. WPS comply fully with the standard or code pertaining to welding required in the execution of the Contractor's Scope of Work.

8.1.7 When requested in the Contract, a suitably marked "weld map" is completed by the Contractor for all items to be fabricated. A summary of WPS is prepared and, when used, is identified on the weld map.

8.1.8 Where TRANSNET approval is required, fabrication is not to commence until written approval of WPS and Welding Procedure Qualification Records (WPQR) is received by the Contractor. No welding fabrication will be accepted that is not covered by a TRANSNET approved WPS/WPQR.

8.1.9 Welding Procedure Qualification (WPQ) tests may be witnessed by TRANSNET and/or an independent inspection authority. Testing of the specimens prepared during the WPQ Tests is carried out by an approved testing laboratory, independent of both TRANSNET and the Contractor. In certain instances, a certificate to EN 10204 3.1 B may be required which will be clarified at Tender review and clarification stage.

8.1.10 Where actual weld deposit analysis and weld metal physical properties are required for procedure qualification, the information is taken from the procedure qualification tests. Data listed in the catalogues of the manufacturer of welding consumables is not acceptable.

8.1.11 Welders/welding operators are qualified in accordance with the relevant welding code prior to commencing production fabrication. Specific Welder Qualification (WQ) records will be reviewed by TRANSNET in the Contractor's works and should NOT be submitted for review.

8.1.12 A register of welders qualified to work shall be maintained by the Contractor.

## 8.2 Material Traceability

8.2.1 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 stenciling as appropriate shall be defined and agreed with the Employer.

8.2.2 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.

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

## 8.3 Material Certification

8.3.1 Where specified in the Contract the following certificates shall be provided to TRANSNET and included in the DP.

- a) Type A: A 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 test results (EN10204 certificate 2.1).
- b) Type B: A certificate issued by a laboratory or test facility independent of the 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. (EN10204 certificate 3.1B).
- c) Type C: The same as Type B, the tests are to be witnessed by a third party (EN10204 certificate 3.1C).

## 8.4 Factory Acceptance Test

8.4.1 The factory acceptance test (FAT) is a process that evaluates the equipment during and after the assembly process by verifying that it is built and operating in accordance with design specifications.

8.4.2 The Contractor shall conduct a Factory Acceptance Test for all Plant's to be installed as part of the Works to be executed in this Contract prior to delivery to site. The Factory Acceptance Test shall be conducted in the presence of the Employer's representatives (Quality, Engineering and/or the Third-Party Inspection Authority).

## **8.5 Inspection Release**

8.5.1 At completion of the Scope of Work, either in total or in phases, TRANSNET may issue an Inspection Release Report (IRR) or an Inspection Waiver Report (IWR).

8.5.2 The issue of either an inspection release or waiver of inspection does not relieve the Contractor of its obligations under the Contract. The Contractor ensures that 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 TRANSNET without a copy of these documents may not be accepted.

8.5.3 A copy of the inspection release or waiver of inspection is included in the DP.

## **9. Non-Conforming Products**

### **9.1 General**

Note the requirements of 9.1 to 9.3 must be applied in conjunction with ISO 9001:2015 Clause 10.2 Nonconformity and Corrective action

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

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

- a) If the Contractor discovers material or product which is not in accordance with the requirements of the Contract, i.e., a non-conformance, the Contractor shall immediately initiate the non-conformance procedure in terms of the Contractor's Quality Management System, advise TRANSNET promptly, and provide a copy of the non-conformance report (NCR) to TRANSNET
- b) If TRANSNET or its agent identifies a non-conformance, a TRANSNET NCR may be raised.

9.1.3 Originals of all closed out NCRs shall be included in the DP.

### **9.2 Defects**

9.2.1 The project Quality officer will notify the NEC supervisor / Construction Manager of any defects observed and log them on the snag list.

### **9.3 Corrective and Preventative Action**

9.3.1 If the 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 TRANSNET whose decision on the proposal shall be obtained in writing before the non-conforming material or product is covered up or incorporated into the Works, or is the subject of any other disposition.

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

## **10. Concession Requests and Technical Queries**

### **10.1 Concession Requests**

10.1.1 Where a Contractor requests a Concession to deviate from the requirements of the Contract or specified requirements, the Contractor raises the request for TRANSNET review and approval.

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

10.1.3 Completed original Concession Requests shall be included in the DP.

Note: The above requirements must be applied in conjunction with ISO 9001:2015 Clause 8.7 Control of Non-Conforming outputs

## 10.2 Technical Queries

10.2.1 For clarification of technical issues (only), the Contractor may submit a Field Engineering Query (FEQ) to TRANSNET in accordance with the Contract.

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

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

## 11. Inspection, Measuring and Test Equipment

Note the requirements of 11.1 to 11.3 must be applied in conjunction with ISO 9001:2015 Clause 7.1.5.1 & 7.1.5.2 General and Measurement traceability

### 11.1 Calibration

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

11.1.2 Where calibration is required by an external laboratory, the 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.

11.1.3 The Contractor should 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).

### 11.2 Use of Inspection, Measuring and Test Equipment

11.2.1 The Contractor shall ensure that authorized equipment users:

- a) Use the equipment in accordance with manufacturer's instructions, and accepted industry practices
- b) Ensure the equipment is covered by a current calibration certificate
- c) Conduct the measurements or tests in accordance with the equipment manufacturer's specifications or other relevant specification
- d) 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.

### 11.3 Verification of Previous Test Results

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

- a) review all previous test results associated with the suspect equipment;
- b) identify the inspections, measurements or tests required to re-validate the results;
- c) ensure that suitable re-testing is performed with calibrated equipment;
- d) record the results of the re-testing on the respective inspection and test documentation.

## 12. Quality Personnel Qualifications

12.1.1 The contractor shall nominate/appoint a Quality officer with minimum experience and qualifications specified in the Tender documents.

12.1.2 The Contractor shall submit the CV and relevant qualifications of its nominated/appointed quality representative for the Project Manager's review and approval.

12.1.3 Should the approved qualify officer be no longer available, the contractor will notify the Project Manager in writing and upon agreement the contractor will provide the CV and qualifications of the proposed resource that is equivalent to the previously approved.

Note: The above requirements must be applied in conjunction with ISO 9001:2015 Clause 7.2 Competence

### **13. Quality Records**

13.1.1 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.

13.1.2 All Quality Records, including original source material test certificates and non-destructive test reports, shall be retained by the Contractor during the project, and be provided to TRANSNET at the times, and in the quantities specified in the Contract.

13.1.3 The Contractor shall collate all quality records in the Data Pack (DP) and submit the DP to TRANSNET 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.

13.1.4 The Scope of Work shall not be complete until the Contractor's DP, including the quality records from Sub-Contractors/Sub-Suppliers, has been reviewed and accepted by TRANSNET.

13.1.5 The Contractor compiles the DP progressively during the execution of the Scope of Work and makes the DP available for review by TRANSNET as required.

13.1.6 The Contractor shall retain a copy of all Quality documentation generated during the contract, including a copy of the complete DP, for his own records for a minimum period of five years after the completion of the work.

Note: The above requirements must be applied in conjunction with ISO 9001:2015 Clause 7.5.3 Control of Documented Information