Master Specification
Part PC-QA1A

Quality Management Requirements

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Government of South Australia
Department for Infrastructure and Transport

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Contents

PC-QA1A Quality Management Requirements

1 General

a) This Master Specification Part sets out the requirements for quality management of the Contractor's Activities, including:

i) the documentation requirements for the Project Quality Plan and As-Built Records, as set out in section 2;

ii) the Quality Management System requirements, as set out in section 3;

iii) the management responsibility and authority requirements including those in relation to the Construction Quality Representative, as set out in section 4;

iv) the quality outcome requirements including requirements for Work Lots and Inspection and Test Plans, as set out in section 5;

v) the Hold Point and Witness Points process, including those related to submission of documentation, Project Plans and construction quality, as set out in section 6;

vi) quality management during the production of the Works and Temporary Works, as set out in section 7;

vii) the control of Non-Conformances, as set out in section 8;

viii) the control of System Non-Conformances, as set out in section 9; and

ix) the Hold Point and Witness Point requirements, as set out in section 10.

b) The Contractor must comply with the relevant Reference Documents including AS/NZS ISO 9001 Quality Management Systems - Requirements.

c) Where the Principal has provided the design documentation for construction purposes, the following definitions will replace the definitions in PC-IN2 "Glossary of Terms" for the purposes of this Master Specification Part:

i) Design Documentation means the design documentation provided by the Principal for construction purposes; and

ii) Designer means the Principal's appointed designer.

d) Where this Master Specification Part forms part of the Contract Documents, any reference to PC-QA1 "Quality Management Requirements" in the Contract Documents must be read as a reference to this Master Specification Part.

2 Documentation

2.1 Project Quality Plan

a) The Contractor must establish, implement and maintain a Project Quality Plan to direct its personnel and Subcontractors about the specific quality practices, management responsibility, resources, controls and checks that have to be implemented to complete the Contractor's Activities, which must include:

i) evidence of the Quality Management System;

ii) a statement of the Contractor's policy on quality management;

iii) the organisation structure for the management of the Project with details of the specific responsibilities and authorities of key personnel, including the responsibilities and authorities of the Construction Quality Representative with respect to quality matters;

iv) a register of Technical and System Procedures, giving title, identifier and revision status of all procedures necessary for execution of the Contractor's Activities;

v) the method(s) proposed to assure the quality of all Subcontractor's products or services in order to comply with the requirements of the Contract Documents;

vi) the approach to be taken regarding inspection and testing (including a register of Inspection and Test Plans) and the method of notification of all off-site testing and manufacture of items to be included in the permanent Works;

vii) a register of ITPs in accordance with section 5.5e);

viii) detail the method of arranging notification and release of Hold Points by the Principal (or the delegated party in accordance with section 6.1e)), with individual processes for:

A. all documentation, including Project Plans and Design Documentation (where applicable); and

B. construction quality inspections including where the Contract Documents include a design component, how the Designer will be involved; and

ix) details of the audit plan and schedule for the Quality Management System and all audits required by the Contract Documents, including external audits proposed for Subcontractors and suppliers.

b) The Project Quality Plan must be prepared, submitted and updated in accordance with PC-PM1 "Project Management and Reporting".

2.2 Document control

a) Where the Contract Document require an online Information Management System this section 2.2 does not apply.

b) Where the Contract Documents do not require an online Information Management System, as set out in PC-PM5 "Information Management", the requirements of this section 2.2 must as a minimum be complied with.

c) Controlled Documents include the quality procedures, Technical Procedures, Inspection and Test Plans, Project Plans and any other document specified as a Controlled Document.

d) Further to clause 7.5.3 "Control of Documented Information" in AS 9001, the Contractor must develop, implement and comply with the Controlled Documents.

e) Where a Controlled Documents is in draft status, the Contractor must develop the Controlled Document so that the final version is provided to the Principal within the timeframes specified in the Contract Documents. If no timeframe is specified, the Controlled Document must be provided at least 14 days prior to the commencement of any activity related to the relevant part of the Controlled Document.

f) Each Controlled Document must be submitted to the Principal and each submission will constitute a documentation **Hold Point**.

g) The Contractor must not proceed with, or proceed to implement, a Controlled Document until the Hold Point in section 2.2f) is released.

h) The Contractor acknowledges that the Controlled Documents may require ongoing development, amendment and updating throughout the Project.

i) The Contractor must update a Controlled Document as soon as practicable if it:

i) does not adequately address the requirements of the Contract Documents;

ii) is causing non-conformity; or

iii) no longer reflects the current practice of the Contractor.

j) The Principal owes no duty to the Contractor to review any Controlled Document submitted by the Contractor for compliance with the Contract Documents or Law.

k) The Contractor must provide copies of any proposed amendment to a Controlled Document prior to its implementation and the Hold Point set out in section 2.2f) will reapply. The Contractor's document control procedure must ensure that only the current version of a Controlled Document is used.

l) Contract Documents must be controlled by the Contractor.

2.3 As-Built Records

a) The Contractor must produce As-Built Records in accordance with the requirements of PC-CN2 “Asset Handover” and PC-EDM5 “Digital Engineering” (where applicable), that include:

i) where the Contract Documents include a design component (excluding standalone spray seal design or Temporary Works):

A. the Design Documentation, updated to reflect the as-constructed state;

B. a complete set of as-constructed drawings endorsed by the Designer;

C. a certificate from the Designer confirming the design intent has been achieved and complies with the requirements of the Contract Documents (in the form set out in the Designer’s certificate (available from: https://dit.sa.gov.au/standards/standards_and_guidelines));

D. the final Design Departures register and a copy of all Accepted Design Departures;

E. pre-opening and post-opening (post-completion) road safety audits in accordance with RD-GM-D2 “Road Safety Audits”; and

F. a table of contents, containing a full index of all drawings, documents, metadata and referenced models and computer aided design and drafting (CAD) files;

ii) Quality Management Records, including an index of the Quality Management Records;

iii) where the Principal has provided the Design Documentation, a ‘red line’ mark up of the Design Documentation that represents the constructed Works;

iv) the final Non-Conformance register and a copy of all accepted Non-Conformances;

v) Testing and Commissioning Reports;

vi) all as-built record requirements by Third Parties (as applicable to Third Party Assets); and

vii) all other relevant documents required by the Contract Documents.

b) As part of the As-Built Records, the Contractor must produce Quality Management Records which as a minimum include:

i) complete Inspection and Test Plans in accordance with sections 5.5 and 7.3;

ii) test results;

iii) for each component incorporated into the permanent Works, a complying factory acceptance test (FAT) certificate (as applicable);

iv) all certificates of compliance in accordance with all Laws, including the *Electricity Act 1996* (SA), *Water Industry Act 2012* (SA) and *South Australia Public Health Act 2011* (SA);

v) commissioning records;

vi) traceability detail in accordance with section 5.3;

vii) all warranties;

viii) Non-Conformance Reports in accordance with section 8;

ix) Corrective Action Requests in accordance with sections 8.2 and 9.2;

x) System Non-Conformance Reports in accordance with section 9;

xi) closed out Work Lots in accordance with section 7.4; and

xii) all other requirements of the Quality Management Records as set out in the Contract Documents.

c) The Construction Quality Representative must provide written notification to the Principal that the As-Built Records are compliant with the requirements of the Contract Documents as a condition precedent to Handover.

d) The Contractor must ensure that all Quality Management Records can be inspected at any time.

3 Quality Management System

a) The Contractor must establish, implement, maintain and audit a Quality Management System for the duration of the Contractor's Activities.

b) The Quality Management System may be integrated with other management systems.

c) The Quality Management System must be used throughout the course of the Project to ensure that the quality of the Contractor's and any Subcontractor's work complies with the requirements of the Contract Documents.

d) The Quality Management System must at a minimum:

i) subject to section 3f), be compliant with AS/NZS ISO 9001 Quality Management Systems - Requirements;

ii) include process inputs (e.g. purchased product, constituent materials and Subcontractor work) that are validated as meeting the requirements of the Contract Documents before being incorporated into the Works and Temporary Works;

iii) include work processes (including use of suitable equipment and work methods and the availability of adequately trained personnel) that will result in a conforming product;

iv) have appropriate procedures in place which document how processes will be carried out, who is responsible for the activities that constitute the process and how interfacing between different activities and responsibilities is achieved;

v) include work processes that are validated as conforming with the Quality Management System and the requirements of the Contract Documents;

vi) include the Project Quality Plan and all Controlled Documents (including referenced procedures);

vii) ensure completed Works and Temporary Works are validated as conforming with the requirements of the Contract Documents;

viii) ensure non-conforming processes and products are identified and controlled;

ix) comply with PC-PM5 "Information Management" and PC-EDM5 "Digital Engineering" (where applicable);

x) be capable of ensuring Quality Management Records demonstrating compliance with the Quality Management System are generated and provided to the Principal; and

xi) be fully accessible by the Principal and its Associates and the Independent Design Certifier (as applicable).

e) The Contractor must provide the Quality Management Records in PDF format and, where applicable, in accordance with the native format specified in PC-PM5 "Information Management" and PC-EDM5 "Digital Engineering" (where applicable).

f) Where the Contract Documents do not include a design component (excluding standalone spray seal design or Temporary Works), the Quality Management System is not required to comply with the design and development requirements of AS 9001 Quality Management Systems - Requirements.

4 Management responsibility and authority

4.1 Engineering Authority

The Contractor must liaise with the Principal where the Contract Documents require liaising with the Engineering Authority.

4.2 Contractor's responsibility

The Contractor will not be relieved from any of its obligations, responsibilities or liabilities under the Contract Documents or any applicable Laws by:

a) the implementation and compliance with any part of the Quality Management System;

b) the acceptance or approval (or non-acceptance or non-approval) of any part of the Project Quality Plan by any person authorised under the Contract Documents to approve or accept work;

c) acceptance of the Contractor's disposition for Non-Conformances and System Non-Conformances;

d) compliance with any Witness Point or Hold Point processes; or

e) the failure by any person to detect any Defect or error in the Contractor's work or documentation at a Witness Point or Hold Point or during surveillance, inspections or audit.

4.3 Construction Quality Representative

a) The Contractor must appoint a Construction Quality Representative.

b) At all times, the duties of the Construction Quality Representative, with regard to ensuring compliance with this Master Specification Part, will take precedence over any other activity undertaken by the Construction Quality Representative.

c) The Construction Quality Representative must be available to attend meetings on Site within 24 hours' notice by the Principal or Independent Design Certifier (as applicable).

4.4 Principal and Independent Design Certifier activities and audits

4.4.1 General

a) The Contractor must allow the Principal, the Independent Design Certifier (as applicable) and any person authorised by the Principal to undertake inspection, audit, surveillance, assessment and photographic recording of the Contractor's Activities

b) The Contractor must provide all reasonable assistance and access required for the purpose of undertaking the activities set out in section 4.4.1a), and providing access to Quality Management Records and other relevant documentation.

4.4.2 Quality Management System audits

The Principal or the Independent Design Certifier (as applicable):

a) may undertake Quality Management System audits to review any aspect of the Quality Management System, its implementation and performance;

b) must provide 5 Business Days' notice of an audit of the Quality Management System; and

c) may audit Technical Procedures and the Contractor's Activities without notice.

4.4.3 Product audits

a) Where the Contract Documents require the Contractor to provide samples, the samples must be delivered to a facility as nominated by the Principal in the Adelaide metropolitan area, where the samples will be stored by the Principal.

b) All samples provided to the Principal must be clearly marked and be traceable to the relevant Work Lot in accordance with section 5.3.

c) For all samples provided to the Principal, the Contractor must provide documentation to confirm that the samples have been received by the Principal, and include this documentation in the relevant Work Lot.

5 Planning for quality outcomes

5.1 General

a) The Contractor must plan the procedures, processes, systems, tests, inspections, acceptance criteria and resources needed to ensure the Contractor's Activities comply with the Contract Documents.

b) The Contractor must ensure that all Works and Temporary Works are inspected to ensure that the Works and Temporary Works comply with the Construction Documentation, including the Design Documentation.

5.2 Responsibility for testing

The Contractor must verify that all products comply with the manufacturer's and supplier's product manuals, instructions and specifications, including completing all necessary testing, inspection, commissioning, sampling and analysis (as applicable) to provide evidence of compliance with the Contract Documents.

5.3 Traceability

The Contractor must ensure that all materials, work processes and activities are appropriately traceable to demonstrate compliance throughout the product lifecycle including as part of the As-Built Records, Construction Documentation, and during the supply, manufacture, installation and at the time and location when the product is incorporated into the Works.

5.4 Identification of Work Lots

5.4.1 Work Lot requirements

a) All Works must be sub-divided into Work Lots of discrete work.

b) The Contractor must determine and document the bounds of each Work Lot, which must:

i) consist of a continuous portion of homogenous or representative material, Works activity or process, produced under essentially consistent conditions; and

ii) where discrete portions of a Work Lot are visually non-homogenous or non-representative they must be excluded from the Work Lot and must be treated as a separate Work Lot.

c) The Contractor must develop and implement a Work Lot management system, which:

i) enables each Work Lot to be identified on Site;

ii) provides a unique Work Lot number compatible with any item numbers in the payment schedule;

iii) records measurements and quantities (as applicable) associated with the Work Lot;

iv) records the part numbers and individual serial numbers (as applicable) of manufactured items incorporated into the Works;

v) identifies all Quality Management Records associated with the Work Lot;

vi) includes a Work Lot Register which must record:

A. the location of the Work Lot by start and finish chainages, easting and northings or with lateral location (as applicable); and

B. all Quality Management Records associated with the Work Lot;

vii) records the status of the Work Lot, including the status of any Non-Conformances and Corrective Action Requests; and

viii) enables recording of endorsement that a Work Lot is closed in accordance with section 7.4.

d) The Contractor must include all test reports in the relevant Work Lot and must make available at all times all test reports to the Principal no later than 10 Business Days after completion of each test.

e) The Work Lot Register must be updated to reflect the Work Lot status of the Contractor's Activities, made available at all times to the Principal and submitted monthly, which will constitute a **Witness Point**.

5.4.2 Design alignment with Work Lots

a) Where the Contract Documents include a design component (excluding standalone spray seal design or Temporary Works):

i) the Contractor must develop Design Packages in accordance with PC-EDM1 "Design Management"; and

ii) Work Lots must be compatible with, and aligned to, the Design Packages to enable traceability of the Works.

b) Where the Principal has provided the Design Documentation, Work Lots must be compatible with, and aligned to, the Design Documentation to enable traceability of the Works.

5.5 Inspection and Test Plans and ITP Forms

a) The Contractor must develop, implement, maintain and comply with a standard set of Inspection and Test Plans (ITPs) that are consistent across the Works for the same types of construction activities.

b) The details for the acceptance criteria and frequency of inspection and testing detailed on the ITP must replicate the nominated requirements of the Contract Documents, including the Reference Documents, all relevant Master Specification Parts, the Design Documentation and the Construction Documentation.

c) The Inspection and Test Plans must include:

i) a description of the activity and identification of applicable activities (inspection, testing, commissioning, sampling, analysis activity);

ii) all necessary extracts and requirements from the Reference Documents and the Contract Documents to ensure the person signing the ITP is clear of the requirement being signed, including:

A. the applicable sections of the Contract Documents; and

B. applicable test procedures, methods or Reference Documents used for the testing (as applicable);

iii) details of the method of verification for all specified requirements of the Contract Documents, including those where verification is by control of process rather than inspection and testing at process completion;

iv) the test frequency, acceptance criteria and records produced to demonstrate compliance;

v) details of the test equipment, and where calibrated equipment is required, the calibration regime;

vi) the responsibility for inspection, testing, commissioning, sampling, analysis activity (as applicable) and responsibility for acceptance of the relevant activity;

vii) any applicable Witness Points or Hold Points;

viii) details of any environmental conditions or external factors that may affect the results;

ix) identification of the involvement of any Subcontractors in the process; and

x) the ITP Form.

d) The draft ITP must be submitted to the Principal for review which will constitute a **Hold Point**. Each ITP must not be used until this Hold Point is released.

e) The Contractor must maintain a register of ITPs and include it in the Project Quality Plan.

f) The ITP Forms must as a minimum include the following details in relation to the inspection, testing, commissioning, sampling or analysis activity (as applicable):

i) the location of the activity;

ii) the name of the person undertaking the activity;

iii) the date and time of the activity;

iv) relevant details of the test sample (e.g. type and sample number);

v) the outcome of the activity;

vi) any other comments required to clarify the requirements;

vii) details of any environmental conditions or external factors that may affect the results; and

viii) a location to record approval of Hold Points and endorsement of Witness Points.

5.6 Frequency of testing or inspections

a) The Contractor must determine the frequency of inspections, testing, commissioning, sampling, analysis activity (as applicable) that is appropriate to verify compliance based on its organisational knowledge, and which is no less than that stated in the Contract Documents, including the Reference Documents.

b) Where the Contract Documents defines no minimum frequency of inspection, testing, commissioning, sampling or analysis activity (as applicable), the Contractor must nominate appropriate frequencies in the ITP.

c) Where the Contractor can demonstrate consistent process capability, the Contractor may submit a proposal to the Principal to reduce the specified minimum frequency of inspection, testing, commissioning, sampling or analysis (as applicable) as long as the proposed reduction is no greater than 50% of the specified minimum frequency (unless otherwise allowed by the Contract Documents). The submission of the proposal constitutes a **Hold Point**. The reduction of the specified minimum frequency must not occur until the Hold Point is released.

d) Where a Non-Conformance is detected in a material, work process or activity that has reduced requirements in accordance with section 5.6c), the prior acceptance of reduced requirements in accordance with section 5.6c) will be deemed to be invalid, and the minimum frequency of inspections, testing, commissioning, sampling, analysis activity with respect to that material,

work process or activity (as applicable) in accordance with the Contract Documents must be met.

6 Hold Points and Witness Points

6.1 General requirements

a) A Hold Point or Witness Point (as applicable) is reached when:

   i) all information demonstrating compliance with the relevant Hold Point or Witness Point requirement (as applicable) has been provided in an appropriate format to the Principal and any other nominated party; and

   ii) for construction quality inspection Hold Points or Witness Points (as applicable) the Works are complete as required to enable the required inspection to take place and the Designer has been involved in accordance with the Project Quality Plan and PC-EDM1 “Design Management”.

b) The Contractor is deemed to have allowed for all Hold Points and Witness Points in the Contract Program.

c) The Contractor must not proceed beyond a Hold Point without the Principal (or delegated authority) releasing the Hold Point in accordance with this Master Specification Part.

d) The Contractor must not proceed beyond a Witness Point where the Principal has provided comment in accordance with section 6.2.1 or has advised the Contractor why the Witness Point cannot be released in accordance with 6.3.3 and until:

   i) the Witness Point has been reached in accordance with section 6.1a); and

   ii) either:

      A. the specified period for the relevant Witness Point has elapsed and the Principal has neither released the Witness Point nor provided comment; or

      B. the Principal has released the Witness Point in accordance with section 6.2.1 or 6.3.3 (as applicable).

e) The Principal may delegate authority for the release of Hold Points and Witness Points.

f) Where the Contractor’s Activities associated with a Hold Point or Witness Point (as applicable) are not in accordance with the requirements of the Contract Documents, the Principal may issue a Corrective Action Request to the Contractor for rectification, re-work and re-submission (as applicable) of the stated activity associated with the Hold Point or Witness Point (as applicable).

g) Where the Principal elects not to review or inspect an activity associated with a Witness Point, and the Contractor continues beyond the Witness Point in accordance with section 6.1d):

   i) all work beyond the Witness Point is entirely at the Contractor’s risk;

   ii) it does not constitute an endorsement by the Principal of the Contractor’s Activities the subject of the Witness Point;

   iii) the Contractor must record evidence of compliance of the relevant activity and where related to the Works include the evidence in the relevant Work Lot; and

   iv) the Principal reserves the right to deem the relevant Contractor’s Activities as a Non-Conformance where the Contractor’s Activities are not compliant with the Contract Documents.

h) The designation of each Hold Point and Witness Point as either documentation or construction quality is set out in the relevant table of each Master Specification Part.

i) The Principal's approval of a Hold Point or endorsement of a Witness Point does not relieve the Contractor of responsibility for satisfactory execution or performance of the Contractor's Activities in accordance with the Contract Documents.

6.2 Hold Point and Witness Points relating to documentation

6.2.1 Review of documentation

a) Where comments (excluding where conditions have been provided for Design Documentation submissions in accordance with PC-EDM1 "Design Management") have been provided on the submitted document, the Contractor must resubmit the document and the requirements of this section 6 will reapply for the submitted document.

b) The Contractor may proceed beyond the Witness Point not related to construction quality inspections where the Principal has neither released the Witness Point nor provided comment within the applicable review period.

6.2.2 Review period

The review period after the date that all the relevant details and information from the Contractor in accordance with section 6.1a) has been received, that applies for the Principal for the relevant Hold Point or Witness Point related to documentation is:

a) where the period is nominated in the Hold Point or Witness Point table (as applicable), as set out in the relevant Master Specification Part;

b) where a period of 'as required' is expressly specified, no time limit will apply; or

c) where no period is expressly specified in the Hold Point or Witness Point table (as applicable) in the relevant Master Specification Part, then 10 Business Days.

6.3 Hold Points and Witness Points relating to construction quality inspections

6.3.1 General

This section 6.3 only applies for construction quality inspection related Hold Points and Witness Points and excludes all Hold Points and Witness Points related to documentation covered in section 6.2.

6.3.2 Notification

a) The notification period after the date that all the relevant details and information from the Contractor in accordance with section 6.1a) has been received, for the relevant party that applies for the relevant Hold Point or Witness Point related to construction quality is the reasonable time for travel in addition to:

   i) where the period is nominated in the Hold Point or Witness Point table (as applicable), as set out in the relevant Master Specification Part, that period; and

   ii) where no period is expressly specified in the Hold Point or Witness Point table (as applicable), as set out in the relevant Master Specification Part, then 2 workings days.

b) Where the requirements of section 6.1a) are not met at the time of the relevant Hold Point or Witness Point (as applicable) notification, the notification requirements in accordance with this section 6 will reapply to the relevant Hold Point or Witness Point (as applicable).

6.3.3 Inspection and release of Hold Points and Witness Points relating to construction quality inspections

a) Where the Contractor has been advised that the Hold Point or Witness Point (as applicable) has not been released in accordance with this Master Specification Part the Contractor must re-notify the review parties in accordance with this section 6 and this section 6 will reapply.

b) The Contractor may proceed beyond the Witness Point related to construction quality where the Principal has not released a Witness Point and not provided comment.

7 Provision and production of the Works

7.1 General

The Contractor must implement the procedures, processes, systems, tests, inspections, analysis, sampling, acceptance criteria and resources to provide, produce and complete the Works in accordance with the Contract Documents.

7.2 Control of monitoring, testing and measuring devices

7.2.1 General

a) Sampling and verification testing of Works and products must be conducted by laboratories appropriately accredited by NATA.

b) The NATA accredited laboratories utilised for sampling and verification testing of Works and products must utilise Department Test Procedures and Reference Documents referred to in the Contract Documents.

c) The Contractor must use the test methods and procedures for verification testing set out in the Contract Documents, including the Reference Documents.

7.2.2 Inspection, measuring and test equipment

a) The Contractor must maintain a schedule of calibrated inspection, measuring and test equipment to be used for the Works, which must include the date of last calibration and next due calibration.

b) Where an item is calibrated or recalibrated during the carrying out of the Works, the Contractor must submit:

i) advice of the results;

ii) details of any adjustments made to the equipment; and

iii) the effects any adjustments have had on work completed since the previous calibration,

which will constitute a **Witness Point**.

c) Inspection, measuring and test equipment must be capable of producing the degree of accuracy specified in the Contract Documents, including the Reference Documents and all applicable industry standards.

d) All inspection, measuring and test equipment must have a self-adhesive calibration identification label which clearly identifies the serial number of the equipment, the date when calibrated and the expiry date of the calibration.

7.3 Inspections and testing

7.3.1 General

a) The Contractor must utilise the Inspection and Test Plans to validate all Works, and to demonstrate the completed Works comply with the Contract Documents.

b) The Contractor must manage the implementation of Subcontractors' Inspection and Test Plans to validate the Works. For the avoidance of doubt all Subcontractor Inspection and Test Plans must comply with the requirements in this Master Specification Part, including section 5.5.

c) The inspection, test and verification Quality Management Records, including completed Inspection and Test Plans and ITP Forms for each Work Lot must:

i) clearly complete the information on the Work Lot and testing as detailed in the ITP;

ii) clearly identify the actual results obtained from any inspection and test;

iii) demonstrate conformity with the specified requirements; and

iv) demonstrate the control of any Non-Conformance is addressed.

d) Quality Management Records, including ITPs must be progressively maintained and updated as results of the inspection and testing are achieved.

e) Quality Management Records, including ITPs must be available at all times, including on site for review and evaluation by the Principal.

f) All samples taken must be registered in a sample register.

g) Where a sample has been taken but not tested, the reason why must be recorded in the sample register.

7.3.2 Location and storage of inspection and test records

An electronic copy of Quality Management Records for all Works must be accessible to the Principal at all times and in accordance with PC-EDM5 “Digital Engineering” (where applicable).

7.4 Close out of Work Lots

a) Where the Works fail to pass any inspection, testing, commissioning, sampling or analysis activity, the Work Lot must not be closed out until the Non-Conformance has been rectified and closed out in accordance with the Contract Documents.

b) Subject to section 7.4c), Works must not be covered up before the associated Work Lot is closed out in accordance with section 7.4d).

c) Where the Contractor is required to undertake compliance testing that is likely to take over 48 hours to complete and the Contractor proposes to cover up Works before the associated Work Lot is closed out in accordance with section 7.4d), the Contractor must submit the following information which will constitute a **Witness Point**:

i) the anticipated timing to obtain compliance testing results;

ii) a documented method detailing how the Works that are proposed to be covered up will be identified, traced, recorded and promptly verified;

iii) a description of remedial action or re-work that will be undertaken if compliance with the Contract Documents is not achieved;

iv) demonstrated evidence (on the basis of past work) that the risk (including probability and consequence) of the failure of the Works is low; and

v) details of the closure method to close out the Work Lot after verifying the Works are compliant.

d) Work Lots must not be closed out and the product not released or used until:

i) the Contractor makes available to the Principal the completed records for the Work Lot and demonstrates evidence that the Work Lot is compliant;

ii) the Construction Quality Representative has reviewed the relevant Work Lot and associated Quality Management Records and has included written confirmation in the relevant Work Lot that the Work Lot complies with the requirements of the Contract Documents; and

iii) it is demonstrated that all relevant applicable Hold Points and Witness Points for the Work Lot have been released in accordance with the Contract Documents.

e) The Construction Quality Representative must certify each Work Lot within 3 working days of that Work Lot being completed.

f) Work Lots must be forwarded to the Principal within 1 working day of the certification by the Construction Quality Representative, which will constitute a **Witness Point**.

8 Control of Non-Conformances

8.1 General

a) The Contractor must identify and control all instances of the Works and Applicable Temporary Works not fulfilling a Contract Document requirement, including all Works that fail to achieve the requirements of AS/NZS ISO 9001 Quality Management Systems - Requirements, acceptance criteria in any inspection, test or audit (**Non-Conformance**).

b) Where a Non-Conformance is identified by the Contractor, the Contractor must submit a Non-Conformance Notice to the Principal within 1 working day of the Non-Conformance being identified.

c) Where a Non-Conformance is identified by the Principal, a Corrective Action Request will be issued to the Contractor in accordance with section 8.2, and the Contractor must subsequently issue a Non-Conformance Notice to the Principal within 1 working day following receipt of the Corrective Action Request.

d) The Non-Conformance Notice issued in accordance with sections 8.1b) or 8.1c) must comply with the Quality Management System and include:

   i) a description and details of the Non-Conformance; and

   ii) information of the non-conforming Work Lot.

e) The Non-Conformance Report must:

   i) be submitted to the Principal for each Non-Conformance;

   ii) comply with the Quality Management System;

   iii) not relate to more than one Work Lot;

   iv) be submitted as soon as reasonably practical; and

   v) include:

      A. information of the non-conforming Work Lot;

      B. a description and details of the Non-Conformance;

      C. relevant Quality Management Records, including inspection, test records and calculations (as applicable);

      D. the proposed remediation actions, methods and concessions (as applicable); and

      E. where the disposition of a Non-Conformance Report proposes a dispensation to a design standard, the Design Departure process in accordance with PC-EDM1 “Design Management” must be followed and the accepted Design Departure Application must be included.

f) The Non-Conformance Report to be submitted in accordance with section 8.1e) will constitute a **Hold Point**.

g) Where a Non-Conformance has been identified in accordance with sections 8.1b) or 8.1c), the Contractor must not proceed with any rectification work, covering up of non-conforming Works or any subsequent Works until the proposed Non-Conformance Report Hold Point in accordance with section 8.1f) has been released.

8.2 Corrective Action Requests

a) In the event of a Non-Conformance being observed by the Principal, the Principal may issue a Corrective Action Request to the Contractor.

b) The Contractor must address each Corrective Action Request in accordance with AS/NZS ISO 9001 - Quality Management Systems - Requirements and the Quality Management System.

8.3 Acceptance of Non-Conformances

a) Following the release of the Hold Point in accordance with section 8.1f) all required rectification Works related to the Non-Conformance Report will remain subject to the requirements of the Contract Documents.

b) Following rectification of the Non-Conformance, a **Hold Point** will apply. The Contractor must not proceed with any Works that may cover up the rectification until this Hold Point has been released.

9 Control of System Non-Conformances

9.1 General

a) This section 9 does not apply to any activities that can be classified as Design Departures, Defects or Non-Conformances.

b) The Contractor must identify and control all Contractor's Activities that fail to achieve the requirements of the Contract Documents, including those that fail to achieve the requirements of AS / NZS ISO 9001 Quality Management Systems - Requirements (**System Non-Conformance**).

c) Where a System Non-Conformance is identified by the Contractor, the Contractor must submit a System Non-Conformance Notice to the Principal within 2 Business Days of the System Non-Conformance being identified.

d) Where a System Non-Conformance is identified by the Principal, a Corrective Action Request will be issued to the Contractor in accordance with section 9.2, and the Contractor must subsequently issue a System Non-Conformance Notice to the Principal within 2 Business Days following receipt of the Corrective Action Request.

e) The System Non-Conformance Notice issued in accordance with sections 9.1c) or 9.1d) must comply with the Quality Management System and include a description and details of the System Non-Conformance.

f) Each System Non-Conformance Report must:

   i) be submitted to the Principal for each System Non-Conformance;

   ii) comply with the Quality Management System;

   iii) be submitted in a timely manner in accordance with Best Industry Practice; and

   iv) include:

      A. a description and details of the System Non-Conformance;

      B. details of how the System Non-Conformance is being addressed together with, if relevant to the System Non-Conformance, an assessment of the risks associated with the relevant requirement not being complied with; and

      C. the proposed remediation actions, methods and concessions (as applicable).

g) The Contractor must review and analyse the cause of all System Non-Conformances and develop a plan of corrective actions to minimise the likelihood of recurrence, which must be included with the System Non-Conformance Report submitted in accordance with section 9.1f).

9.2 Corrective Action Request

a) In the event of a System Non-Conformance being identified by the Principal, the Principal may issue a Corrective Action Request to the Contractor.

b) The Contractor must address each Corrective Action Request in accordance with AS/NZS ISO 9001 - Quality Management Systems - Requirements and the Quality Management System.

9.3 Acceptance of System Non-Conformance

The System Non-Conformance Report submission in accordance with section 9.1f) will constitute a **Hold Point**.

10 Hold Points and Witness Points

a) Table PC-QA1 10-1 details the review period or notification period, and type (documentation or construction quality) for each Hold Point referenced in this Master Specification Part.

b) Table PC-QA1 10-2 details the review period or notification period, and type (documentation or construction quality) for each Witness Point referenced in this Master Specification Part.

Table PC-QA1 10-1 Hold Points

Section reference	Hold Point	Documentation or construction quality	Review period or notification period
2.2f)	Submission of Controlled Documents	Documentation	10 Business Days review
5.5d)	ITP	Documentation	10 Business Days review
5.6c)	Reduced minimum frequency of testing or inspections	Documentation	5 Business Days review
8.1f)	Non-Conformance Report	Documentation	10 Business Days review
8.3b)	Rectification of Non-Conformance	Construction quality	10 days notification
9.3	System Non-Conformance Report	Documentation	10 Business Days review

Table PC-QA1 10-2 Witness Points

Section reference	Witness Point	Documentation or construction quality	Review period or notification period
5.4.1e)	Work Lot Register	Documentation	10 Business Days review
7.2.2b)	Calibrated or recalibrated inspection, measuring and test equipment records	Documentation	10 Business Days review
7.4c)	Covering up of Works	Documentation	10 Business Days review
7.4f)	Work Lot	Documentation	10 Business Days review