MY HOME CONSTRUCTIONS (P) Ltd.

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QA&QC FUNCTIONAL PROCEDURE

Document No: MHCPL-FP-QA&QC		Rev-01, Revision Date: 15-04-2025	
Prepared by	**Reviewed by**	**Approved by**	**Issued By**
Associate Manager	AVP-Corp QA/QC Head	Director (Projects)	MR
Date:	Date:	Date:	Date:

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1. Revision history

Date	Rev No	Reason for Change	Prepared	Approved
01-07-2019	00	Initial release of functional procedure by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018	Manager - QA&QC	HOD-QA&QC
15-04-2025	01	Regular Review and added & table of contents and a list of procedure elements	Manager - QA&QC	HOD-QA&QC

2. List of Functional Procedures

Sl. NO	Name of the procedure	Documents No	Rev NO	Effective date
1	Project QA/QC Guidelines	MHCPL-QA&QC-GL	00	01/07/2019
2	Method Statement for VDF	MHCPL/MS/VDF/001	R0	10/10/2023
3	Method Statement for Installation of Marble/ Granite	MHCPL/MS/GM/002	R0	30/01/2024
4	Method Statement for UPVC & Aluminium Works	MHCPL/MS/UA/003	R0	05/04/2024
5	MS for Gypsum Plastering Works	MHCPL/MS/GPW/004	R0	29/12/2023
6	MS for Cement Plastering Works	MHCPL/MS/PL/005	R0	10/01/2023
7	MS for AAC Block Work	MHCPL/MS/BW/006	R0	29/12/2023
8	Method Statement for Wooden Doors	MHCPL/MS/WD/007	R0	06/04/2024
9	Method Statement for Installation of Tiles for Flooring and Dado	MHCPL/MS/TW/008	R0	26/06/2023
10	Method Statement for False Ceiling works	MHCPL/MS/UA/009	R0	05/04/2024
11	Method Statement for Painting Works Internal & External	MHCPL/MS/PW/010	R0	06/04/2023

3. PURPOSE

The purpose of this procedure is to specify the principles for the inspection and testing of materials, product and construction works to be carried out in order to verify the compliance to the legal requirements, contract and technical specification requirements and approved inspection and test plans.

4. SCOPE

This procedure covers all monitoring, measurement, analysis, tests and controls applied for the purpose of inspection and testing of construction materials and works.

5. DEFINITIONS

- ITP - Inspection and Test Plan: A document derived from the specified requirements, including method statements, drawings, procedures and specifications, setting out the sequence of operations and their associated inspection and test requirements for a particular product, service, contract or project, or specific part thereof, together with acceptance criteria.
- Verification: Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled.
- Inspection: Conformity evaluation by observation and judgment accompanied as appropriate by measurement, testing or gauging.

6. RESPONSIBILITIES

6.1 Quality Manager:

- Review and confirm compliance of contractor, supplier, manufacturer project quality documents (quality plans, method statements, ITPs) to contract requirements.
- Ensure that a control system is established for the incoming materials and construction works.
- Assign QC Engineer / Inspector for incoming materials and construction works verification.

6.2 QA/QC Engineers / Inspectors:

- Conduct inspection, measurement, testing and analysis of data gathered to ensure that work is executed and performed according to approved quality documents (MS, ITP, Drawings, Specifications, etc.).
- Conduct inspection and checking incoming documents related to material against the requirements.
- Issue NCR as necessary and ensuring non-conforming material/work is under control for unintended usage.

6.3 Construction Incharge:

Responsible for the supervision, control, and monitoring of all field activities related to physical installation, fabrication and construction to the project

6.4 Site Engineers:

Responsible for the supervision, coordination and monitoring all site construction works assigned to a particular discipline and facility. Request and coordinate with QC department regarding inspection of materials or works based on the approved ITP.

7. PROCEDURE

7.1 Preparation of Inspection and Test Plans

Inspection and test plans shall be prepared to include the following information and/or refer to related documents.

- Work item to be inspected and tested.
- Inspection and testing activity.
- Inspection and testing frequency.
- Personnel responsible for inspection and testing (participating parties depending on the type of inspection).
- Acceptance criteria.
- Documents for recording the details of the inspection and test.

The ITPs shall be documented in the format that complies with the project terms.

The inspection and test plan of contractor, supplier, manufacturer prepared shall be reviewed by the Project QA/QC Department and submitted to the Project Director for approval.

The relevant Project Discipline Manager (in coordination with the contractor / supplier) ensures that the inspection and test plan is prepared.

Inspection and test plans shall be numbered in accordance with document and data control procedure by relevant disciplines in coordination with document control department.

Following the approval by the Project Director, the inspection and test plan shall be submitted to the Consultant for approval by document control department. The approval status of the inspection and test plans shall be monitored in accordance with document and data control procedure by document control department.

7.2 Inspection Type:

The inspections types regarding responsibility of the all parties are as follows:

Hold Point (H): The responsible party has to perform this check and it needs to be successful in order to proceed to the next stage.

Witness Point (W): The responsible party has to be informed that a check is being performed but its presences and signature is not obligatory to move on to the next stage.

Surveillance (S): The responsible party has to conduct surveillance monitoring of the activity without formal request for inspection.

Review (R): The responsible party has to only review the inspection records that checks have been done and it passed. No notification required for this inspection.

7.3 QA/QC Personnel Qualification

Inspections and tests shall be carried out in compliance with the documents prepared by the personnel who have the sufficient qualification in this field.

Project Management employs QA/QC Engineers/Inspectors, who are qualified, trained and experienced in their own disciplines and fields.

It is ensured that inspection and tests for special processes (welding, brazing etc.) are carried out by QA/QC personnel with relevant experience, training and certificates required in this field.

Third Party Inspection Firms are hired if required in the technical specifications. In such cases, it is ensured that third party inspection companies are accredited in their fields and the training, experience, certificates and qualifications of the personnel are reviewed.

Necessary trainings are provided for the QA/QC personnel by the Project Quality Department on project specifications, method statements, inspection and test plans etc.

7.4 Material Inspection and Testing Procedure

The materials are kept in an appropriate place and the usage is prohibited until they are inspected. Whenever Materials are arrived to the main gate, the security personnel on duty shall intimate to storekeeper after they complete their security checks and stamp on the delivery challan with date and sign and handover the delivery ticket to the storekeeper. Store keeper shall inform the QA/QC team for inspection of the received material immediately upon receiving the materials on site prior to unloading and after they have ensured the materials quantity and the source are as per the approved material submittal and/or Purchase order/ approved Bill of Quantities.

Following methods are used as applicable when checking the materials upon receipt:

- Checking whether the materials delivered are as approved material submittal and/or Good For Construction (GFC) drawings or technical specifications/ applicable Bureau of Indian (BIS) or other international standards.
- Checking the Label (Dispatch Note): Descriptive information on incoming materials is checked to ensure compliance with the materials ordered. At this stage, the shelf life of the materials is also checked if applicable.
- Checking the Certificates: This involves checking the document (delivered with the material and/or separately) detailing the technical specifications of the material based on the manufacturing lot number or conducted tests / inspections. It is applicable in cases where the material specifications are to be within a specific range of tolerance values and when their combination is also vital.
- Visual Inspection: Incoming materials are inspected visually for packaging, appearance, accuracy of weight, color match and other characteristics to ensure that they are the right materials and undamaged.
- Test Production / Function Test: A sample of incoming material is used in production to check their compliance with the requirements of the project.
- Measuring: Incoming materials are subjected to certain measurements, inspections and tests carried out in certain conditions using specific inspection and test equipments.

All materials accepted, including the ones supplied by the Employer, are subjected to checking.

Upon satisfactory internal quality control inspection QC inspector/Material Inspector shall submit the Material Inspection Request (MIR) through **Aconex mail type** to the consultant with 24hours notice. Next day QC/Material Inspector shall coordinate with consultant and ensure MIR is approved and in case if samples to be collected for testing then a separate work inspection request shall be raised based on consultant comments or as per the frequency mentioned in the project specifications.

The decisions given below may be taken as a result of the material inspection process:

- Acceptance of the product: The product meets all requirements. It is approved for use.
- Rejection of the product: The product does not meet requirements. It is returned to the supplier. In case

of any delay in returning to supplier store keeper shall shift these rejected materials to quarantine area.

- Conditional acceptance of the product: The product meets some of the requirements. However, the product may be approved for use after certain adjustments.

7.5 Work Inspection and Testing Procedure

The work inspection requests shall be issued by Site Engineers after ensuring that works are ready in accordance with specification requirements, approved drawings, Method Statements and ITPs. The Site Engineer concerned shall provide required information in the attachment of the inspection request including requested inspection time with 24hours advance notification, precise location with grid lines, highlighted approved shop drawings, checklists etc. and forward to QA/QC team for processing. If the QC Inspector in charge of the work is satisfied with the work under consideration, the WIR information shall be entered in the inspection schedule. The inspection schedule shall be forwarded to the Consultant in order to ensure that the Consultant is notified in advance as per contract requirements. The WIR shall be signed by all parties after inspection and it shall be forwarded to the Document Controller for filing.

A preparatory inspection is carried out by the QC Engineer/Inspector in relation to the inspection and test followed by;

- Review of the contract and appendixes, technical specifications.
- Review of approved shop drawings and documents submitted for approval (method statements, inspection and test plans, material and sample approvals etc.).
- Checking that the required inspection and tests are ready.
- Ensuring that the materials and equipment comply with the approved shop drawings and documents submitted for approval.
- Ensuring that necessary preparations are finalized.

Initial inspection is carried out in accordance with the inspection and test plans upon notification (if required) to the Consultant by the relevant QC Engineer / Inspector depending on the type of inspection.

The quality of the workmanship is examined and checked whether or not there is a fault or measurement error and registered under WIR – Work Inspection Request. A follow-up inspection is also carried out if necessary.

All inspections and tests carried out are monitored by the relevant QC Engineer / Inspector with the IR Register and the results are reported to the Project Director as a monthly Project Quality Report.

Non-conformities encountered as a result of the inspections and tests are managed in accordance with the *Control of Non-Conforming Product Procedure.*

7.6 Factory Acceptance Tests

Inspections and tests to be carried out at the manufacturer's premises are specified by the Project Quality Department in line with the technical specifications and inspection and test plans.

These inspection and tests are notified to the Consultant in advance as per the contract conditions.

Inspections and tests are carried out by the assigned QA/QC Engineer / Inspector (with participation of the Consultant depending on the type of inspection) in accordance with technical specifications, approved shop drawings, inspection and test plans and material approvals, results are reported.

In the event that the technical specifications require the factory tests to be carried out by third party inspection firms, it ensured that these firms are accredited (ISO 17020 etc.) and that their personnel

qualifications, inspection procedures and programs are efficient. If necessary, the Consultant approval is also obtained in the selection of the firm to be hired.

Technical specifications, approved drawings and documents submitted for approval (inspection and test plans, material approvals etc.) are forwarded to the Third-Party Inspection Firm selected.

Required inspection and tests are carried out by the Third-Party Inspection Firm at the manufacturer's premises, all data and documents to show the conformity of the material/equipment manufactured to the requirements are reviewed and gathered.

Following the above, the Third-Party Inspection Firm prepares an Inspection Report and sends it to project team and/or the Consultant.

The material/equipment is approved for loading once the inspection results are confirmed to be in compliance with the requirements. In the event of non-conformance raised as a result of the inspection, the manufacturer is asked by project team to carry out necessary adjustments/corrective actions.

The Third-Party Inspection Firm is asked to carry out the inspection again upon finalization of the adjustments/corrective actions. The Third-Party Inspection Firm makes a final reporting to project team and the Consultant if required, including all tests, reports and relevant documents.

7.7 Reporting

The Quality Manager shall prepare weekly & monthly Project Quality Report including results and statistics of all inspections and tests conducted. This report shall be shared with Project Management and Head Office Quality Department.

Inspection and testing process risks and opportunities shall be identified, assessed and treated regarding project risk management procedure.

7.8 RELATED DOCUMENTS

1. Flowchart for Inspection and Testing
2. Project QA&QC Guidelines
3. Inspection & Test Plan (ITP) for Works
4. Materials Testing Frequency Plan (MTP) for Materials
5. Material Inspection Request (MIR)
6. Work Inspection Request (WIR)
7. Project Quality Report
8. HIRA
9. EAIA