"The Mark Of Excellence"

PROJECT QUALITY PLAN

Contents

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BIDDER'S POLICY STATEMENT

In order to achieve the objectives of this Project, it is the policy of BIDDER to maintain an effective and efficient Quality Management System planned and developed in conjunction with other management functions.

The assurance of Quality is fundamental to all works undertaken by BIDDER on the Project and shall be practiced by all of our project staff.

The defined commitment of each member of BIDDER is to work as a Team to achieve the objectives of the Client.

DATO' SERI CHONG WAN SIN
MANAGING DIRECTOR
K3-SYNERGY HOLDINGS (M) SDN BHD

1.0 INTRODUCTION

This Project Quality Plan has been developed by BIDDER in following with the Quality requirements of ISO Standards. The Quality Plan is tailored to meet the specific requirements of the construction and completion of the proposed Project to ensure that the Client's requirements are satisfied.

1.1 Objective of the Project Quality Plan

The objective of the Project Quality Plan is to ensure that all phases of the Project are executed with the highest level of Quality and efficiency satisfying the Client's requirements.

The Quality Plan shall be implemented with the full support of all personnel engaged on the Project.

2.0 QUALITY PLANNING

2.1 Quality Planning

Quality Planning activities have been incorporated into the Project Execution Plan and provisions have been made in the planning to ensure that documents required for downstream activities are prepared, issued for approval and before the planned activity is due to commence.

The Level I Quality Plan in the form of this Project Quality Plan is the first Quality document to explain in the Project Quality Objectives.

The Level II Quality Plan is in the form of BIDDER's Project Procedures which explain the Quality Activities in more detail.

The Level III Quality Plans are in the form of Work Instructions for an actual work process or specialized procedure that will be developed for a Special Quality Process such as Radiographic Examinations, Hydrostatic Testing as examples.

It is the responsibility of the QA Manager to maintain the Project Procedures current and effective throughout all stages of the Project. The Quality Control Officer at the work site is responsible to develop detailed Work Instructions as may be required for review and approval by the Project Manager and/or the QA Manager.

3.0 ORGANISATION AND RESPONSIBILITY

3.1 Scope

The Executive Board has delegated responsibilities to Management levels of the Project staff the complete authority to take the necessary actions to ensure conformance by all staff to BIDDER Quality System.

To satisfy the purpose of this Project Quality Plan, the word **"Responsibility"** shall mean "The actions which nominated personnel are responsible and accountable for".

3.2 Duties and Responsibilities

3.2.1 Project Director

The Project Director is authorised and empowered by BIDDER's Board of Directors to:-

- Represent BIDDER's interests in all aspects in the execution of the Project.
- Ensure the successful execution of the overall Project.
- Ensure that the Client's requirements are completely satisfied in terms of Quality, Safety, Schedule and performance in accordance with the Contract.

3.2.2 Project Manager

The Project Manager is appointed by the Project Director and is authorised to decide and take all necessary actions to ensure speedy, effective and economical completion of the Office Buildings Project. He is directly responsible to the Project Director for the success of the Project.

3.2.3 Engineering Manager

The Engineering Manager is responsible to the Project Manager for the implementation of the Project Execution Plan, the Project Engineering Procedures and all Engineering Standards and Codes applying to the Project.

3.2.4 Construction Manager

The Construction Manager is responsible to the Project Manager for all construction activities on the project. He is responsible for Quality Control within his area of work. His basic responsibilities includes:-

- Monitoring the performance of workers and Sub Contract personnel.
- Ensuring implementation of work Procedures applying to the Project.
- The preparation and issue of construction plans for overall construction.

3.2.5 Quality Assurance Manager

The Quality Assurance Manager reports to the Project Director. His responsibilities and authority with regard to Quality matters are directly delegated from the Board on all the Project activities undertaken by BIDDER . His responsibilities include:-

- The preparation, updating, amendments and issue of this Quality Plan.
- The review and approval of work Procedures and Instructions.
- To hold frequent Quality meetings with the Project Team.
- Monitor the status of implementation of the Project Quality Plan.
- Monitor the implementation of the Project Procedures.
- Review Quality concerns of the work process and make recommendations for improvements.

3.2.6 Quality Control Officer

The Quality Control Officer located at the job site reports to the Quality Assurance Manager. His responsibilities and authority with regard to Quality matters are on all Project site activities which include:-

- Keeping the QA Manager fully advised on Site Inspection activities.
- Submitting a Monthly Quality Control Report to the QA Manager.
- Monitoring implementation of the Project Quality Plan, Project Procedures.
- Maintaining a Log of Non Conformance reports and the status of resolutions.
- Making recommendations for action plans on recurring problems.
- Assigning site Inspection responsibilities to Site Quality Control Inspectors, monitoring their performance in the execution of their assigned responsibilities.
- Developing and implementing a site Quality Control and Inspection Plan for the approval of the Quality Assurance Manager.

3.2.7 Site Inspectors

The Site Inspectors are directly responsible to the Quality Control Officer. Their responsibilities include but not limited to the following:-

- Maintaining the implementation of the Quality Plan related to their work.
- Preparing Inspection Reports for Receiving Inspections, on-going site inspection activities and the witnessing of tests conducted at site.
- Reviewing material certifications and test data from Supplier Contractors
- Conducting QC audits on subcontractors engaged in construction activities as instructed by the QC Officer.

4.0 QUALITY SYSTEM

4.1 Quality System Procedures

The Project Procedures are to be implemented into the Project and shall equally apply to all Suppliers and Sub Contractors where relevant.

Copies of all applying Project Procedures are maintained in the Site QC Office.

4.2 Site Installation Quality Plans

When the purchase order covers site installation work, a separate Quality Plan shall be submitted to the Client detailing the specific site activities. This Plan shall consist of two sections as follows :-

Section 1
A site organisation description with responsibilities for Quality Control shall be clearly defined. An index of the Procedures and Work Instruction applicable to the activities to be performed.

Section 2
Site inspection and Test Plans shall list all site Quality Control activities from the receipt of material and/or equipment installation to the handover of the equipment. All specific inspections, tests and work activities together with control procedures, the acceptance criteria and Quality acceptance documentation that will be performed by a Supplier or Subcontractor on site, shall also be listed.

All Site Inspection and Test Plans shall be approved by the Client prior to the execution of any related activity.

4.3 Format and Approval of Inspection and Test Plans

The content and format of all Manufacturing/Site Inspection and Test Plans shall be subject to approval by the Project Manager.

Where necessary, separate procedures shall be developed for special processes that are not covered by routine procedures. These procedure shall then become part of the Project Quality System and Project Quality Records.

5.0 QUALITY ACTIVITIES

5.1 Contract Review

a) To review contract data supplied by Client and establish its suitability.

b) To establish the requirements of the project relevant to all disciplines and compile into a Project Procedure Manual document for the information of all personnel who are required to work on the project.

c) To establish a reference file of all project documents and to ensure that all changes to this data is controlled, authorised and distributed as necessary.

d) All Project documentation shall be in strict accordance with the Document Control Procedure.

5.2 Review

At the commencement of the project, all discipline/departments shall review the contract requirements to confirm their understanding and interpretation of all scope of work. A Project Launch Meeting will be held.

Responsible discipline/departments shall review their assigned documents and provide comments to anything not understood or obtain clarification to any conflicts.

Missing data, information, etc. shall be identified to the Project Manager/Project Engineer, who will record in an "Action Log" and take the necessary action to obtain missing information as required. Conflict between or within documents forming the Contract will be presented in writing to Client for resolution.

The Project Manager compiles the "Work Execution Plan & Procedure (WEPP) Manual's and issues to all personnel involved in the project as controlled copies.

5.3 Contract Amendments

- The WEPP is revised as and when clarifications, further information or contract changes are received.

- During the course of the Project Execution there will be various changes to the original scope of the contract. In case of contractual changes, the following shall apply:-

a) The proposed changes shall be reviewed jointly by the Client and BIDDER. On agreement of the changes, the necessary documents shall be duly endorsed and stamped for implementation.

b) The relevant Project Managers affected by the changes shall be formally advised of the changes(s).

c) Superseded sections of the Contract shall be identified and marked as "Superseded" and withdrawn from the site office.

d) Any applying or other related documents affected by the change shall be withdrawn from source to prevent further implementation.

e) The Project Quality Assurance Manager shall review all contractual changes to establish the effect on the Quality Plan and/or the Quality System. Any such effect on the Quality System shall be adjusted accordingly.

5.4 Records

All such changes or amendments to the Quality Plan shall be properly recorded and titled as Quality Records. The processing of these Records shall be in strict accordance with the Project Document and Data Control Procedure.

6.0 DESIGN CONTROL

6.1 General

The design shall be in compliance with the Project's system of standard, specifications and procedures to the extent that these are applicable. These standards, specifications and procedures will be used to control and verify the design of the plant in order to ensure that the specified requirement are met.

BIDDER - generated design documents shall be systematically checked and authorised before being issued for Project use. The design basis shall include a list of all the appropriate engineering standards and specifications, national and international, to be utilised during the course of the Project and their order of precedence. The checking shall be accomplished by means of discipline checks, and inter-discipline checks as necessary.

If necessary, the design of the specialised packages may be sub-let to the supplier of those package. Design Control is exercised by placing the order only with suppliers who operate a Quality System satisfying the parameters defined in ISO 9001 (or equivalent) and by reviewing their documents for compliance and interface.

6.2 Interface Control

Interfaces relating to the design and work shall be defined and document. Interfaces shall be reviewed by the Project team for compliance and capability. Interfaces relating to work by Subcontractors and compatibility of control systems shall be defined and documented. Responsibility for loose materials at the interfaces shall be assigned, e.g. bolting and gasket at flanged connections, holding down bolts, etc.

6.3 Design Input

It shall be the responsibility of the Project Engineer to identify all design input requirements relating to a product. This shall include any applicable Statutory or Regulatory requirements. Any conflicts between the Contract and these requirements shall be resolved with those applying these requirements.

6.4 Design Output

In following with BIDDER's Project guidelines all engineering-related activities are conducted in accordance with the applying Company Procedures on Design Controls.

Specifically, design output is documented and expressed in terms that can be validated and verified against design requirements.

6.5 Design Review

Design Reviews are the responsibility of the Project Engineering Manager. Any areas of conflict or misunderstandings are reviewed and discussed with the Client's Engineer and BIDDER Management.

a) Units and Standard

All dimensions, units of measurement, physical constant, etc. shall be metric except pipe sizes which shall be imperial. Standards will be those defined in the contract.

b) As Built Information

As-built drawings shall be provided on completion of the work.

c) Approval by Client

BIDDER shall ensure that Client receives all relevant documents specified in the Contract as requiring Client approval. Approval or review of such documents by Client shall not in any way relieve BIDDER of any its responsibilities or liabilities under the Agreement or the laws of Malaysia.

7.0 PURCHASING

7.1 General

BIDDER shall ensure that all procurement activities are performed in accordance with the requirements as follows:-

a) Project Specifications and Drawings.
b) The Project, Quality Plan, Inspection and Test Plans and supporting Procedures.
c) All applicable codes, specifications and standards.
d) When necessary, special Quality procedures.
e) The Approved Supplier/Contract List.

7.2 Purchasing Data

Procurement and Subcontract documents shall state commercial, technical and Quality Assurance requirements. Quality Assurance requirements shall be commensurate with the Quality level rating of the item to be procured.

The technical requirement shall state the design parameters of the item to be procured by including or referencing the design documents, codes and industrial standards. They shall state special instructions for designing, manufacturing, installing, testing, inspecting, cleaning, packaging, handling, shipping and storage, as necessary.

Where prudent, copies of the relevant parts of applying Project Specifications shall be attached to the Purchase Order. When attachments are included with the P.O. a paragraph shall be added :-

"ATTACHMENTS" to accommodate the listing of the attachment.

The commercial requirements shall contain provision, for delegation of the Quality Assurance requirements and other applicable requirements to sub-suppliers/contractors. They shall contain provisions for access to Suppliers' and Sub-Suppliers' facilities and records for source inspection and/or audit.

They shall require suppliers to ensure that drawings, specifications and inspection requirements are properly transmitted to sub-supplier and subcontractors to provide BIDDER with copies of purchase orders, which may be unpriced. BIDDER shall monitor such purchase orders and verify that suppliers and subcontractors have properly conveyed contract requirements including inspection requirements to all tiers of order placement.

7.3 Criticality Assessment

A Critically Assessment shall be performed as a measure of the importance to be attached to items to be procured, commensurate with the effect that its failure would have on the system or plant as a whole.

7.4 Selection of Suppliers and Subcontractors

Items or services shall be procured from Suppliers and Subcontractors who have the capability and resources to supply them in accordance with the requirements of the procurement documents. The selection of suitable Vendors/Subcontractors shall be based on the use of historical Quality performance data, source qualification programs, acceptable certificates of competence and current performance as applicable.

Pre-award surveys of Vendors/Subcontractors' technical, commercial and Quality Assurance capabilities shall be carried out, where necessary, on the basis of established criteria.

The Vendors/Subcontractor evaluation shall reflect the Vendor's organisation, manpower, workshop facilities, experience, technical know-how and resources as well as Quality Assurance System operation.

BIDDER shall ensure that all supplier, manufacturers and subcontractors have and maintain acceptable Quality Assurance/Quality Control programs.

7.5 Bid Evaluation

An evaluation of each bid shall be performed prior to placement of an order. That evaluation shall comprise commercial, technical and Quality Assurance assessments to a depth consistent with the Quality level rating of the item or service being procured, and a review of the bidder's Quality System and/or Inspection Test Plans.

A Bid clarification meeting shall be held with short listed bidders, where necessary, to resolve commercial, technical and Quality Assurance queries.

Records of the evaluation of each bid for each potential Supplier/Subcontractor shall be documented.

7.6 Verification of Purchased Items/Services

a) Purchased items or services supplied shall comply with the requirements of the procurement documents. Verification by inspection and/or audit that they do comply shall be performed to an extent consistent with the Quality level rating. Results of that verification shall be documented.

b) Supplier's/Contractors shall not sub contract all or part of the work without prior written approval from the Purchasing Manager.

c) Verification of product, service or audit by BIDDER or their representatives shall not relieve the Supplier/Subcontractor of his responsibility to provide the item or service concerned in accordance with the requirements of the procurement documents.

d) Access by TNB will be provided for the purpose of Quality Assurance Surveillance and Audit by TNB at all reasonable times at the Project location. Similar access to Suppliers and Subcontractors offices, works or site establishments will be a contractual requirement of all purchase orders and contracts placed for the project.

e) The Supplier's/Subcontractor's Quality records, certification and documentation relating to purchase items and services shall be subject to documented verification for compliance with the requirements of the procurement documents.

f) On delivery to site, all equipment and materials purchased shall be received at the Material Receiving Area, shall be recorded in and verified prior to being issued for construction. They will be controlled for:-

* Identification and traceability
* Receiving inspection - OS and D Report
* Non-conformance and Corrective Action
* Handling and storage
* Quality records

8.0 DOCUMENT AND DATA CONTROL

8.1 Receipt, Issue, Storage of Documents

The receipt, issue, indexing filing, storing and changes to the Project documents shall be controlled at all times in accordance with relevant project procedure. The control of all Project Site Documentation is the responsibility of the Project Manager.

Control shall ensure that records of receipt, description, revision, numbering and distribution are maintained. The distribution requirements for each type of document shall be determined and defined to ensure the correct edition of each document is issued to the workplace prior to performance of the activity concerned.

Registers of control may be computer-or manually-generated depending upon the volume of documents involved. A transmittal system shall be used for the internal and external movement of all documents.

8.2 Electronic Data

Information and data that is stored or transmitted by electronic means shall be subject to the same control as stated above.

9.0 PRODUCT IDENTIFICATION AND TRACEABILITY

9.1 Documented Records

All equipment and materials supplied to the Project shall be identified to a documented record in accordance with the Project Procedures.

All major equipment is identified by a unique equipment number while process control valves and instruments by tag numbers.

9.2 Identification

Each individual item of equipment and each batch of bulk materials shall be identified with unique serial numbers. All associated Quality Control Documentation shall record the serial number to ensure identification and traceability.

Particular attention shall be given to ensuring identification that proves traceability to certified documentation for all materials for structural load bearing components and pressure containing parts such as pipes, fittings and vessels, the failure of which may impair Safety and/or process operation.

9.3 Product Identification

It is the responsibility of the Site QC Officer to ensure that products and work stages that require progressive inspection are clearly identified as to the Inspection Status of the item. Where possible the product shall be physically tagged to show that the item has passed inspection. The identification methods shall be at the discretion of the QC Officer.

In process identification shall also be suitably identified so as to avoid work progressing beyond specified "Hold" points stipulated in the Quality Control Plan.

10.0 PROCESS CONTROLS

10.1 General

BIDDER's Construction Manager shall ensure that all site construction activities are performed in accordance with the requirement of :-

a) Approved fabrication and construction drawings.

b) Approved Fabrication/Construction Procedures and Specifications.

c) The Project Quality Plan, relevant Inspection and Test Plan and Supporting Procedures.

d) When necessary, special Quality procedures.

10.2 Construction Quality Plan

As early as possible prior to the commencement of any construction work, the Construction Manager shall prepare a Construction Quality Plan along with any necessary supporting Construction Instructions.

10.3 Control over Production and Installation

BIDDER's control over installation of equipment on site shall be performed to documented work instructions which define the activities to be performed, the personnel responsible, any special equipment involved, the essential verifications checks to be performed, and the verification documents produced.

Where critical work processes and equipment are in use, these shall be evaluated by authorised personnel and formally approved.

To define the applicable acceptance levels for workmanship, written standards shall be established, approved before implementation.

10.4 Special Processes

Special processes, such as cable splicing, welding, non-destructive testing, hydrostatic tests, protective coating, etc. shall require Special Procedures to be developed and approved by the Client. Where necessary the operators shall be qualified in accordance with the applicable standards.

The Supplier shall be formally notified by the Quality Assurance Manager of any items received at site found to be defective or unacceptable. The Supplier may be required to take corrective action to correct the deficiency or replace the material.

Qualification Test Records or results for special processes, equipment and personnel (e.g. welding, non-destructive testing, etc.) shall be kept current and available for verification by authorised personnel.

All NDT procedures and personnel shall be approved by the BIDDER's Engineer prior to starting the work.

All control gauges for special processes, e.g. measuring equipment, shall be certified and approved and thereafter included in the calibration programme.

10.5 The overall responsibility for the control of all major processes is that of the Project Manager. In this regard he shall maintain close contact with the QA Manager so that any required qualification tests for a Special Process can be conducted.

11.0 INSPECTION AND TEST

11.1 Inspection at Site

The Project Manager will appoint inspectors to perform Site Inspections which cover Site Receipt Inspection, Stage Inspection, Final Inspection and Testing.

Inspectors shall be qualified and experienced as necessary to perform the functions required as verified by the QA Manager and evidenced by documented Qualification/Experience records in the form of a Resume and Training Certificates. In most cases newly assigned Site Inspection shall be interviewed before being authorised to perform Site Inspection.

All Non-Destructive Testing (NDT) technicians qualifications shall be supported by documented evidence such as Qualification Certifying their Qualification Level.

Assigned Site Inspectors shall be given a Safety Briefing by the Safety Officer prior to commencement of their assigned work.

All equipment and material arriving at site shall be inspected or otherwise verified as conforming to specified requirement. Verification shall be in accordance with documented procedures.

Inspections and Tests shall be performed in accordance with Quality Plans, Specification requirement, Site inspection and Test Plans and Check Lists to ensure the material and manufactured items supplied are constructed and installed in accordance with specified requirements. The relevant Test and Inspection data or reports shall be submitted.

Inspection and Test Reports shall be compiled at all stages and distributed in accordance with a Project Distribution Plan to ensure Project Management are fully informed.

Radiographs of welds will be subcontracted to an independent NDT agency for film-taking, reviewing and reporting of the results. Documented and certified Radiographic results shall be provided by the agency. Interpretation of Radiographic film shall be only undertaken by Inspection personnel qualified to do so. Verification of the Interpretation will be undertaken by the nominated Welding Specialist.

11.2 Inspection, Test and Commissioning Records

At all stages of the inspection, testing and the commissioning process, records shall be established and maintained which give clear evidence that equipment and materials have passed inspection and/or test in accordance with defined acceptance criteria.

All relevant Certificates, Inspection Reports, etc., that are generated from the inspection and tests shall be considered as QA Records and filed accordingly.

Non-conformance's shall be handled as per Section 14.0 of this Plan. A non-conformance log of all rejections on material and equipment shall be maintained by the QC Officer or his appointed QC Inspector and who shall report on the Quality status to the QA Manager.

12.0 INSPECTION AND TEST EQUIPMENT CONTROLS

12.1 Scope

All measuring devices, instruments and other testing equipment used to establish compliance with specification requirements shall be kept in good working order and maintained to the required accuracy.

12.2 Responsibility

It is the overall responsibility of the QC Officer to ensure that all Inspection and Test equipment used on the Project is calibrated as required by the Standard governing that type of device and clearly identified as being acceptable .

12.3 Calibration Deficiencies

Any equipment such as Welding machines that is suspected of being inaccurate or that is past the calibration due date shall be withdrawn from use and brought to the attention of the Project Manager. It is therefore essential that welding machine calibration records are accurately maintained.

If equipment that is out of calibration has been used to test or inspect an item, as much of the item as possible shall be reinspected or retested as soon as the out-of-calibration condition is identified. All items inspected since the equipment was last calibrated shall be treated as suspect.

The QC Officer shall assign the responsibility of Inspection & Test Equipment Control to one of his Site Inspectors. The assigned Inspector shall maintain a separate record which shall be kept for each gauge or instrument. In addition each gauge or instrument shall carry an identification or calibration status tag or other form of identification.

12.4 Sub Contractor's Inspection and Test Equipment

The QC Officer with the assistance of his Inspectors shall ensure that all Sub-Contractors exercise the same controls over any measuring or test device they use on the Project.

13.0 INSPECTION AND TEST STATUS

13.1 General

The QC Officer shall be responsible for monitoring the status of all Inspection and Tests that are required to be performed throughout the different phases of the work. The system for identifying the status of inspection and/or Testing shall be by reference to the documented inspection records.

13.2 Inspection & Test Plan

The QC Officer shall develop and issue Inspection Check Lists or Inspection and Test Plans shall be issued to show inspection requirements during site fabrication and erection. Inspection status shall be indicated by the inspector's stamp or signature and date adjacent to the operation on the List or Plan.

The authority for the application of any inspection stamp or approval signature is vested in Inspection Staff and Site Quality Control Staff only.

Where possible visible identification labels, tags or other suitable identification shall be placed on the product on acceptance by the Inspector.

14.0 CONTROL OF NON-CONFORMING PRODUCTS

14.1 Purpose

The purpose of this Section is to ensure that Non-Conforming items or processes are clearly and easily recognised by all concerned so that they are not inadvertently used on the Project. It is the responsibility of the QC Officer to ensure that the necessary controls are in place to satisfy the requirements of this Section.

14.2 Method

When detected, non-conforming products shall be identified by clear physical marking, tagging and, if possible, segregated to prevent unauthorised use, shipment or mixing with conforming material.

No further work shall be progressed on the product pending a decision on its further disposition by Project Manager/QA Manager in consultation if necessary with Engineering, Construction, the Client as necessary.

14.3 Disposition

According to the circumstances, disposition decisions shall include:-

- Scrap and Replacement
- Repair
- Rework
- Use-as-is

Quality Control is responsible for ensuring that all Non-Conformance and disposition decisions are properly recorded and filed with the Project Quality records. Objective evidence shall be maintained to substantiate that repair and reworked items have been re-inspected or re-tested and found acceptable.

14.4 Reinspection

It is the responsibility of the QC Officer to ensure that all Non-Conforming products are reinspected by the same method that detected the original discrepancy.

15.0 CORRECTIVE ACTION

15.1 Scope

To ensure that all discrepancies found are processed in accordance with Section 14.0 Control of Non-Conforming Products and that early resolutions are developed in order not to avoid undue delays in the work.

15.2 Responsibility

The QC Officer shall ensure that the following areas have been addressed before release of the product for further processing or use:-

- Necessary approvals
- Reinspection and acceptance
- Acceptance by the PM
- A documented history of the deficiency

15.3 Deficiency Identification

Where deficiencies are identified, details of the deficiency shall be clearly documented and reported to the QC Officer who shall determine the actions required to correct the deficiency and initiate the necessary actions accordingly. In all cases deficiencies shall be recorded in the Project NCR Log. Non-Conforming materials or Processes shall not be used nor progressed further until a disposition decision has been made in accordance with Section 14.0 of this Quality plan.

15.4 Inspection Procedures

Inspection Procedures provide for the continuing monitoring of processes, and work operations to eliminate potential causes of deficiencies.

Interfacing between affected organisations shall be notified according to the severity of the non-conformity and agreement shall be reached on the corrective action to be employed. Follow-up investigations or audits shall be performed to provide assurance that the corrective actions have been taken and are effective.

16.0 HANDLING, STORAGE AND DELIVERY

16.1 Responsibility

It is the responsibility of the Procurement Manager to ensure that the proper instructions are included in the Purchases Order (Contract) to ensure that material and/or equipment Handling, Storage and Packaging is performed in accordance with project specification.

16.2 Packaging

The packaging of materials and equipment (products) for shipment shall have the necessary protection and/or preservation to protect the product from damage from handling, shipping and environmental elements. To accommodate handling of large items or equipment the appropriate International lifting symbols shall be clearly stencilled on the container or marked on the equipment.

In the case of instrumentation, the inspector shall confirm that “Silica Gel” or an equivalent moisture absorbent medium is in place.

16.3 Delivery

When shipment arrives at Site, the unloading crew shall ensure that manufacturer's instructions are followed regarding lifting, general handling and storage.

16.4 Storage

When necessary, material shall be stored in dry racked stores.Under no circumstances shall any material be stored directly on the ground.

When internal storage is not used, material shall be covered as necessary with adequate protection to prevent ingress of sand, dirt, water, etc. and stored off the ground on sleepers or boards.

All moving parts shall be protected with either grease or an acceptable fluid.All rotating equipment with bearings shall be turned over in accordance with the manufacturer's instructions.

Electrical and instrument equipment shall be allocated dry, ventilated areas of storage.

17.0 QUALITY RECORDS

17.1 General

It is the responsibility of the QC Officer or his designated Inspector to ensure that all site-developed Quality Records are compiled, maintained and collated as the work is performed throughout the duration of the Project. These records provide objective evidence of the Quality of work produced and testify that the work is in compliance with contractual requirements.

17.2 Records

Such Quality records shall contain all data and information required by the purchased order appropriate codes, standard, regulations, specifications, design basis and the contract.

Records shall be legible, correctly identified, readily retrievable and traceable to the materials or activity for which they were produced and duly signed by the responsible authority.

Records shall be indexed, filed and protected to prevent damage, deterioration or loss. Records can comprise legibly hand-written, printed or typed documents, magnetic tapes, disks, microfilm or other acceptable media. Certificates shall comprise original documents or authenticated copies.

The QC Officer shall maintain a file of all QA Inspection/Test Records.

18.0 QUALITY ASSURANCE AUDITS

18.1 General

During the Contract duration, a systematic programme of Quality System Audits shall be undertaken to determine whether Quality activities and related results comply with the planned arrangements, and whether said arrangements are implemented effectively and are suitable in achieving set Quality objectives.

18.2 Audit Planning

The QA Manager is responsible for developing a programme of planned internal audits to be performed to provide evidence that:-

- Project team personnel, suppliers, subcontractors, etc. are complying with these aspects of the Project Quality System relevant to their activities.
- The Project Quality System is adequate, practical and effective to apply.
- Recommended corrective actions are being implemented effectively.
- Conditions adverse to Quality are promptly identified, documented, reported to management and corrected to preclude repetition.

The audit plan shall include the following:-

- Internal office procedures
- Engineering Reviews
- Procurement Process
- Internal Quality activities
- Subcontractors and supplier performance

Review of the Quality System will be performed at appropriate intervals as determined by the QA Manager.

18.2 Client Audit

Every effort shall be made to prepare BIDDER for an Client Audit. In this regard, the QA Manager shall on an on-going basis spot check various department disciplines for conformance to the Quality Plan. Any discrepancies found shall be brought to the attention of the responsible Supervisor to initiate corrective action.