



Quality Manual

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Unit 1, 39 Biscayne Way
JANDAKOT WA 6164
Phone: 08 9417 5361

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1. Scope

This manual describes Chell Engineering's quality system policies and quality management procedures. These policies and procedures control all activities from supplier procurement to customer shipment of articles.

2. Purpose

The purpose of this document is to provide (by inclusion or reference):

- A quality management overview, organisation and responsibilities for both Chell and contractor project teams in relation to quality management;
- Chell Engineering quality management policy;
- Applicable procedures for Chell Engineering's document control activities;
- Maintenance, completion and close-out of quality records for both Chell Engineering and contractors;
- Methods for performance measurement.

3. Objectives

The objectives of this document are to:

Provide a stand-alone quality management plan for continuous reference on quality requirements by all parties associated with Chell Engineering's construction and commissioning projects.

Provide consolidated quality requirements relevant to the projects for review/ approval by the principal.

Ensure sub-contractors are made aware of the project requirements for incorporation into their own quality assurance plans.

3.1 Policy

The quality program is developed to assure customer satisfaction by providing quality products. Chell Engineering will perform all activities in a manner, which meets or exceeds the expectations of our customers.

Chell Engineering's policy is shown below.

All Chell Engineering managers and supervisors working on the projects must ensure that his or her leadership conforms to the values stated in the quality policy.



QUALITY POLICY

Chell Engineering believes quality and safety are good business as well as good practice, and we are committed to –

Provision of innovative engineering design; construction and project management services which achieves the client's stated or implied needs and requirements.

Execution of engineering and construction projects which fulfils or surpasses all Client expectations and exemplifies FITNESS FOR PURPOSE.

Providing construction management and engineering services, whereby, safety is the highest priority.

Continuous improvements in the effectiveness of our systems.

In meeting these commitments, all Chell Engineering personnel work within the system set out in Chell Engineering ISO 9001 Quality System Documentation, complying with and supporting its organisation, procedures and practices and working to eliminate non-conformances.

We seek to ensure that quality and safety are the preoccupation of all Chell Engineering personnel. The shared Chell Engineering goal to achieve quality on each project is –

GET IT RIGHT - FIRST TIME - EVERY TIME!

THERE ARE NO SECOND CHANCES!

3.2 Application of the Quality Plan

The quality system described herein is mandatory for all activities performed at Chell Engineering' premises at Unit 1/ 39 Biscayne Way, JANDAKOT WA 6164 to assure product conformance to the applicable drawing, item specification and/ or contract requirement.

4. Amendments and Revisions to the Quality Manual

4.1 Revision Control

This manual will be revised by quality assurance as required. Whenever revisions occur, all holders of controlled copies will be distributed copies of the application revised pages, including a new revision page describing the changes.

4.2 Reviews

Management reviews of operations are continuous and any problems indicated with the quality program or its implementation will be addressed and corrected as directed by management.

5. Organisation

5.1 Quality Manager

The quality manager reports directly to the director and is delegated authority and organisational freedom to identify and evaluate quality problems and to initiate, recommend or provide solutions.

5.2 Responsibilities

The quality manager is responsible for:

- Update and distribution control of the quality manual as required;
- Planning to meet customer's quality requirements;
- Determining inspection points within the system;
- Approval of quality work instructions;
- Directing inspection activities;
- Surveillance of procurement documents;
- Approval of suppliers;

- Maintaining a listing of approved suppliers;
- Monitoring compliance;
- Reviewing and maintaining quality records;
- Calibration of measuring and test equipment;
- Approval of disposition of non-conforming articles;
- Corrective action co-ordination.

6. Quality Program

6.1 Documentation

The quality program is documented within this manual and may be supported at any point by desk or work instructions that may be selected to increase control of a quality function. Desk or work instructions affecting quality shall be approved by the quality manager.

6.2 Planning

The quality program is planned to control products from the requirements of a customer order to include procurement practices, receipt of material, receipt inspection of supplier material, handling and storage to the eventual shipment of an article to our customer.

6.3 Indoctrination and Training

Employees are indoctrinated and trained, as necessary, to assure that suitable proficiency is achieved and maintained throughout our operation systems. Training is performed as “On the Job Training” under the direct supervision of management. Procedural changes are implemented by training of any individual(s) affected by the change.

7. Procurement Document Control

7.1 System of Procurement

Procurement documents are manually and computer generated and includes appropriate technical and quality requirements. When a customer has special requirements, such as a Certified Materials Test Report (CMTR), our program is designed to include the requirements into our documents.

7.2 Review and Approval

Procurement documents are reviewed and approved by the purchasing manager. The quality manager performs random surveillance of procurement documents half-yearly and documents the results.

7.3 Changes to Documents

Changes to procurement documents are subject to the same level of control as in preparation of the original document.

7.4 Document History and Status

When revisions to the document are issued, this page will be updated to show the most recent revision level. The revised document will be forwarded to the holders of controlled copies. Recipients are responsible for destroying or marking 'superseded' on the previous revision.

Revision levels prior to 'Issue' shall be alphabetical (A, B, C etc).

'Approved for Issued' and subsequent revisions shall be by date.

Rev	Date	Status	By	Chkd	Appd
1	10/11/2009	Issue for Use	TdG	MF	LC
2	03/06/2010	Issue for Use	MC	YJ	LC
3	28/11/2011	Issue for Use	MC	YJ	LC
4	28/05/2012	Issue for Use	TdG	YJ	LC
5	12/08/2013	Issue for Use	SN	YJ	LC
6	15/02/2015	Issue for Use	SN	YJ	LC
7	19/09/2017	Issue for Use	SN	YJ	LC
8	06/07/2018	Issue for Use	SN	LC	LC
9	19/08/2019	Issue for Use	SN	LC	LC
10	05/10/2020	Issue for Use	SN	LC	LC
11	27/09/2021	Issue for Use	SN	LC	LC
12	15/09/2022	Issue for Use	SN	LC	LC

Distribution of copies

Copy No.	Date	Name	Title	Rev

8. Instructions and Drawings

8.1 Work Instructions

Work or desk instructions are utilised in support of this quality manual to improve the control of a specific operation or evaluation, but in no circumstances shall these documents supersede or change the requirements of this manual.

8.2 Drawings

Drawings, specifications and/ or catalogue criteria shall be used to control the technical requirements of products offered to our customers.

9. Document Control

9.1 Current Issues

The latest issue of drawings, specifications, catalogues, work instructions and customer orders will be utilised to control articles throughout the operations system.

9.2 Modification or Design Changes

Obsolete documents caused by modification or design change will be identified as such and removed from use.

9.3 Document Numbering System

For numbering format to give each project document produced during the course of a project a unique number refer to CE2-05 Document Numbering Procedure.

9.4 Document Controlling System

A document controlling procedure to provide details on records identification, storage, retention and archiving in form of matrix a unique number refer to 'Filing and Archiving Log'.

10. Control of Purchased Items

10.1 Incoming Materials

Receipt of purchase materials is documented on a material certificate register (Form Q-0013). The requirements of the purchase order are included in the material certificate register to provide the inspection function with complete criteria for evaluation of the receipt.

10.2 Certifications

Certifications and Certified Material Test Reports (CMTR's) are reviewed for compliance and accuracy of contents as required by procurement documents. Certified reports or other proof of quality used as a basis for acceptance shall be validated by independent testing on an annual basis.

10.3 Rejected Materials

Rejected materials will be documented as non-conforming on the material certificate register to prevent inadvertent use for further processing. The quality manager will approve final disposition.

10.4 Acceptance

Acceptance of the receipt will be documented on the material certificate register as accepted and the identity of the inspector will be included by initialling the document.

11. Identification and Control Items

The Original Equipment Manufacturer (OEM) articles will retain their identity through our receipt, stocking and delivery function traceable to the procurement and receipt documents containing acceptance status.

12. PROJECT MANAGEMENT

12.1 General

All project and construction management activities will be carried out in accordance with the project implementation plan.

12.2 Responsibilities of Project Staff

12.2.1 Site Superintendent

Overall overseeing of safety/ production/ timekeeping. Client liaison, production meetings and to keep the administrator and director informed of daily events and to co-ordinate daily staff and worker's requirements. Attend pre-starts and any project specified tool box meetings. Send pre-start sheets to the admin for record keeping

12.2.2 Rigging Supervisor

In charge of all rigging activities, cramage, safe work methods and lifting equipment, compliance to safety standards, regular checks slings/ chains/ servicing of cranes and that the pre-starts of machinery is been carried out. Run pre-starts and project specified tool box meetings.

12.2.3 Mechanical Supervisor

Daily co-ordination of all teams under his control. In charge of all mechanical equipment that is assembled under his control and what he is asked to do by the client. Run pre-starts and tool box meetings. Check calibration record of equipment if required by the client.

12.2.4 Scaffolding Lead/ OHS

Erection/ dismantling and maintenance of scaffolds under his control. Making sure the team under his control are competent in their tasks and maintain safety standards/ pre starts. Responsibility of trade staff are not required to be recorded. Authority of personnel is described in methods or forms that they are authorized to complete.

12.2.5 Admin Staff

Perth based admin staff is to record attendance of workforce from pre-starts. Control payroll ensure pays are done, and superannuation guarantee contribution obligations are met, enter data, maintain manpower information, update records process payroll tax and liaise with accountant and director, order uniform, book accommodation where required. Liaise with site.

12.2.6 Director

Oversee operations; maintain contact with site staff to see if improvements are needed. Continually check with client requirements. Ensure payroll and admin staff has all the info required to carry out their work. Visit sites regularly. Continue management improvements. Review and approve new contracts with customers. Attend contract reviews if required.

12.3 Project and Construction Management Quality Records

All project management records shall be maintained in complete, orderly, up-to-date files (electronic and/ or hard copy) by the personnel responsible for their preparation, including;

- Gantt Chart Schedules;
- Cost Control Reports;
- Progress Reports;
- Cost Estimates.

Each successive issue of these documents shall be distinguished from the previous by a revision system or date designation appropriate to their means of preparation (software, etc.). All project management documents shall be prepared through Chell docs, including fee estimates and proposals, letters, minutes, memos, and progress reports.

13. PROCUREMENT

13.1 General

This section outlines scope and responsibilities where Chell is responsible for managing all procurement activities for a project.

The procurement status report is the key planning and monitoring report for procurement, and is published by procurement in the project monthly report.

13.2 Procurement Process

The Chell procurement control flow chart outlines the standard procurement workflow. The procurement manager is responsible for ensuring all procurement activities conform with these requirements.

13.3 Equipment Purchase

All purchase orders will be negotiated principally by Chell, with input as required from the principal.

Chell is responsible for:

- preparing scopes of supply (through Chell docs) including quality requirements;
- tendering to obtain pricing information;
- preparation of contracts, (through Chell docs) including quality;
- recommendation of award to principal contractor;
- inspection, expediting and auditing;
- contract administration activities for equipment purchase.

13.4 Contracts

All contracts will be negotiated principally by Chell, with input as required from the client's management team.

Chell is responsible for:

- preparing scopes of work (through Chell docs) including quality requirements;
- obtaining prices and schedule information against the scope from contractors;
- preparation of contracts;
- award of contracts subject to client approval;
- auditing as outlined below.

13.5 Procurement Quality Records

The procurement process shall be carried out in accordance with Chell procedures, including controlled production of records. (Refer: Appendix E)

Selected procurement documents shall be prepared through Chell docs, including contract documents (tenders and contracts for equipment supply and construction contracts), tender recommendation, etc.

14. EXPEDITING

14.1 General

To ensure that agreed delivery dates are achieved for materials and equipment, including associated drawings and documentation, purchase orders and contracts will be subject to expediting and reporting procedures.

The frequency and intensity of expediting shall be established by the Chell engineer for each individual purchase order and contract based on an informal risk analysis. Criteria to be considered in justifying the amount of expediting required are as follows:

The technical importance of the equipment - how critical is the equipment to the overall plant function? For example, is the equipment or materials part of a critical system, safety system or located in a hazardous area?

The technical complexity of the equipment – is the equipment required to comply with a large number of technical specifications?

Is the equipment delivery on the critical path? If not, how much schedule float is available? What proportion of the total delivery is the available float?

The monetary value of the equipment (e.g. Can it be justified spending \$5,000 on expediting a pump that costs say \$10,000?).

Is a major part of the manufacturer's shop capacity required to complete the order?

Is there a history of slippage with the particular supplier/ contractor on similar work?

Other criteria may apply in particular cases.

14.2 Expediting Procedures

Purchase orders and contract packages may be subject to either:

- Remote expediting by telephone, fax, email or letter;
- Shop expediting at the manufacturers works by Chell personnel or an assigned third party audit agency;
- Combination of the above.

For each contract, Chell shall determine what combination of remote and shop expediting is required either on a geographical basis.

Normal procedure requires that contact shall be made with the contractor at least every two weeks, however, a more frequent or less frequent interval.

The results of each contact shall be immediately reported by means of the Chell Engineering expediting/ inspection report (Appendix D), detailing the status of engineering design or detailing, status of drawings and other documents, materials, manufacturing and delivery. Back-up in the form of photographs, supplier's or contractor's progress reports, updated manufacturing programs, drawing control sheets, material lists and copies of sub-orders may be attached to the Chell Engineering expediting/ inspection report.

In the expediting/ inspection report, expeditors shall highlight any problems or technical issues, attempt to forecast possible delays and may suggest corrective action to be taken where appropriate. However, regardless of any slippage to the delivery schedule, under no circumstances shall an Auditor agree to changes in materials, quality or finish to those specified, or to compromise any specification without the prior approval of the Chell Engineer.

14.3 Responsibility

Expediting by Chell or a nominated third party shall not relieve the supplier or contractor of any obligation to meet scheduled deliveries.

14.4 Expediting/ Inspection Files

For each purchase order and contract, the expeditor/ inspector shall create and maintain comprehensive files containing copies of the following or as otherwise agreed to be appropriate for the project:

- Purchase orders and contract scope documentation, including variations to original scope;
- Sub-contracts;
- Relevant drawings, codes and specifications;
- Delivery schedule;
- Vendor Drawing and Data Index and Schedule (VDDR);
- Expediting/ inspection reports;
- Correspondence relating to auditing tasks;
- Contractor progress reports;

- Contractor internal expediting and inspection reports;
- Minutes of any formal audit meetings;
- Records of telephone conversations and telephone log;
- Material receiving reports;
- Photographic records;
- Rejection notices;
- Exclusion/ variance notices;
- Contractor Inspection release notices.

Because expediting activities are likely to be performed concurrently by the same person and to avoid unnecessary duplication, a common file may be used for auditing activities associated with each purchase order or contract.

15. Inspection

15.1 General

All equipment and materials purchased for the project may be subject to inspection. The purpose of inspection is to -

- Ensure suppliers and contractors comply with drawings, specifications, relevant codes and standards;
- Ensure quality of workmanship;
- Ensure suppliers and contractors comply with all nominated QA/ QC requirements.

15.2 Inspection and Test Plans

The requirement for suppliers and contractors to prepare an ITP for their respective scope shall be specified by Chell Engineering in the scope of supply or scope of work document. The supplier/ contractor shall include supplier or sub-contractor commitment to an Inspection and Test Plan (ITP). Any deficiencies in the proposed ITP shall be negotiated before award such that the ITP shall be as complete as possible at the time of award.

For each contract, the ITP shall form the basis for minimum requirements of inspection and approval.

The format and content of the ITP shall be as per the pro-forma in Appendix A or the supplier's or contractor's own similar format.

15.3 Quality Surveillance Requirements

For each contract the following is required to be issued to bidders at the tender stage in the scope of supply or scope of work document:

1. Vendor Drawings and Data Request (VDDR) Schedule (refer sample in Appendix B) – to be completed by Chell Engineer. Schedule requirements for ITP must be nominated here.
2. Quality assurance requirements (refer sample in Appendix C) – to be completed by the Chell Engineer. Input requirements for ITP's must be nominated here.
3. Company QA/ QC Requirements/ Specifications

Also at the tender stage, Chell Engineering shall nominate the level of quality audit to be exercised by Chell Engineering over the contractor. The decision may be based on an informal risk analysis (see below).

The audit levels for equipment suppliers are defined as follows in the scope of supply standard proforma document in Chell Engineering docs:

Level of Quality Surveillance	Activity by Purchaser
0	No quality surveillance required
1	Final quality surveillance prior to shipment
2	Limited scope quality surveillance This level requires that the purchaser visit the supplier and perform predetermined surveillance inspection as noted on the ITP.
3	Full scope quality surveillance In addition to the visits to accomplish those activities described by formal notification points in the ITP, the purchaser will visit the supplier on a regular basis to monitor the work in progress. The frequency of these visits will be in relation to the activity of the order/ contact and the quality history of the supplier.
4	Resident quality surveillance This level of quality surveillance is performed when the supplier is in continuous fabrication of critical equipment. The purchaser will continuously monitor daily operations as well as witness those activities designated as "Witness" or "Hold" points.

The audit levels for construction contractors are defined as follows in the scope of work standard proforma Chell Engineering document:

Level of Quality Inspection	Activity by Principal/ Superintendent
0	No inspection required
1	Final inspection prior to practical completion
2	Limited scope quality inspection This level requires that the superintendent performs predetermined surveillance/ inspection as noted on the ITP.
3	Full scope quality inspection In addition to the inspection to accomplish those activities described by formal notification points in the ITP, the superintendent will visit the contractor on a regular basis to monitor the work in progress. The frequency of these visits will be in relation to the activity of the order/ contract and the quality history of the contractor.
4	Full-time quality inspection This level of quality inspection is performed when the contractor is in continuous fabrication, manufacture and/ or installation of critical materials, facilities and/ or equipment. The superintendent will continuously monitor daily operations as well as witness those activities designated as "Witness" or "Hold" points in the ITP.

15.4 Inspection

Chell Engineering's manager shall appoint inspectors as required to execute the inspection requirements of the individual purchase orders and contracts.

The inspector shall review the purchase order, drawings, specifications, codes and standards to ensure a complete understanding of the scope, technical and commercial requirements before making contact with the supplier or contractor.

The inspector shall reject any equipment or material that is found to be of unacceptable quality of workmanship, or that fails to comply fully with the requirements of the purchase order or contract. Variances from drawings and/ or specifications shall be recorded on inspection reports. The equipment or material shall not be accepted until a suitable exclusion, in writing, is provided by the company. Technical decisions regarding material substitution shall be referred to the specific project manager for approval, particularly those affecting price or delivery.

Inspection release for shipment notes and rejection notices may be issued on the spot to the supplier or contractor. However release notices must not be issued until all material and test certification required by the purchase order or contract is received, reviewed and agreed to be in compliance with the purchase order or contract.

Under no circumstances shall an inspector or expeditor agree to changes in materials, quality or finish to those specified, or to compromise any specification without the prior approval of the project manager.

Chell Engineering may request corrective action by the supplier or contractor on any rejections.

15.5 Responsibility

Inspection by Chell Engineering or a nominated third party shall not relieve the supplier or contractor of any obligation to provide quality control and inspection of equipment and materials to ensure the requirements of the purchase order or contract are met. Inspection surveillance by Chell Engineering shall not compromise or release the supplier or contractor from guarantees for materials, workmanship or performance.

16. Control of Measuring and Test Equipment

16.1 Commercial Equipment

Calibration of normal commercial equipment (i.e. rulers, tape, measures, levels, and other similar devices) is not required. It is the responsibility of the user to report worn or damaged equipment to management to prevent inadvertent use.

16.2 Special Devices

Calibration will be performed and maintained at prescribed intervals in accordance with Figure 2. An outside calibration laboratory is contacted to supply this service. The supplier is certified and performs calibrations traceable to recognised national standards.

16.3 Identification of Equipment

Each item is identified with current status of calibration and the user is responsible to verify an item is serviceable. Items too small to be identified are serialised, and calibration status is maintained by a traceable record supporting a calibration recall system.

17. Control of Non-Conforming Articles

17.1 Disposition

All non-conforming articles are reviewed to determine disposition; the disposition is documented on the accompanying paperwork.

17.2 Approval of Dispositions

The quality manager approves all dispositions of non-conforming articles as follows:

- a) Return to supplier
- b) Rework to specification
- c) Scrap

Customer approval of the following dispositions shall be requested and required prior to delivery of articles:

- a) Use as is (waiver)
- b) Repair to a useable condition

17.3 Rework/ Repair

Reworked and repaired items are re-inspected and/ or tested in accordance with disposition instructions.

18. Control of nonconforming product

Chell Engineering shall ensure that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. A documented procedure shall be established to define the controls and related responsibilities and authorities for dealing with nonconforming product.

Where applicable, Chell Engineering shall deal with nonconforming product by one or more of the following ways:

- a) by taking action to eliminate the detected nonconformity;
- b) by authorizing its use, release or acceptance under concession by a relevant authority and, where applicable, by the customer;
- c) by taking action to preclude its original intended use or application;
- d) by taking action appropriate to the effects, or potential effects, of the nonconformity when nonconforming product is detected after delivery or use has started.

When nonconforming product is corrected it shall be subject to re-verification to demonstrate conformity to the requirements.

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, shall be maintained using form S-0018.

18.1 Corrective action

Chell Engineering shall take action to eliminate the causes of nonconformities in order to prevent recurrence using form S-0018.

Corrective actions shall be appropriate to the effects of the nonconformities encountered.

A documented procedure shall be established to define requirements for

- a) reviewing nonconformities (including customer complaints),
- b) determining the causes of nonconformities,
- c) evaluating the need for action to ensure that nonconformities do not recur,
- d) determining and implementing action needed,

- e) records of the results of action taken, and
- f) reviewing the effectiveness of the corrective action taken.

18.2 Preventive action

Chell Engineering shall determine action to eliminate the causes of potential nonconformities in order to prevent their occurrence using form S-0018. Preventive actions shall be appropriate to the effects of the potential problems.

A documented procedure shall be established to define requirements for

- a) determining potential nonconformities and their causes,
- b) evaluating the need for action to prevent occurrence of nonconformities,
- c) determining and implementing action needed,
- d) records of results of action taken, and
- e) reviewing the effectiveness of the preventive action taken.

18.3 Customer Complaints

Responses to customer complaints will be documented by letter or on forms required by the customer. Responses will include cause of the condition, actions taken to prevent a future occurrence and effective date using form S-0018.

19. Internal Audits

Chell Engineering shall conduct internal audits at planned intervals to determine whether the quality management system

- Conforms to the planned arrangements, and;
- Is effectively implemented and maintained;

Internal audits are divided into 2 categories, project and none project audits.

Project Audits

Chell and customer requirements are to be audited for each project as stated in Chell documents and applicable customer documents.

Project audits shall be carried out at a frequency determined by the length and complexity of the project.

Non project audits

Audits shall be conducted against the requirements of Chell documentation as defined or referred to in the Chell quality manual.

The frequency of non-project audits shall be a minimum of once per year. This frequency may be increased due to changes that may impact on the project.

Staff conducting audits need to have either qualifications or experience in auditing and must not audit their own work.

Non conformances found at audits shall be recorded and tracked for improvements on Chell corrective action form S-0018.

20. Procedure/ Meeting Proformer

Chell Engineering management shall review the organization's quality management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. This review shall include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.

The input to management review shall include information on

- results of audits;
- customer feedback;
- process performance and product conformity;
- status of preventive and corrective actions;
- follow-up actions from previous management reviews;
- changes that could affect the quality management system, and;
- Recommendations for improvement.

21. Quality Records

21.1 Retention

Quality records traceable to an article or lot of articles will be sorted by the identifying part number, tax year or by job description. Quality records traceable to a customer will be stored in Chell Engineering Perth office, and maintained on a hard drive back-up-files, which are retained indefinitely.

Quality records shall be maintained to demonstrate conformance to specified requirements and the effective operation of the quality system. Pertinent quality records from the various subcontractors shall be an element of these data.

All quality records shall be legible and shall be stored and retained in such a way that they are readily retrievable in facilities that provide a suitable environment to prevent damage or deterioration and to prevent loss. Records shall be archived in boxes and electronically filed in their respective projects.

The retention of hard-copy quality records is a minimum of three years or as otherwise directed by a customer order requirement, thereafter, they are destroyed using the typical shredder method.

Where agreed contractually, quality records shall be made available for evaluation by the customer or the customer's representative for an agreed period.

22. Management Commitment

Chell Engineering Management shall provide evidence of its commitment to the development and implementation of the quality management system and continually improving its effectiveness by

- a) communicating to the organisation the importance of meeting customer as well as statutory and regulatory requirements,
- b) establishing the quality policy,
- c) ensuring that quality objectives are established,
- d) conducting management reviews, and
- e) ensuring the availability of resources.

22.1 Customer focus

Chell Engineering Management shall ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction through the quote and tender processes.

22.2 Quality policy

Chell Engineering Management shall ensure that the quality policy

- a) is appropriate to the purpose of the organisation,
- b) includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system,
- c) provides a framework for establishing and reviewing quality objectives,
- d) is communicated and understood within the organisation, and
- e) is reviewed for continuing suitability.

Refer page 6 of the Quality Manual.

22.3 Planning

22.3.1 Quality objectives

Chell Engineering Management shall ensure that quality objectives, including those needed to meet requirements for product are established at relevant functions and levels within the organization. The quality objectives shall be measurable and consistent with the quality policy. Quality Objectives will be review at Management Reviews.

22.3.2 Quality management system planning

Chell Engineering Management shall ensure that

- a) the planning of the quality management system is carried out at the tender stage as well as Management Reviews
- b) the integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

22.4 Responsibility, authority and communication

22.4.1 Responsibility and authority

Chell Engineering Management shall ensure that responsibilities and authorities are defined and communicated within the organization through the establishment of job descriptions and through the description responsibilities and authorities within procedures.

22.4.2 Management representative

The Managing Director shall have responsibility and authority that includes

- a) ensuring that processes needed for the quality management system are established, implemented and maintained,
- b) reporting to Chell Engineering Management on the performance of the quality management system and any need for improvement, and
- c) ensuring the promotion of awareness of customer requirements throughout the organization.

NOTE The responsibility of a management representative can include liaison with external parties on matters relating to the quality management system.

22.4.3 Internal communication

Chell Engineering Management shall ensure that appropriate communication processes are established within the organisation and that communication takes place regarding the effectiveness of the quality management system.

22.5 Management review

22.5.1 General

Chell Engineering Management shall review the organization's quality management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. This review shall include assessing opportunities for improvement and the need for changes to the quality management system, including the quality policy and quality objectives.

Records from management reviews shall be maintained.

22.5.2 Review input

The input to management review shall include information on

- a) results of audits,
- b) customer feedback,
- c) process performance and product conformity,
- d) status of preventive and corrective actions,
- e) follow-up actions from previous management reviews,
- f) changes that could affect the quality management system, and
- g) recommendations for improvement.

22.5.3 Review output

The output from the management review shall include any decisions and actions related to

- a) improvement of the effectiveness of the quality management system and its processes,
- b) improvement of product related to customer requirements, and
- c) resource needs.

Figure 2 – Calibration Intervals

Equipment	Interval
Wire feeder	Half yearly
Purge monitor	Half yearly
Welding machine	Half yearly

CHELL COMMITMENT

QUALITY POLICY

Chell Engineering is committed to providing our Customers with a high quality service. Quality, to us, is a standard to be practiced by everyone in the organisational hierarchy to meet all project, regulatory, statutory and community requirements. Chell Engineering shall create an environment where each employee contributes to all aspects of our business processes. We shall strive for continuous improvement of our products and services to surpass the satisfaction of our clients.

Chell Engineering will implement and maintain a quality system, which

- Identifies appropriately qualified people to deliver products and services that satisfy our customer's requirements in every respect.
- Facilitates client communication for satisfactory and on-time delivery of all projects
- Creates an environment where each employee contributes to all aspects of our business processes
- Strives for continuous improvement of our products and services to surpass the satisfaction of our clients
- Ensures that activities are controlled in a manner compatible with achieving required service levels and obligations effectively
- Ensure that a safe environment is created for all their employees

It is mandatory that all staff adhere to the procedures in order to achieve a consistent approach to quality assurance in accordance with the international quality standard ISO 9001.

Larry Chellin
Managing Director
Chell Engineering

APPENDIX A
INSPECTION TEST PLAN

APPENDIX B
SUB CONTRACTOR VENDOR REQUIREMENTS

CONTRACTOR DRAWING AND DATA REQUIREMENTS (DDR)

Drawings and data listed below shall be submitted in accordance with schedule requirements.

DESCRIPTION	QTY WITH BUDGET ENQUIRY	QTY WITH TENDER	QTY TO BE SUPPLIED AFTER AWARD			
			FOR APPROVAL		CERTIFIED FINAL	
			NO & TYPE	SCHEDULE	NO & TYPE	SCHEDULE
Completed Pricing Schedule		1				
Completed Schedule of Rates		1				
Completed Schedule of Progress Payments		1E				
Work Schedule (Program)		1E				
Manning Schedule		1E				
Key Personnel Listing		1				
Organisation Chart		1				
Health and Safety Plan			1	2WAA		
Environmental Plan			1	2WAA		
HR/IR Plan			1	2WAA		
Quality Plan			1	2WAA		
Inspection and Test Plans			1	2WAA	3	AC
Inspection and Test Procedures			1	2WAA		
Manufacturer's Data Report					3	AC
Material Certificates						
Weld Procedures / Specification						
Loading / Shipping Drawings						
Erection Drawings						
Erection Instructions						
As Built Mark-ups of all Drawings						
Completed As Built Drawings					1E	AC

NOTES:

- | | |
|--|---|
| <p>1. P = Print</p> <p>2. D = Day(S) W = Week(S) AA = After Award
 BM = Before Manufacture
 BI = Before Installation
 AT = After Testing / Inspection</p> <p>3. WM = With Manual/MDR</p> | <p>E = Electronic Format – Ms Word Or Microstation</p> <p>AR= After Review / Approval
 BD = Before Delivery
 BT = Before Testing / Inspection
 AC = After Commissioning</p> |
|--|---|

APPENDIX C
QUALITY REQUIREMENT – STRUCTURAL STEEL

DESCRIPTION	REQUIREMENT
1.0 QUALITY ASSURANCE PLAN including ITP: This shall set out the individual tests, inspections and verifications required to ensure that materials and installation of civil works meet specified requirements.	<input type="checkbox"/> With tender <input type="checkbox"/> Prior to commencement <input type="checkbox"/> Not required
2.0 PRE-INSPECTION MEETING: Pre-inspection meeting prior to the start of materials production to discuss Q.A aspects.	<input type="checkbox"/> Required <input type="checkbox"/> Not required
3.0 SUB-CONTRACTORS: The contractor shall submit suppliers, testing agencies and sub-contractors names for approval.	<input type="checkbox"/> Required <input type="checkbox"/> Not required
4.0 CONTRACTOR INSPECTION REPORTS: Lists of all reports and certificates forming part of the civil works installation contract – see 7.0 below	<input type="checkbox"/> Required prior to commencement <input type="checkbox"/> Not required
5.0 MATERIAL CERTIFICATES FOR SUPPLIED PRODUCTS: Material/Mill certificates shall include results of tests performed and identification marks on the item. All certificates shall be identified against material supplied. Letters of conformity from stockists are not acceptable.	<input type="checkbox"/> Letter of Conformity from Manufacturer <input type="checkbox"/> Test by Manufacturer’s laboratory <input type="checkbox"/> Independent testing
6.0 EXISTING CONDITIONS Location of existing services and structures prior to excavation.	<input type="checkbox"/> By Contractor <input type="checkbox"/> By AMMS Group <input type="checkbox"/> Other _____
7.0 QUALITY CERTIFICATION: <input type="checkbox"/> Permit to dig <input type="checkbox"/> Construction signage plan <input type="checkbox"/> Test plan for classification of rock <input type="checkbox"/> Blasting plan <input type="checkbox"/> Permit to blast <input type="checkbox"/> Stabilisation plan (dust control) <input type="checkbox"/> Dieback Control plan <input type="checkbox"/> Rehabilitation plan <input type="checkbox"/> Fill material certificates <input type="checkbox"/> Size distribution <input type="checkbox"/> Compaction test certificates <input type="checkbox"/> Abrasion <input type="checkbox"/> Strength and Density Tests	<input type="checkbox"/> Fill Material Certificates (Cont’d) <input type="checkbox"/> Chemical Composition <input type="checkbox"/> Thickness <input type="checkbox"/> Moisture content (prior to wearing course installation) <input type="checkbox"/> Compaction certificates <input type="checkbox"/> Trench backfill <input type="checkbox"/> Road/hardstand materials <input type="checkbox"/> Foundation base <input type="checkbox"/> Wearing course tests <input type="checkbox"/> Materials <input type="checkbox"/> Thickness <input type="checkbox"/> Compaction <input type="checkbox"/> As built drawing markups
8.0 INSPECTION AND WITNESS TESTING: Inspection of civil works Minimum notice required by Contractor	<input type="checkbox"/> By CHELL <input type="checkbox"/> By 3rd Party <input type="checkbox"/> Not Required _____ days

APPENDIX D
EXPEDITING REPORT

EXPEDITING/INSPECTION REPORT

Client: _____

Project: _____ Job No.: _____

Report by: _____ Report No: _____ Date: _____

Telephone Report Site Visit Report

Contractor/Supplier: _____ Contract/Order No: _____

Address: _____

Order Date: _____ Contact: _____ Tel: _____

Equipment Description and Numbers: _____

Date Required

Previous Estimate

Present Estimate

Engineering Status: _____

Fabrication/Manufacturing Status: _____

Overall % Complete: _____ Progress Ahead/Delayed: _____

COMMENTS- Action Required: _____

Inspector/Expediter Signature: _____

Copies to: _____

APPENDIX E
PROCUREMENT PROCEDURE-FLOWCHART

PROCUREMENT FLOWCHART

