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Version 8.0  
September 1, 2020

	Signature	Date
Author	 _____ D. Hauge, QA/QC Manager	01-Sept-20
Approval #1	 _____ M. Hauge, President	01-Sept-20
Approval #2	 _____ G. Bogatyrevich, Manager of Engineering	01-Sept-20

Revision	Date	Description	Author
1	Sept. 1/10	Issued for Implementation	M. Hauge
2	Jan. 1/15	Issued for Implementation	M. Hauge
3	Jan. 1/16	Issued for Implementation	M. Hauge
4	Dec. 8/16	Issued for Implementation	M. Hauge
5	Feb. 1/18	Issued for Implementation	M. Hauge
6	July 1/18	Issued for Implementation	M. Hauge
7	Mar. 1/19	Issued for Implementation	M. Hauge
8	Sept. 1/20	Issued for Implementation	M. Hauge

## 1.0 Policy Statement

DynaWest Engineering Ltd's (DWEL) quality policy is to achieve profitable growth by providing services that consistently satisfy the needs and expectations of its customers. The objectives of DynaWest Engineering Ltd.s' Quality Management System are:

- **Maintain an effective and efficient Quality Management System;**
- **Achieve and Maintain a level of superior quality that enhances the Company's reputation with our cliental;**
- **Ensure Compliance with relevant statutory and regulatory requirements;**
- **Increase productivity;**
- **Promote innovation and creativity resulting in effective and economical solutions;**
- **Ensure that the company's professional practice is carried out by individuals having the necessary training and experience in their relevant fields and to ensure continuing professional development is being undertaken by all professionals.**

## 2.0 Management Commitment

DWEL's Management will continually develop and maintain the Quality Management System and provide resources and training required for its implementation. Management is committed to reviewing and improving work practices.

## 3.0 Introduction

### 3.1 Purpose

This Quality Assurance Manual defines the quality assurance activities undertaken by DWEL. It will be used internally to guide the company's employees through the various requirements in order to ensure customer satisfaction, continual improvement and provide the necessary instructions to create an empowered team. This manual will be used externally to introduce our Quality Management System to our cliental and will provide insight into the controls that have been implemented and to ensure the integrity of our Quality Management System is maintained and focused on continuous improvement and customer satisfaction.

### 3.2 Scope

This Quality Assurance Manual identifies quality assurance activities based on regulatory requirements and best industry practice. For each project, a project specific implementation plan will be developed to guide development activities for client specified requirements and procedures.

### 3.3 Background

DynaWest Engineering Ltd. is an Alberta based consulting engineering company with our office located in Edmonton:

Greystone IV – 100, 4207-98 Street, Edmonton, Alberta T6E 5R7

Phone: (780) 469-5622

Fax: (780) 469-5633

Website: [www.dynawesteng.com](http://www.dynawesteng.com)

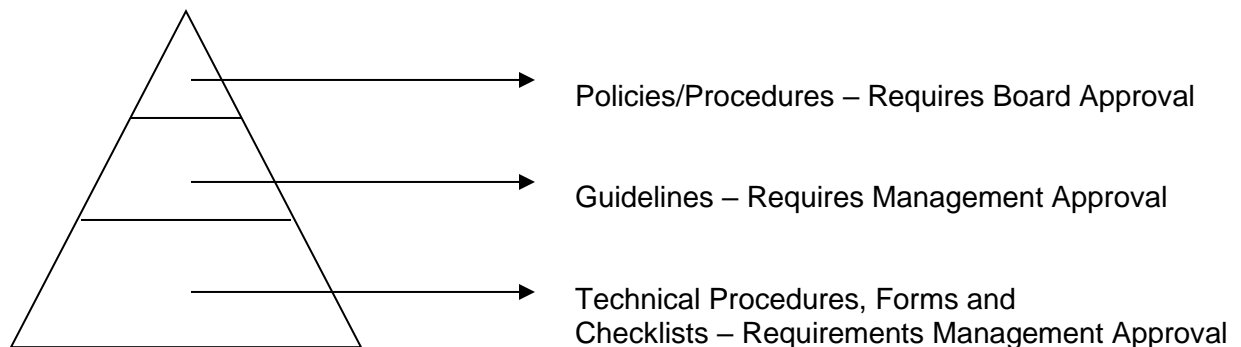
Our Permit to Practice Number is P10787.

We provide fully integrated engineering services based on the skills of a multi-disciplinary professional line up including Architectural, Civil/Structural, Mechanical, HVAC, Piping, Electrical, Instrumentation as well as Project Management, Project Services and Estimating Assistance that allows us to deliver a broad suite of engineering and design capabilities. DWEL is led by a team of professionals that have collectively amassed many years' experience through successful execution of industrial and manufacturing projects throughout Western Canada and Alberta. Our primary focus is on the following sectors:

- Oil Sands Facilities
- Refining & Processing Facilities
- Manufacturing Plants
- Public Infrastructure
- Industrial Buildings

### 4.0 Program Structure

The Quality Assurance Manual defines the quality assurance and quality control elements for DWEL. DynaWest's operational policies, manuals and procedures will be issued as individual documents and managed by each respective department within DWEL. The overall structure of policies, manual and procedures are identified below:



#### 4.1 DynaWest Engineering Policies/Procedures

Procedure No.	Procedure Name	Revision
DWEL-P0001	Professional Management Practice Plan	5
DWEL-P0002	Project Initiation Guidelines	3
DWEL-P0003	Project Planning Guidelines	3
DWEL-P0004	Project Execution & Control Guidelines	3
DWEL-P0005	Project Close Out Guidelines	3
DWEL-P0006	Document Review & Approval Guidelines	3
DWEL-P0007	QA/QC Management Guidelines	3
DWEL-P0008	Document & Record Management Guidelines	3
DWEL-P0009	Engineering & Design Guidelines	3
DWEL-P0010	Ethics & Integrity Guidelines	3
DWEL-P0011	Procurement Guidelines	3

#### 4.2 Quality Assurance Program Review

DWEL's Quality Assurance System and Manual will be reviewed on an annual basis. Some policies, guidelines or procedures may be updated throughout the year on an as needed basis. The input for the Quality Assurance System review will include the following:

- Results from Project Audits;
- Lessons Learned feedback/input;
- Cliental Feedback;
- Preventative or Corrective Actions status;
- Issues or Actions from previous Management Reviews;
- Changes that could impact the Quality Management System;
- Recommendations for improvement from cliental and staff;
- New or revised regulatory requirements;
- Updates to Professional Code of Conduct or Ethics.

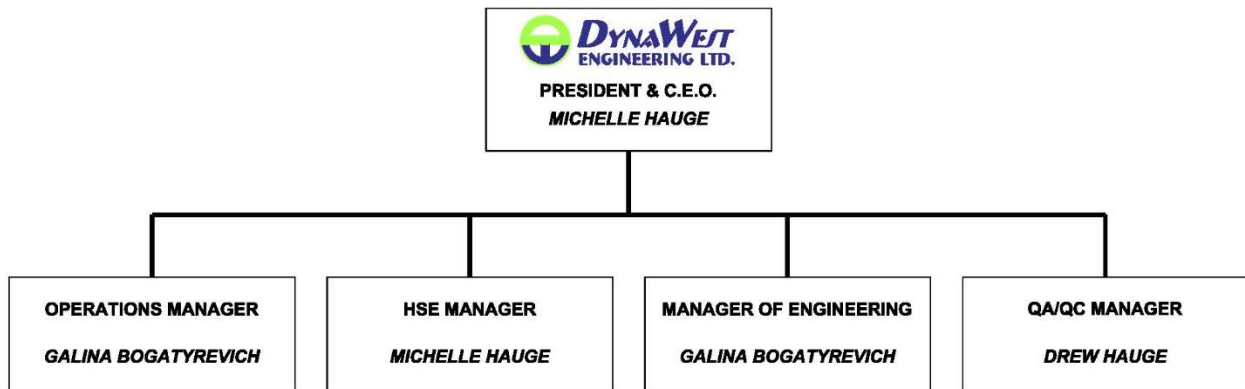
## 5.0 Quality Assurance Program Elements

### 5.1 Management

#### 5.1.1 Organization

##### Company Structure

### DYNAWEST ENGINEERING ORGANIZATION CHART



##### Responsibilities

###### **President**

- Formulates company strategy, policies and objectives.
- Ensures the Quality Management System is reviewed regularly.
- Plans changes to improve quality.
- Has an overview of the management of non-conformity.
- Financial Management.

###### **Operations Manager**

- Implements company strategy, policies and objectives.
- Allocates necessary resources to maintain and improve quality system.
- Participates in the Quality Management System review.
- Ensures Quality Management System and Procedures are implemented on an overall basis.
- Assists with staff training on procedures and quality issues.
- Implements changes to improve quality.
- Responsible for the management of non-conformity.

**HSE Manager**

- Assists in formulating company strategy, policies and objectives.
- Ensures Company Safety and Loss Control Policy is reviewed regularly.
- Plans changes to improve safety.
- Input into Quality Management System changes required to improve safety.
- Ensures the Quality Management System is reviewed regularly.
- Plans changes to improve safety and quality.
- Staff training and safety and loss control policies.
- Has an overview of the management of non-conformity.
- Input into financial management.

**QA/QC Manager**

- Formulates company strategy, policies and objectives.
- Ensures the Quality Management System is reviewed regularly.
- Ensures Quality Management System and procedures are implemented on a day-to-day basis.
- Participates in internal and external audits of the Quality Management System.
- Maintenance of Quality Management System.
- Assists in staff training on procedures and quality issues.
- Plans and implements changes to improve quality.
- Responsible for the management of non-conformity.

**Manager/Supervisor (Engineering)**

- Participates in the review of the Quality Management System.
- Implements Quality Management System and procedures on a day-to-day basis.
- Identifies strategies for changes to improve Quality Management System.
- Ensures employees and contractors follow the companies Quality Management System.
- Participates in internal and external audits of the Quality Management System.
- Ensures professionals have the necessary training and experience to conduct services required.
- Ensure professionals are continually developing professionally.



**Company Employee or Contractor**

- Understands and follows the companies Quality Management Procedures and Guidelines.
- Has input into company strategies, policies and objectives.
- Participates in audits of the company Quality Management System when requested by Management or Supervisors.
- Participates actively in training programs offered with respect to the company Quality Management System.
- Responsible for ensuring they continually develop their knowledge basis in accordance with the regulations, guidelines and bylaws of their professional practice.

**5.1.2 Change Control**

Changes to the Board and Senior Management Structure are made by the Board of Directors which are identified below:

<b>Name</b>	<b>Position</b>	<b>Date Appointed</b>
Drew Hauge	Director	August 4, 2014
Galina Bogatyrevich	Director	October 17, 2013
Michelle Hauge	Director	August 27, 2009

The Board of Director positions will be reviewed on a yearly basis and any changes will be documented in the Board Meeting Minutes. DynaWest's Human Resources Coordinator maintains and updates the document outlining the organization's structure and job descriptions of individual staff members. All modifications must be reviewed and approved by the Board Members.

Changes to the Quality Assurance System and Quality Procedures will be reviewed on a yearly basis and any necessary modifications will be implemented at that time.

Changes to the Safety and Loss Control Procedures will be reviewed on a yearly basis. Refer to DynaWest's Safety & Loss Control Manual for details on implementing change control.

### **5.1.3 Quality System**

DynaWest's Quality Assurance System is comprised of various Quality Guidelines and Procedures as noted in the attached Appendix A. This Quality Assurance Manual is consistent with these policies and procedures and defines the structure and requirements of the Quality Assurance Program. The policies, procedures and technical guidelines define or reference specific requirements that form part of the quality assurance system.

## **5.2 Document Control**

DWEL maintains a system for the management of documents, records and drawings. This includes defining procedures for the following:

- Indexing and uniquely numbering each document/drawing;
- Reviewing and Approving documents/drawings;
- Distribution of Approved documents/drawings;
- Periodic review of documents still in use;

Documents are classified into these categories:

- Public
- External Confidential (Clients)
- Internal Confidential (Corporate)
- Internal Non-Confidential

Each classification will have guidelines how these documents are to be maintained and distributed.

The approver of a document defines the category when the document is to be issued for review. The Document and Records Management Guideline defines the retention period for documents and records.

Each Project Manager shall ensure that the project follows DynaWest's Document and Records Management Guideline as a minimum. The Project Manager is responsible for obtaining any client document and records management guidelines and implementing these on a project basis. Specific client requirements for document and records management shall be forwarded to the QA/QC Manager for records purposes for future work. The QA/QC Manager shall ensure that a record of current client standards/requirements for document control and records management is maintained in the appropriate place defined in our Document and Records Management Guidelines. The QA/QC Manager shall ensure staff training is provided for these standards/requirements.

### **5.3 Design and Engineering**

#### **5.3.1 Engineering Codes and Standards**

DWEL follows the latest industry and regulatory defined codes and standards by various associations as noted below:

National Building Code of Canada (NBC)  
Alberta Building Code (ABC)  
National Fire Protection Association (NFPA)  
National Fire Code of Canada (NFCC)  
National Plumbing Code of Canada (NPCC)  
Alberta Occupational Health & Safety (OH&S)  
Alberta Safety Codes Act  
Alberta Boilers Safety Association (ABSA)  
Canadian Standards Association (CSA)  
Canadian Electrical Code  
Electrical & Electronics Manufacturers Association of Canada (EEMAC)  
Institute of Electrical & Electronic Engineers (IEEE)  
National Electrical Manufacturers Association (NEMA)  
American Concrete Institute (ACI)  
American Society for Testing and Materials (ASTM)  
American Water Works Association (AWWA)  
American Petroleum Institute (API)  
American National Standards Institute (ANSI)  
Underwriters Laboratories Canada (ULC)  
Canadian Portland Cement Association  
Canadian Institute of Steel Construction (CISC)  
American Institute for Steel Construction (AISC)  
Sheetmetal & Air Conditioning Contractors National Association (SMACNA)  
American Society of Heating, Refrigeration & Air Cond. Engineers (ASHRAE)  
American Society of Mechanical Engineers (ASME)  
Instrument Society of America (ISA)  
Manufacturers Standardization Society (MSS)  
National Association of Corrosion Engineers (NACE)

### **5.3.2 Drawing Review, Verification, Validation and Approval**

Prior to issuing document/drawings, the adequacy of the design, design tools, design inputs and design outputs are verified, validated and approved. The responsibility for ensuring designs are subject to adequate review and approval rests with the Project Manager and/or Manager of Projects. All drawing and/or document reviews shall follow the Document Review and Approval Guidelines. Any document or drawing that has not followed the Document Review and Approval Guidelines cannot be issued either as an internal or external document.

### **5.3.3 Drawing Controls**

All DWEL drawings are issued drawing numbers as assigned by the Document Control Group. The Document and Record Management Guidelines and Document Review and Approval Guidelines outline how each drawing shall be initiated, reviewed and issued.

### **5.3.4 Engineering Change Control**

If an engineering change is required, then a Project Change Request (PCR) shall be issued to evaluate the potential impact of any major technical changes. If the decision is made to proceed with the change, then a Project Change Notice (PCN) is issued and must be approved by the Project Manager and the Client prior to implementing the changes. Refer to the Project Execution and Control Procedures.

## **5.4 Health, Safety and Environment**

DynaWest is committed to providing and maintaining a healthy and safe work place, and to responsibly manage all environmental aspects of our business. A Health, Safety and Environmental Policy and a Safety and Loss Control Program have been developed to encourage injury prevention and provide an effective workplace health and safety management system.

### **5.5 Purchasing Services and Supplies**

Procedures for procurement of services and supplies are outlined in the DWEL Procurement Procedures. This includes records, vendor quality audits, receiving, inspection and acceptance requirements and procedures.

### **5.6 Subcontracting**

When sub-contracting any work, DWEL shall review the supplier's Quality Assurance Program and Health and Safety Program to ensure it is consistent with DynaWest's Quality Assurance Program and our Safety and Loss Control Program. Work conducted by Sub-contractors shall comply with DynaWest's Quality Assurance Program and our Safety and Loss Control Program. If the sub-contractor does not have an acceptable Quality Assurance and Health and Safety Program, then they shall abide by DynaWest's programs.

### **5.7 Feedback**

DWEL will utilize feedback from cliental, management, project managers, staff, audit results and lessons learned recommendations to continually improve the Quality Assurance Program. As part of the Project Execution and Control Procedures and the Project Close-Out Procedures, continual feedback is requested from our cliental and team members working on the projects. DWEL's Management is responsible for constant review of our Quality Management Program and Procedures and offer feedback for improvement. Audits will be performed on projects to ensure compliance with our Quality Management Program as well as to define and record areas for improvement.

### **5.8 Non-Conformance and Corrective/Preventive Action**

DWEL will operate a Non-conformance Management System that identifies and tracks non-conformances and identifies the root cause. The non-conformance issues are reviewed and a corrective action is identified, implemented and validated to be effective. The non-conformance management system is used to track the following:

- Internal Quality Assurance Audit Findings
- External Quality Assurance Audit Findings
- Internal Health, Safety and Environment Audit Findings
- External Health, Safety and Environment Audit Findings
- Other corrective actions required to meet regulatory or operational needs.

## **5.9 Control of Records**

DWEL's Document and Record Management Guidelines defines the processes for the control of records. This includes the identification of confidential information and legal requirements for the management of personnel information. The procedures and timelines for record keeping are identified in the Document and Record Management Guidelines. Guidelines for record management of both hard copies and electronic copies of documents are identified in the Document and Record Management Guidelines.

## **5.10 Internal Audits / External Audits**

Internal quality assurance audits will be performed as outlined in our Document Review and Approval Guidelines and our QA/QC Management Guidelines. The objective of an internal audit is to assess compliance with the overall Quality Assurance Program and Procedures. The audit result will be considered confidential and only distributed to the respective members and the QA/QC Manager. The intent of the audit is to provide constructive feedback resulting in improvements to the quality of the services we provide.

External quality assurance audits may be performed by our client or, if required, by an independent third party. The format of these audits will be driven by the client. The Project Manager and/or the QA/QC Manager will be responsible for coordinating the external audit and ensuring the feedback is utilized in implementing improvements in our Quality Assurance Program.

The QA/QC Manager shall track status of audit findings and ensure necessary updates to policies and procedures are implemented for improvement.

### **5.11 Quality Assurance Program Reviews**

The QA/QC Manager, HSE Manager and Manager of Projects shall review the Quality Assurance Program annually for the following:

- Performance is meeting quality and safety objectives;
- Assess if management processes are effective in establishing, promoting and achieving conformance with quality and safety objectives;
- Identify weaknesses that impact the safe, efficient and effective operations of the company;
- Allocation of resources, priorities and objectives;
- Define goals and objectives for the next six months that address any weaknesses found during the review;
- Define any other actions required outside the company to address weaknesses found during the review including identifying any barriers to attainment in the defined objectives;
- Provides input to the president for improvements to the quality programs policies, procedures and/or guidelines.

### **5.12 Peer Review**

DynaWest will request feedback from all of the team members on issues that they may have encountered and/or recommendations for improvements to our Quality Assurance Program and our Safety and Loss Control Program. Feedback received can be provided openly or anonymously and this feedback will be utilized in forming goals, objectives and potentially corrective actions to ensure continual improvement in the quality, health and safety of our operations.

### **5.13 Personnel**

Each DWEL team member will have a job description that defines their role within the organization including their qualifications, authority and responsibility. Personnel qualifications are reviewed when hired, at the end of the three month probationary period and afterwards on a yearly basis. It is the responsibility of the Engineering Manager, QA/QC Manager and President to ensure the staff members are qualified to undertake the activities assigned and to ensure adequate supervision is provided where required. DynaWest encourages the development of all of our personnel by offering financial assistance for industry related training and continual professional development.

Annual performance reviews will be conducted by the immediate manager or supervisor to review employees' performance including areas of achievement and areas requiring improvement. Feedback from the employee is encouraged to ensure the opportunities provided satisfy their expectations and allow for growth in the company.

#### **5.14 Work Environment**

DWEL will create and maintain a work environment where team members feel totally free to express an idea or concern. We will strive to engage the enthusiasm of the entire team and the team will support the company's vision for the future by developing the strategy as a team to meet our corporate goals and objectives. We will encourage positive, informal interaction between team members, members will share leadership roles, all team members will participate in idea generation and decision making. Team members will show respect and trust for one another and DWEL management will eliminate any potential conflict by confronting issues and inappropriate behaviors. Team building will be critical to our corporate success and we will strive to achieve and maintain a strong united team.

#### **5.15 Equipment/Tools**

With an increase demand for higher quality products and cost reduction, it is essential for our organization to deliver their products more rapidly, efficiently and cost effectively in order to remain competitive. Technology is constantly evolving and changing, DynaWest realizes the importance of keeping their employees up-to-date with emerging technologies. We provide state of the art computer equipment and the latest release of computer software for our employees. A detailed inventory of our equipment and software is located in Appendix B.

Developing sound Information Technology (IT) infrastructures requires solid planning and execution. Our business needs will often require that existing technology be updated to meet growing demands or to take advantage of Internet opportunities. DynaWest works closely with Sysgen Solutions Group in developing an IT plan that provides a practical blueprint for describing how our technology can evolve to meet our business requirements. Sysgen Solutions Group is an Alberta-based IT consulting organization that provides customized IT support services to DWEL. They provide network administration, storage and data management, network infrastructure design, infrastructure assessments and business continuity back-up solutions.