

**BYLAW NO. 98-02**

**BEING A BYLAW IN THE VILLAGE OF ANDREW  
IN THE PROVINCE OF ALBERTA  
TO ESTABLISH A QUALITY MANAGEMENT PLAN FOR THE  
DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE  
OF A NATURAL GAS UTILITY**

**WHEREAS:** The village of Andrew owns and operates a natural gas distribution system in the Province of Alberta; and

**WHEREAS:** The Village wishes to establish guidelines for the operation of the gas distribution system; and

**WHEREAS:** A quality management plan has been prepared regarding the design, construction, operation, and maintenance of it natural gas utility system;


**NOWTHEREFORE:** The Municipal Council of the Village of Andrew, in the Province of Alberta, duly enacts as follows:

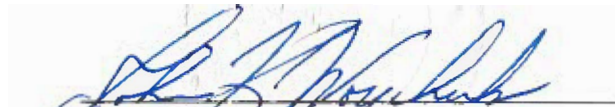
1. That the Quality Management Plan for the Natural Gas Utility, a copy of which is set forth in Schedule "A" hereto annexed, be and the same is hereby ratified, confirmed and approved.

**READ** for a first time this 8<sup>th</sup> day of JULY, 1998 A.D.

**READ** for a second time this 8<sup>th</sup> day of JULY, 1998 A.D.

**READ** for a third and final time 29<sup>th</sup> day of JULY, 1998 A.D.

  
Reg Charnick,  
Ewanowich, Mayor

  
John K. Woychuk, Municipal Administrator

## **Schedule "A"**

### **VILLAGE OF ANDREW - QUALITY MANAGEMENT PLAN**

This Quality Management Plan is intended to cover the design, construction, operation and maintenance of a natural gas utility owned by a municipality.

#### **PREAMBLE**

The Village of Andrew (hereinafter referred to as "the Village"), owns and operates a natural gas distribution system in the Province of Alberta and, in accordance with provisions of the Municipal Government Act, the Village has assumed the responsibility to provide natural gas service to residents and other consumers located within a defined franchise or service area within the Province. The Mayor and Council, with the support of the municipal administration and staff, take full responsibility for ensuring that the natural gas distribution system is designed, constructed, operated and maintained in a manner that will ensure the safety of its customers, employees, and the general public.

#### **QUALITY MANAGEMENT PLAN FUNCTIONS**

##### **Standards**

The Village will operate and maintain the natural gas transmission and distribution system in accordance with the following legislation, regulations, standards and guidelines:

- The Municipal Government Act
- The Water Gas and Electric Companies Act
- The Gas Distribution Act, as applicable
- The Gas Utilities Act, as applicable
- The Pipeline Act and Regulations, as applicable
- Occupation Health and Safety legislation and regulations, as applicable
- Canadian Standards Association standard CAN/CSA Z662, Oil and Gas Pipeline Systems, latest edition
- Canadian Standards Association standard CAN/CSA Z731-95 Emergency Planning for Industry
- Guidelines for Operations & Maintenance Practices in Alberta Natural Gas Utilities, issued jointly by Alberta Transportation and Utilities and the Federation of Alberta Gas Co-ops Ltd., as amended by the Village from time to time

## **Design**

The Village will ensure that its distribution system is designed to safely deliver the required volumes of gas to each consumer under the most extreme conditions by:

Acquiring the services of a qualified professional engineer to determine system requirements.

Working with the qualified professional engineer to establish maximum and minimum system design and operating pressures, appropriate selection of routing and alignment of natural gas facilities with other utilities and infrastructure, system design, and materials specifications.

## **Construction, Testing and Commissioning**

In order to ensure that all pipelines are constructed, tested and commissioned in the appropriate manner, the Village will:

Have a process in place that systematically identifies and records all specific approvals, agreements, utility rights-of-way, permissions and consents required, and the dates that each is acquired.

Ensure that all pipelines are constructed in accordance with the applicable codes, regulations and standards, with depth of cover maintained to that specification required by the applicable code, legislation, regulation, and standards by:

- Providing the contractor with appropriate specifications for depth of cover to be maintained, monitoring the physical installation of the pipeline and related facilities, and documenting all information required to provide a true record of the construction being undertaken
- Verifying pipeline depths during and/or after the time of installation, and documenting the findings

Maintain a system for recording the location, and materials information (i.e. reel number, resin type and extruder) for all pipe installed.

Ensure that all pipelines are tested to the pressures and for the durations as specified in the appropriate regulations and/or technical standards manual, and that air and other testing medium entrapments are removed from the system before it is placed in service, by:

- Providing the contractor with the test specifications, and document the transmittal of this information to the contractor.

Require certification for all pressure test documents, with a permanent record reporting the legal description of the pipeline segment tested, date, time, duration of testing, and the test medium used, and verify pressure testing is undertaken in accordance with the specifications and standards prior to acceptance of facilities for commissioning

Verifying test charts and records of pressure data (i.e. start time, location information) during testing, and documenting findings and records of all such inspections.

Purging the pipeline and related facilities and/or verifying that the facilities have been properly purged of test medium and entrapments, using an approved method prior to commissioning the facilities, and documenting the findings.

Ensure proper pressure control equipment, and regulator and relief valve configurations and capacities are in place to adequately protect the connected transmission and distribution system and customer installations from excessive pressures by:

- Providing a qualified installer with the technical information required to determine the proper capacities and configuration of the equipment.
- Developing a specific audit procedure to ensure the correctness of the regulator and relief valve installation.

Ensure pipeline warning signs and markers are properly installed by inspecting all new crossings and above-ground facilities after completion, to confirm the placement of signage and markers, and document the findings accordingly.

### **Operation, Maintenance and Repair:**

In order to ensure that the distribution system is properly operated, maintained, and repaired, the Village will:

Employ or contract the services of qualified operations personnel to safely operate and maintain the system. The level of manpower required should be established by developing a plan or formula, based on historical performance, system requirements and the level of service committed to by the distributor (i.e. the formula for distributors with burner-tip service and/or a self-construction operation will require a different plan/formula) to complete those functions in accordance with industry standards.

Ensure that the minimum level of safety equipment, as adopted in the operation and maintenance manual, is provided and maintained by utilizing an inventory sheet, for both the shop and emergency response

vehicles, to routinely check and document the physical inventory against the utility's policy requirements.

Monitor the integrity of the transmission and distribution systems by:

- Establishing test points at predetermined locations throughout the system to allow recording system pressures
- Recording, comparing and reconciling volume purchases and sales data on a monthly basis
- Undertaking physical inspections of the operating systems for leakage and other areas of concern by patrolling the pipelines at such frequencies as may be deemed appropriate under the governing codes, legislation, regulations and Guidelines

Ensure that safe and adequate levels of odorant are maintained in the system by:

- Establishing test points at predetermined locations throughout the system to assure that testing or sampling will provide a representative quality of odorization for the total system.
- Testing or monitoring for levels of detectable odorant on a regular basis, with samples being taken not less than once a month at each test location.
- Maintain a permanent record of findings of all testing and monitoring, with actions taken if any to remedy unsatisfactory readings.

Ensure all damages and incidences of system leakage are diligently repaired, documented and reported to the authority having appropriate jurisdiction in accordance with the appropriate regulations (system licensed under the Pipeline Act to the AEUB, system operating at 700 kPa or less to AT&U), by:

- Assigning the responsibility for repair and proper collection of field information to a designated or specific individual(s).
- Assigning the task of reporting and verifying incidents of system contact, failure and/or leakage, in an appropriate format, to a designated or specific individual or individuals.
- Verifying the completeness of information collected and reports issued on a regular basis.

Develop and maintain a regular preventative maintenance program (i.e. line patrolling, cathodic protection surveys, operation of pressure control

assemblies, and integrity of above-ground facilities) to safeguard the distribution system against premature deterioration of safety and security. This will be ensured by scheduling the frequency of these activities, as established in the utility's O&M program, and developing and maintaining a permanent record of such activities, inspections, verifications and audits.

Establish a maintenance/control system which ensures that all safety equipment is properly calibrated and functional at all times. This system will include a schedule of preventative maintenance and re-calibration dates for planning, tracking, spot checking and auditing all safety equipment, including equipment used to locate pipelines, measure concentrations of odorant and gas, levels of cathodic protection, pressure gauges, etc.

### **Emergency Response:**

To ensure that employees understand how to respond appropriately to emergency situations, the Village will:

Develop a safety program and document the frequency and results of each employee's involvement. This program should include a lecture/tape presentation and mini quiz to confirm each participants understanding of material presented, and cover the following situations:

- Gas odour calls
- Carbon monoxide poisoning
- Explosions and fires
- Major system outages
- System failure, incidents of contact with or ruptures on polyethylene, PVC, steel or aluminum pipelines

Ensure that employee orientation sessions include the above safety program.

Actively participate in community emergency response exercises, involving the above situations, and maintain reports on the results of the exercise, which will cover the extent of the exercise as well as the successes and shortcomings identified.

### **System Plans and Records:**

In order to ensure the completeness, accuracy and timely completion of the utility's as-built drawings and ensure that the Alberta One Call data base is current, the Village will:

Monitor the progress of as-built survey/application to ensure that the it is submitted to AT&U (when applicable) prior to March 31 of the year following construction.

Review the as-built drawings against each year's new customer location listing for completeness.

Have the construction personnel responsible for service installations review pipeline placement for accuracy according to his/her recollection.

Complete, check and return Alberta One Call updates forms from information contained on the as-built drawing updates or construction application drawings.

### **Responsibility**

This Quality Management Plan highlights the safety related components of the Village of Andrew design, construction, operation, and maintenance programs for the natural gas system. The responsibility for compliance with this plan is hereby accepted by the Mayor, Council and Administration.