

Quality Management Plan

Lac La Biche County Gas Utility

Preamble

This Quality Management Plan (QMP) represents a commitment to the Province of Alberta under section 5 of the *Gas Distribution Act* that the rural gas utility is designed, constructed, operated and maintained in accordance with the Act's section 2 requirements.

The Lac La Biche County Gas Utility (hereinafter referred to as "the municipal gas utility", section 1(k) of the *Gas Distribution Act*), owns and operates a rural gas utility in Alberta and in accordance with its franchise issued under section 18 of the Act, has both the exclusive right and duty to offer and provide natural gas service to residents in a specific area of the province. The municipal gas utility, represented by the County Council, is as owner, ultimately, but with the full support of the Chief Administration Officer, the municipal gas utility's Manager and employees, takes full responsibility for ensuring that the rural gas utility is being designed, constructed, operated and maintained in a manner consistent with section 2 of the Act so as to ensure the safety of its customers, employees, and the general public of Alberta. Annual review of this QMP document by the County Council and the Chief Administrative Officer and the Gas Utility Manager, in conjunction with the annual submission of as-built plans and sustaining operation and maintenance expectations of the Chief Officer, partly form the Approval to Operate a rural gas utility in Alberta.

QUALITY MANAGEMENT PLAN FUNCTIONS

Standards

As applicable, the rural gas co-operative association will design, construct, operate, and maintain its gas utility in accordance with the following legislation and standards:

- The *Gas Distribution Act*
- The *Pipeline Act* and Regulations
- The *Municipal Government Act*; only as applicable/relevant to the rural gas utility
- The *Gas Utilities Act*, as applicable
- The *Occupation Health and Safety Act*, and all codes and regulations, as applicable
- Canadian Standards Association (CSA) Z662 Oil and Gas Pipeline Standard
- Canadian Standards Association (CSA) Z246.2 Emergency Preparedness and Response for Petroleum and Natural Gas Industry Systems
- The Technical Standards Manual for Gas Distribution Systems in Alberta, issued by Rural Utilities
- Guidelines for Operations & Maintenance Practices in Alberta Natural Gas Utilities issued by the Federation of Alberta Gas Co-ops Ltd.
- Alberta Energy Regulator (AER) Directive 71 Emergency Preparedness and Response Requirements for the Petroleum Industry (as applicable)

Municipal gas utilities are also expected to maintain appropriate insurance coverage.

Design

The municipal gas utility 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 gas distribution Engineer (recognized by APEGA) or a designated P. Tech (Eng) (Professional Technologist) in accordance with the *Engineering and Geoscience Professions Act* to determine system requirements, and/or
- Working with the Engineer/P. Tech. to establish pipe and station design, pipe sizing minimum end line pressure, appropriate route selection, and design and material requirements.
- Acquiring and installing only pipe that has been inspected under the Quality Assurance Program (QAP) and approved by Rural Utilities.

Construction Testing and Commissioning

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

- Have a documentation process in place that systematically identifies and tracks all the specific approvals, agreements, utility rights-of-way, etc. required and the dates acquired for each.
- Ensure that all pipelines are buried to the depths specified in the Technical Standards and Specification Manual for Gas Distribution Systems by:
 - Providing the contractor with the depth specifications and documenting the information and time of presentation.
 - Spot checking pipeline depths during and/or after the time of installation and documenting the findings.
- Establish a system for recording and auditing the location, and material information for all pipe installed.
- Ensure that all pipelines are tested to the pressures and times specified in the Technical Standards and Specifications Manual for Gas Distribution Systems by:
 - Spot checking charts/pressure data (i.e. start time/location information) during testing and document these checks.
 - Recording all the test, location, and material data on a test confirmation report.
 - Purging each pipeline using an approved method, prior to putting the line into service, and documenting the findings.
- Ensure proper regulator and relief valve configuration and capacities are in place to adequately protect the distribution system and customer installations from excessive pressures by:
 - Providing the technical information required to determine the proper capacities and configuration of the equipment to a qualified installer.
 - Developing a specific audit procedure to ensure the correctness of the regulator and relief valve installation.
- Ensure pipeline warning signs are properly installed by inspecting all new crossings and above ground facilities to confirm the placement of signs, and document accordingly.

Operation, Maintenance and Repair

In order to ensure that the gas utility is properly operated, maintained, and repaired, the municipal gas utility will:

- Employ or contract the services of qualified field staff to safely operate and maintain the system. The level of manpower requirements will be established by developing a plan or formula, based on historical performance, system requirements and the level of service committed to by the municipal gas utility to complete these functions in accordance with industry standards.
- Ensure that the level of safety equipment for both the shop and emergency response vehicles (as adopted in the Guidelines for Operations & Maintenance Practices in Alberta Natural Gas Utilities) in

addition to personal protective equipment (PPE), is provided, inventoried, maintained, and calibrated as and if required.

- Monitor the levels of gas loss by:
 - Recording and comparing wholesale tap purchases on a weekly basis.
 - Comparing the wholesale purchases to the retail sales on a monthly basis
 - Physically checking the system for leaks by performing a leak detection survey on the distribution pipe lines at intervals of at least the following:
 - Urban systems - every three years.
 - Rural systems – every five years.
- Ensure that the proper levels of readily detectable odorant are maintained in the system by:
 - Checking the odorant tank levels at every tap location every month and recording findings.
 - Testing or monitoring for levels of readily detectable odorant on a regular basis, not less than once a month at each test location.
 - Maintaining records of monthly readings and spot checking and documenting those results at reasonable intervals.
- Ensure all underground damage and leaks are diligently repaired and reported to the appropriate regulatory body:
 - Damage or leaks to high pressure (> 700 kPa) pipelines or facilities must be reported to the Alberta Energy Regulator (AER).
 - Damage or leaks to low pressure (< 700 kPa) pipelines or facilities must be reported online to Rural Utilities through the Rural Utilities Portal. (<https://partners.agric.gov.ab.ca>)
 - Significant damage, leaks, and/or explosions should be reported to the Chief Officer as soon as it is safe and practicable to do so.
- Develop and maintain a regular preventative maintenance program (i.e. leak detection surveys, cathodic protection surveys, regulator station operation and painting of above ground facilities) to safeguard the distribution system against premature deterioration. The frequency of these activities must be scheduled as established in the municipal gas utility's Operations and Maintenance program.
- Establish a maintenance/control system of equipment used to locate pipelines, measure concentrations of odorant and gas, levels of cathodic protection, pressure gauges, etc.

Emergency Preparedness and Response

To ensure that employees understand the municipal gas utility's program to respond to emergency situations, the municipal gas utility will:

- Develop an Emergency Response Program (ERP) to effectively respond to emergencies, promote safety of workers, responders and the public. The program should cover training, resources and equipment for responding to the following (but not limited to):
 - Pipeline leaks or ruptures,
 - Fires and explosions,
 - Unplanned system outages,
 - Dangerous good spills, and
 - Gas odour notifications.
- Document employee's training and participation in annual tabletop or communications exercises and ERP reviews.
- Actively participate with community emergency services in major field mock disaster exercises (held once every three years).
- Annually review internal emergency response procedures to update the municipal gas utility's effectiveness.

Surveying and Plant Records

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

- Maintain an up-to-date set of as-built plans of the rural gas utility in the municipal gas utility's office.
- Monitor the progress of as-built surveys and mapping to ensure that the as-built plans are submitted to Rural Utilities by March 31 of the year following construction.
- Review the as-built drawings and documentation against each year's new customer location listing for completeness.
- Submit all required Alberta One-Call database updates for distribution system additions or removals.

RESPONSIBILITY

This Quality Management Plan highlights the safety related components of the Lac La Biche County Gas Utility's design, construction, operation, and maintenance programs. The municipal gas utility's County Council and Chief Administration Officer along with their Gas Utility Manager have reviewed the QMP in its entirety, and the municipal gas utility hereby accepts the responsibility for compliance of their distribution system with this plan.

This Quality Management Plan was reviewed at the County Council meeting held on: _____.

Dated _____

Reeve

I have read and will support the municipal gas utility in ensuring the compliance of this Quality Management Plan:

Dated _____

Chief Administrative Officer

Dated _____

Gas Utility Manager

Annual review of QMP required:

This QMP must be reviewed and signed by the municipal gas utility, represented by the County Reeve, the Chief Administrative Officer and the gas utility Manager on an annual basis and submitted to Rural Utilities by December 31st of each year.

Failure to submit a signed QMP document may result in any or all of the following actions: (1) The annual 'Approval to Operate' will not be issued, (2) all planned/future construction must be approved by the Chief Officer prior to construction until the QMP is signed and submitted, and (3) any construction done without prior approval of the Chief Officer will be in contravention of section 13 of the *Gas Distribution Act* and potentially subject to an offence (section 8) and/or order (section 9) under the Act.