



Report to: General Committee

Report Date: December 7, 2007

SUBJECT: Quality Management System Policy for Town of Markham

PREPARED BY: Eddy Wu, P.Eng., Ext 2737
Waterworks, QMS Controller

RECOMMENDATION:

THAT the report titled "Quality Management System Policy for Town of Markham" be received;

AND THAT Council approves the proposed Quality Management System Policy as the Quality Management System Policy for Town of Markham in order to comply with element #2 of the Drinking Water Quality Management Standard;

AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

EXECUTIVE SUMMARY:

Not applicable

PURPOSE:

The purpose of this report is to advise Council on the implementation progress of the Quality Management System in order to comply with the Ministry of Environment's Drinking Water Quality Management Standard (DWQMS) and to propose and get the approval of the Quality Management System (QMS) Policy for Town of Markham in order to comply with element number 2 – QMS Policy of the DWQMS.

BACKGROUND:

Justice Dennis R. O'Connor, in Part Two of the Report of the Walkerton Inquiry, recommended the adoption of quality management systems for drinking-water systems. It was also recommended that a standard, specifically designed for drinking-water systems, be developed and implemented in Ontario.

This recommendation has been mandated by the provincial government through the Safe Drinking Water Act. To address this requirement in the Act, the Ministry of the Environment has developed, with water industry stakeholders, a quality management standard specific to the needs of the drinking-water systems in Ontario – the Drinking Water Quality Management Standard (DWQMS). The DWQMS is applicable to the owners and operating authorities for all municipal residential drinking-water systems, including treatment, transmission and/or distribution.

The DWQMS consists of 21 elements and is divided into four steps – **PLAN, DO, CHECK** and **IMPROVE**. This structure originates from the Plan-Do-Check-Act

methodology seen in some international standards. The implementation steps are cyclic so that the quality management system is able to continuously evolve and improve.

The **PLAN** and **DO** elements are:

Element 1 – Quality Management System

Element 2 – Quality Management System Policy

Element 3 – Commitment and Endorsement

Element 4 – Quality Management System Representative

Element 5 – Document and Records Control

Element 6 – Drinking-Water System

Element 7 – Risk Assessment

Element 8 – Risk Assessment Outcomes

Element 9 – Organizational Structure, Roles, Responsibilities and Authorities

Element 10 – Competencies

Element 11 – Personnel Coverage

Element 12 – Communications

Element 13 – Essential Supplies and Services

Element 14 – Review and Provision of Infrastructure

Element 15 – Infrastructure Maintenance, Rehabilitation and Renewal

Element 16 – Sampling, Testing and Monitoring

Element 17 – Measurement and Recording Equipment Calibration and Maintenance

Element 18 – Emergency Management

The **CHECK** elements are:

Element 19 – Internal Audits

Element 20 – Management Review

The **IMPROVE** element is:

Element 21 – Continual Improvement

Waterworks has already started the implementation of DWQMS by addressing each of the above elements individually. The documentation of how the Town addresses each element will form the required Operational Plan. The expected completion date of the Operational Plan, and the Standard Operating Procedures and Work Instructions that support the Operational Plan, is May 2008. The deadline for Town of Markham to submit the application for the accreditation is February 1, 2009.

Waterworks Staff began the implementation journey in early 2007 by conducting a gap analysis, and also by hiring the Quality Management System (QMS) Controller who will be in charge of the implementation and maintenance of the quality management system. The QMS Controller position has been filled in September 2007, and since then Waterworks has been working in full force, with the assistance of other associated departments, in order to meet the submission deadline. A DWQMS Working Team has been established and with the input from all Waterworks Managers, the following tasks had been accomplished since September 2007:

1. From the Quality Management System Gap Analysis and Delivery Plan Report, endorsements have been requested to designate the Town of Markham's Owner, Operating Authority, Corporate Top Management, Operational Top Management and Quality Management System Representative as required by the DWQMS. Once the Council approved all the recommendations made in this report, the implementation of element #3 Commitment and Endorsement and element #4 Quality Management System Representative of the DWQMS could be considered to be completed.
2. Several DWQMS Introduction Sessions had been delivered to all Waterworks, Asset Management Staff and Leaders of Human Resources, Fire and Emergency Services, Engineering, Asset Management, Legal, Finance, ITS and Operations Departments in order to deliver general DWQMS information, and to assist them in seeing where each group and department would be fitting in the quality management system.
3. Weekly Working Team meeting have been held to work on specific task each week for the implementation of QMS.
4. All Waterworks Managers contributed towards the establishment of the Quality Management System Policy.
5. Started the process of gathering information and the writing of the Operational Plan, Standard Operating Procedures and Process Mappings as required by the DWQMS.

OPTIONS/ DISCUSSION:**Quality Management System Policy**

The QMS Policy sets the foundation for the QMS. This policy demonstrates a commitment by the Operating Authority that quality management is important. This element of DWQMS requires the development of a QMS policy, and the policy is the backbone of the quality management system. This is an important step that should be performed with the input from top management.

The Drinking Water Quality Management Standard says the Operational Plan shall document a Quality Management System Policy that provides the foundation for the Quality Management System, and:

- a) is appropriate for the size and type of the subject system,
- b) includes a commitment to the maintenance and continual improvement of the Quality Management System,
- c) includes a commitment to the consumer to provide safe drinking water,
- d) includes a commitment to comply with applicable legislation and regulations, and
- e) is in a form that provides for ready communication to all Operating Authority personnel, the Owner and the public.

In order to comply with the DWQMS, the Operating Authority shall establish and maintain a Quality Management System that is consistent with the Policy.

The policy is the driver for the quality management system – documentation to demonstrate the operating authority's commitment to quality management is important. The standard outlines three main commitments that must be in the policy: to maintain and continually improve the QMS, to comply with applicable legislation and regulations, and to provide safe drinking water to the consumer. In this manner, the organization's commitment to drinking water quality is documented. This element also requires that the policy be in a form that can be easily communicated and the operating authority ensures that the QMS is consistent with the commitments made in the QMS policy.

The QMS policy must be addressed as part of the Operational Plan. The endorsement of the QMS Policy is a major milestone in the implementation process, as it sets the direction of the quality management system. The Owner and Operating Authority must demonstrate how the QMS policy is established and communicated within the Corporation and to the Public.

With the input from all Waterworks Managers and external consultants, Waterworks is proposing the QMS Policy for the Town of Markham in Attachment "A".

Under the NQI Organizational Quality & Wellness Criteria for Municipalities model, the Leadership and Planning Driver requires the setting of commitment and reinforcement, and the setting of vision and strategic direction. The People Engagement Driver requires the setting of training and development commitment, and the Process Management Driver requires the setting of continuous improvement commitment. All these activities are included in this QMS Policy and therefore this policy fits well under the NQI model that the Town of Markham is currently working towards to achieve.

Future Implementation Plans

In the coming months, major implementation activities will be happening throughout the Town in order to meet the submission deadline. These activities are:

1. To conduct the Risk Assessment project in order to comply with elements #7 & 8 of DWQMS – Risk Assessment of the Drinking Water System is to be performed, and the Outcomes from the Risk Assessment are to be documented. The Outcomes are to be used as the base line for the Emergency Management project.
2. To conduct the Emergency Management project in order to comply with element #18 of DWQMS – Emergency Management of the Drinking Water System is to be documented from the use of the Risk Assessment Outcomes.
3. Continue the development of the required operational plan and system procedures, implement and approve all the procedures upon completion of each at all level of the Town.
4. Further DWQMS training to be developed and delivered focusing on new procedures developed and for the preparation of audits.

5. Perform internal audits of all 21 DWQMS elements, identify any nonconformance from the audits, implement corrective action for each nonconformance identified and most importantly follow up with the corrective action in order to close the loop and see how effective the corrective action is.
6. Management Review meeting to be held at the later part of this year prior to the submission of the application for accreditation services.
7. Quarterly Implementation Progress Update to be submitted to General Committee to advise the QMS implementation progress and as of this moment the implementation has been on track.

FINANCIAL CONSIDERATIONS AND TEMPLATE: (external link)

There are no immediate Financial implications resulting from the recommendations of this report.

ENVIRONMENTAL CONSIDERATIONS:

Not Applicable

ACCESSIBILITY CONSIDERATIONS:

Not Applicable

ENGAGE 21ST CONSIDERATIONS:

The QMS Policy ties in with the Corporation's Goals of Infrastructure Management, Managed Growth and Organizational Excellence.

Infrastructure Management

To build, renew and strategically manage the Town's infrastructure to meet the demands and expectations of a growing community.

Managed Growth

Provide a framework for the timely delivery of well-planned new communities that are phased and coordinated with the provision of infrastructure.

Organizational Excellence

To achieve excellence in managing and delivering quality services through quality people.

Within the QMS policy, it states the infrastructure is well operated, maintained and managed in support of the provision of safe drinking water, which ties in with the Infrastructure Management and Managed Growth goals. The policy also states the

training of all staff and continuous employee development, which ties in with the Organizational Excellence goal.

BUSINESS UNITS CONSULTED AND AFFECTED:

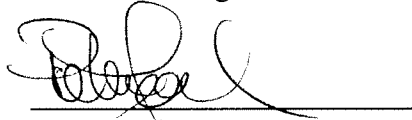
Not Applicable

RECOMMENDED

BY:



Jerry Klaus,
General Manager, Waterworks



Peter Loukes
Commission Lead, Operations and Asset Management

ATTACHMENTS:

Attachment "A" – Proposed Quality Management System Policy for the Town of Markham

Subject: Quality Management System Policy for the Town of Markham**Introduction:**

Justice Dennis R. O'Connor, in Part Two of the Report of the Walkerton Inquiry, recommended the adoption of quality management systems for drinking-water systems. It was also recommended that a standard, specifically designed for drinking-water systems, be developed and implemented in Ontario - the Drinking Water Quality Management Standard (DWQMS). The DWQMS implemented by the Province complies with Justice O'Connor's recommendation.

Markham Drinking Water System is a distribution subsystem of the Region of York Transmission and Distribution System. Markham is responsible to maintain the quality of the water once it has entered the distribution system. Supplied water is treated either by the City of Toronto or the Region of Peel.

Scope:

This policy describes the commitment of the Town of Markham to establish, adopt and manage a quality management system as a means to deliver safe drinking water and to enhance customer confidence in the quality of the drinking water.

Policy:

Town of Markham shall provide safe drinking water that is compliant with the Safe Drinking Water Act and applicable regulations and legislation, by:

- The maintenance and continual improvement of the Quality Management System for the Markham Water Distribution System through adhering to the requirements of the Drinking Water Quality Management Standard and the principles embodied in the Standard.
- Adopting the principles of Quality Management in the design, construction and operation of the Drinking Water System. Markham will strive to use the best available, cost-effective technology, materials, management and planning methodologies to ensure that the infrastructure is well operated, maintained and managed in support of the provision of safe drinking water.
- Building and maintaining a leading organization through emphasis on development of staff expertise and knowledge through targeted training programs and continuous employee development. Markham will ensure that all staff with duties that directly affect the drinking water quality is trained and competent to perform their duties.
- Markham reviewing its practices affecting the provision of safe drinking water against industry best practices and industry standards. The performance of the system and the policy will be communicated to the Owner & Management of the Town's water system, as well as staff and customers.

