



STAFF REPORT INFORMATION ONLY

Generating Revenue from Toronto Water Laboratories

Date:	May 15, 2007
To:	Public Works and Infrastructure Committee
From:	General Manager of Toronto Water
Wards:	All
Reference Number:	P:\2007\Cluster B\TW\pw07021 (AFS # 4177)

SUMMARY

Toronto Water is currently restructuring the operation of its laboratories to improve the effectiveness, efficiency and quality of analytical services provided. The restructuring process includes the consolidation of two separate laboratory facilities into one larger newly renovated facility. Recent improvements to the organization and processing of tests by the two laboratories have increased efficiencies, however, the existing separate facilities do not have the capability or capacity to provide services on a scale that is economically attractive to external clients.

FINANCIAL IMPACT

There are no financial implications resulting from this report.

DECISION HISTORY

This report was requested by Councillor Howard Moscoe in his letter to the Chair and Members of the Public Works and Infrastructure Committee dated January 29, 2007.

COMMENTS

Toronto Water has been restructuring over the past seven years to harmonize and standardize its operations with the objective of improving the effectiveness and efficiency of service delivery. As part of the restructuring process, an assessment and program review of the laboratory services required by Toronto Water and other City Divisions was completed.

Laboratory Service Program Review

The Laboratory Services Program Review has led to a new organizational structure and operational framework and has recommended the consolidation of two separate laboratory facilities into one location. The Program Review consisted of the following components:

- **Lean Assessment** - A Lean Assessment was initiated to develop proposals to improve the overall efficiency, competitiveness and effectiveness of both the water and wastewater laboratories. The objective of the assessment was to identify and minimize low or non-value added activities, identify barriers to overall effectiveness, and determine how to consolidate the two laboratories into a single more efficient facility. Results from the lean assessment were used in preparing a new management structure for the organization and completing a detailed laboratory facility needs assessment (both physical building layout and testing equipment requirements).
- **Laboratory Testing Levels** - An expert panel of professionals from the fields of public health, medical ethics, regulatory agencies and water and wastewater operators was convened to review the City's existing testing practices. The mandate of the expert panel was to reach consensus on the appropriate number, location and frequency of drinking water tests required above the minimum amount specified by the Ministry of the Environment to ensure a high degree of public health protection and confidence. The expert panel recommended and defined testing levels for various parameters that would constitute the drinking water portion of the laboratory's work load. This workload along with projected workloads for other laboratory users within the City (i.e. wastewater, stormwater, beach monitoring and landfill leachate testing) was used as the basis for reorganizing the Toronto Water Laboratories.
- **Organization Redesign** - The management structure of the laboratories was redesigned into one cohesive team providing all water, wastewater, stormwater and other analytical services to the City. The new organizational structure considered all of the issues raised in the lean analysis as well as the testing levels recommended by the expert panel.
- **Laboratory Facility Assessment** - Specific plans and detailed space considerations were developed for a consolidated facility to address the needs identified through the above processes. Specifically, the laboratory facility is being designed to satisfy the new work load, address the findings of the lean assessment and accommodate consolidated staffing levels.

Expanding the Scope of Services for Laboratories to Generate Revenue

The potential to expand the scope of services provided by Toronto Water Laboratories to include external clients for the purposes of generating revenue is limited at this time by the capacities of the two existing laboratories and the cost of providing services. The two laboratories are not configured in a manner nor do they possess some of the newer automated equipment used by private laboratories to make the venture economically competitive in the market place. At present, only smaller "one-off" external testing

projects can be accommodated by the laboratories and the price that would need to be charged to customers to recover the full cost of testing plus a reasonable profit margin would not be competitive in today's market place.

As part of the Laboratory Services Program Review, an assessment was completed for the current scope and volume of analytical services and it was determined that market competitiveness can only be achieved when the identified changes to the organization, operational processes, acquisition of new automated equipment along with the consolidation of laboratory facilities (occupancy expected in late 2009) are implemented and functioning properly. In addition, a review of the market demand for specific analytical services and an assessment as to Toronto Water Laboratory's competitiveness within the marketplace, at that time, is required to ensure the facility layout and equipment purchases meets the needs of external clients.

Extending analytical services to outside clients may require a review of the current restructuring approach as revisions may be required to the design of the newly expanded and renovated facility to include larger and more automated facilities. New practices would also need to be developed to handle a larger volume of external clients and the organizational structure may change as additional staff would be required to process all aspects of a commercial nature.

Answers to the specific questions raised by Councillor Moscoe in his January 29, 2007, letter are as follows:

Question No. 1 - To what extent do we have surplus capacity at our labs?

Answer - With the implementation of new testing levels and the restructuring of the organization as part of the Laboratory Services Program Review, there is presently no surplus capacity at the laboratories to accommodate a significant increase in testing to service external clients. There is the capacity to service smaller volume, "one-off" external projects.

Question No. 2 - What charges do other municipalities pay to private labs to do their testing?

Answer - The cost of testing varies significantly depending on the type of analyses performed, the volume of testing and the type of laboratory completing the tests. Private laboratories can provide significant cost savings for large quantities of repetitive tests such as microbiological testing, while special analyses performed infrequently are often more expensive or not available except as performed by other municipally owned laboratories. However, based on a competitive review completed as part of the Laboratory Services Program Review, the overall cost of all analyses performed by an advanced private laboratory was always found to be either lower or similar in cost to those analyses performed by municipal laboratories, depending on the efficiency level of the individual municipal operation.

Question No. 3 - Could we sell testing services to other municipalities and make profit?

Answer – Yes, there is the potential to sell testing services. However, the cost of testing will not be competitive until the new consolidated laboratory facility is constructed. Also, it would be prudent to complete a market study to assess the demand for external testing as the new facility may need to be expanded, additional staff hired and trained and new practices implemented to accommodate a significant increase in the volume of repetitive analyses that would need to be conducted to achieve the economies of scale required to maintain a competitive pricing and cost structure for the laboratory.

Question No. 4 - If we do decide to sell laboratory services, what business structure would work to our best advantage?

Answer - Toronto Water's Laboratory services would need to be competitive with private sector laboratories for it to attract external clients. For drinking water related analytical services, economies of scale plays a significant role in pricing and costing. Laboratory facilities would need to be structured at the scale of service to achieve and maintain market competitiveness. This would require construction of larger facilities equipped with expanded automated testing trains, development and implementation of new work practices, and hiring additional trained staff to operate in such an environment. In addition, a sales component would need to be created to market and promote the laboratory services. A proper business plan addressing issues such as the demand for laboratory services in the market place, the existing pricing structure for various analytical tests, the capital expense of expanding existing facilities (including the cost of purchasing new automated equipment), and an assessment of the regulatory and business risks associated with operating a for-profit laboratory enterprise would need to be prepared before analytical services are offered at significant volumes or for lengthy contract terms with any external clients.

CONTACT

Alex Marich
Director Operational Support
Toronto Water
Tel: (416) 397-7296
Email: amarich@toronto.ca

SIGNATURE

Lou Di Gironimo
General Manager
Toronto Water