



CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT
Hamilton Water Division

TO: Chairs and Members Public Works Committee	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: November 18, 2013	
SUBJECT/REPORT NO: Standardization of Water & Wastewater Plant Operations and Environmental Laboratory Equipment, Parts, Supplies and Services (PW13084) - (City Wide)	
SUBMITTED BY: Gerry Davis, CMA General Manager Public Works Department	PREPARED BY: Dan McKinnon (905) 546-2424, Extension 5941 Lindsay Reiach (905) 546-2424, Extension 5662 Pam Thomas (905) 546-2424, Extension 5826
SIGNATURE:	

RECOMMENDATION

- (a) That a single source supplier of equipment, parts/supplies and services contained in Appendices A and B to Report PW13084 be approved as the source of supply for the listed equipment, parts/supplies and services for the Hamilton Water Division, specifically Plant Operations (PO) and the Environmental Laboratory (CHEL) operations;
- (b) That the Original Equipment Manufacturer (OEM) of equipment, parts/supplies and services contained in Appendices A and B to Report PW13084 be approved as the single source of supply for equipment, parts/supplies and services for the Hamilton Water Division, specifically Plant Operations (PO) and the Environmental Laboratory (CHEL) operations;
- (c) That the General Manager of Public Works, or his designate, be authorized and directed to enter into and sign on behalf of the City of Hamilton, all negotiated agreements and all necessary associated documents with the vendors listed in Appendices "A" and "B" to Report PW13084 with content acceptable to the General Manager of Public Works, and in a form satisfactory to the City Solicitor.

EXECUTIVE SUMMARY

PO and CHEL have a multitude of complex systems that consume a high volume of parts, supplies and services in order to maintain the facilities in a state of operability and good repair. This satisfies a number of goals related to legislative compliance, health and safety, cost-efficiency, productivity and return on investment.

The supplier base that PO and CHEL use is wide spread and complex and requires the use of various strategies and networks of distribution to have parts, supplies and services available to their customers. This includes vendors with exclusive distribution rights to geographical areas, levels of pricing according to whether the vendor has redistribution rights, is a service provider or is an end user.

We can leverage that advantage by committing to standard components where Water and Wastewater operating groups can realize familiar operating parameters, reduce training costs and improve the ability to control inventory costs.

Purchasing products and equipment through the Corporate Standardization Policy will result in PO and CHEL being compliant with current Procurement Policies and is expected to achieve the goal of transparency for parts, supplies and equipment purchases and control cost of replacement components. It will also further reduce the time requirement for staff to prepare Policy 11's for all of the vendors listed in Appendices A and B. Additionally this report recommends certain products as the City of Hamilton's standard to strengthen our ability to meet the goals stated above, and prevent delays or non-compatible products from entering the system.

Purchasing Policy #14 provides guidelines for standardization. Standardization is a management decision-making process that examines a specific common need or requirement and then selects a good and/or service that best fills that need to become the standard. Where multiple sources are available for a standardized part or equipment the applicable procurement document will be issued for competitive bids.

Through a variety of sources including trade shows, periodicals, other municipalities, sales representatives and industry organizations the market place will be monitored for new industry practices and suppliers to ensure the recommended brands and sources of supply contained in this report remain current and in the City's best interest and in compliance with the Procurement Policy.

The Procurement Policy requires an annual approval for each vendor when:

- there is only one source for supply of particular Goods and/or Services in the open market (sole source);
- a single source for the supply of a particular Good and/or Service is being recommended because it is more cost effective or beneficial for the City (single source).

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The purpose of this report is to seek approval as follows:

- (a) That a single source supplier of equipment, parts/supplies and services contained in Appendices A and B to Report PW13084 be approved as the source of supply for the listed equipment, parts/supplies and services for the Hamilton Water Division, specifically Plant Operations (PO) and the Environmental Laboratory (CHEL) operations.
- (b) That the Original Equipment Manufacturer (OEM) of equipment, parts/supplies and services contained in Appendices A and B to Report PW13084 be approved as the single source of supply for equipment, parts/supplies and services for the Hamilton Water Division, specifically Plant Operations (PO) and the Environmental Laboratory (CHEL) operations;
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The recommendations contained in this report support the mission statement of the Public Works Business Plan - 'Innovate Now' - 'Provide safe, strategic and environmentally conscious services that bring our communities to life'.

Alternatives for Consideration - See Page 5

FINANCIAL / STAFFING / LEGAL IMPLICATIONS

Financial: Appendix A or B lists the products and services recommended for standardization.

Adequate budget was approved for these procurements in 2013 and is included the 2014 proposed rates-supported operating and maintenance budgets.

Staffing: A reduction in the amount of staff time required to procure these supplies will support improved efficiency of operation and maintenance of our facilities and equipment.

Legal: N/A

HISTORICAL BACKGROUND

PO and CHEL includes Woodward Water Treatment Plant, Woodward Wastewater Treatment Plant, Dundas Wastewater Treatment Plant, the Environmental Laboratory and 139 outstations, which represents more than 8500 individual pieces of equipment and includes a vast number of individual components. Asset replacement value is estimated to be approximately \$2.3 billion.

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The cost for annual parts and supplies for repair and maintenance is budgeted at approximately \$4.0 million. PO carries an inventory of parts, supplies and materials to expedite repair and maintenance operations. The inventory includes in excess of 8000 'stock keeping units' (SKUs) which can include numerous brand names and manufacturers of the same component to keep up with changes that occur when equipment from a new or different vendor is put in service.

CHEL requires a dependable and consistent supply of 'standards' and chemicals. This enables timely and efficient testing procedure for their numerous clientele; Plant Operations, Water Distribution, Waste Management, Fleet & Facilities, Hamilton Conservation Authority and various construction projects.

As new equipment is acquired PO and CHEL have previously undertaken OEM approval under Policy #11 for spare parts, supplies and services. For much of this equipment there is no known aftermarket for spare parts and supplies available, or the OEM representative is the only source of specialized testing equipment and knowledge.

By allowing the standardization of these components PO and CHEL can ensure they have inventory of the specific make and model to allow for direct replacement without having to modify electrical or piping requirements or configurations for equipment therefore reducing downtime and costs. Monthly expenditure reports are developed to track purchases and ensure the all expenditures do not surpass the thresholds as stated in the Procurement Policy.

By standardizing equipment, parts, supplies and services, it may be possible to maintain or reduce the number of SKUs. This streamlines repair and maintenance work and puts out-of-service equipment back in service in less time, thereby maximizing service availability and equipment uptime and maintaining legislative compliance. It reduces the amount of training needed for operators and maintenance technicians, and reduces the value of inventory carried in City stockrooms.

POLICY IMPLICATIONS/LEGISLATED REQUIREMENTS

The City of Hamilton Bylaw #11-297 - Procurement Policy, Policy #14, Section 4.14, allows for standardization.

This process aligns with the Public Works Strategic Plan by ensuring that equipment is maintained and completes its expected lifecycle, and costs are kept to a minimum.

RELEVANT CONSULTATION

These recommendations are the result of consultations with the Procurement Section and the Financial Services Division to reduce the number of requests to use Policy 11 of the Procurement Policy for approval to negotiate with vendors.

ANALYSIS / RATIONALE FOR RECOMMENDATION

The selection of parts and supplies to replace existing equipment or components that have reached the end of their service life has been given considerable attention. Management seeks to improve the efficiency and productivity of operations and create a positive work environment. Front-line employees who use the equipment know from experience what kinds of equipment are best suited for work, including those aspects which maintain an ease of operation, stable functionality and acceptable health and safety standard. Providing components where questionable reliability, unfamiliarity with new technology, incompatibility and concern for failures may otherwise distract staff from performing safe work or executing legislative compliance duties supports the need for the standardization of supply of goods noted in the related appendices.

ALTERNATIVES FOR CONSIDERATION

The initial process of acquisition for purchasing new municipal goods and services is a competitive bidding process and award to the compliant bid with the lowest cost that meets specifications. This results in a transparent process that is fair for all potential bidders, by reducing the variables to focus on acquisition cost alone.

This process may have adverse outcomes for complex systems within PO and CHEL. When considering maintenance and servicing, where there is no aftermarket supply and in many cases the OEM or their representative is the only source for parts, supplies and service. The degree of effort and the opportunity for errors increases to work with new or unfamiliar equipment.

ALIGNMENT TO THE 2012 - 2015 STRATEGIC PLAN

Strategic Priority #2

Valued & Sustainable Services

WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.

Strategic Objective

2.1 Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.

Strategic Priority #3

Leadership & Governance

WE work together to ensure we are a government that is respectful towards each other and that the community has confidence and trust in.

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Strategic Objective

- 3.2 Build organizational capacity to ensure the City has a skilled workforce that is capable and enabled to deliver its business objectives.
- 3.4 Enhance opportunities for administrative and operational efficiencies.

APPENDICES / SCHEDULES

Appendix A - Single source parts/supplies, equipment and services and Original Equipment Manufacturers for the Environmental Laboratory operations.

Appendix B - Single source parts/supplies, equipment and services and Original Equipment Manufacturers for Plant Operations.

**Parts, Supplies, Equipment and Services for the
City of Hamilton Environmental Laboratory**

Vendor Name	Goods	Services
Single source parts, supplies, equipment & services		
Canadian Association for Laboratory Accreditation (CALA)	Laboratory Accreditation Services and Laboratory Performance Testing Samples	On site ISO 17025 Laboratory Assessments and Provider of specialized standards utilized by the Environmental Laboratory to maintain ISO 17025 Accreditation
Instruments Canada Company Ltd.	Providing on-site calibration services for the laboratory certified thermometers and digesters	Providing on-site calibration services for the laboratory certified thermometers and digesters
Delta Scientific Laboratory Products Ltd.	Phenova (Wibby), High-Purity Standards and Inorganic Ventures certified reference standards and laboratory consumables	Provider of specialized standards and consumables utilized by the Environmental Laboratory to maintain ISO 17025 Accreditation
Fisher Scientific	Supplier of Millipore EZ-Pak® Membrane Filters used for regulatory drinking water analysis	Provider of specialized filters used in existing laboratory equipment
Sigma-Aldrich Canada Ltd.	SUPELCO Analytical certified reference standards and laboratory consumables	Provider of specialized standards utilized by the Environmental Laboratory to maintain ISO 17025 Accreditation
VWR International	Supplier of Environmental Resource Associates (ERA) Single Blind Reference Standards	Provider of specialized standards utilized by the Environmental Laboratory to maintain ISO 17025 Accreditation
Original Equipment Manufacturers and their representatives for parts, supplies, equipment & services		
Abraxis, LLC	Instruments, parts, supplies and service for microcystins ELISA analysis	OEM spare parts, supplies and services for existing equipment utilized by the Environmental Laboratory
Agilent Technologies, Inc.a	Instruments, parts, supplies and service for trace metal (Varian Vista-PRO Axial CCD and SpetraAA 220FS) and trace organic analysis (Agilent GC/MSD System, Agilent GC/ECD and Tekmar Purge and Trap auto sampler with Agilent GC/MSD System, Agilent GC/MS/MS System)	OEM spare parts, supplies and services for existing equipment utilized by the Environmental Laboratory
Thermo Fisher Scientific	Instruments, parts, supplies and service for anion analysis	OEM spare parts, supplies and services for existing equipment utilized by the Environmental Laboratory
Mandel Scientific Company Inc.	Instruments, parts, supplies and service for PC-Titrate™ Chemistry System and three Lab Grade Lancer Dishwashers	OEM spare parts, supplies and services for existing equipment utilized by the Environmental Laboratory
EMD Millipore Corporation	Parts, supplies and service for Laboratory water purification systems for trace analysis	OEM spare parts, supplies and services for existing equipment utilized by the Environmental Laboratory
Skalar Inc.	Instruments, parts, supplies and service for Skalar Automated Chemistry Systems	OEM spare parts, supplies and services for existing equipment utilized by the Environmental Laboratory
CEM Corporation	Instruments, parts, supplies and service for Discover SP-D Microwave System	OEM spare parts, supplies and services for existing equipment utilized by the Environmental Laboratory
Magnetar Corporation	Maintenance and Upgrades to SIRIUS Laboratory Information Management System (LIMS) database	Maintenance and Upgrades to laboratory information management system (LIMS) database

**Parts, Supplies, Equipment and Services for the
City of Hamilton Water Treatment Plant**

Vendor Name	Goods	Services
4Imac Inc.	CMMS Software	Technical support for the modification of the City's existing Computerized Maintenance
A & F Industries	Screw Conveyor System for loading Biosolids	OEM spare parts, equipment & services for existing systems & equipment
ACI Instrumentation Limited	Krohne Flow Meters, Primary controller, secondary measuring element, control	OEM spare parts & services for existing equipment
Aerzen Canada Inc.	Aerzen Blowers	OEM spare parts & services for existing equipment
Alfa- Laval	Centrifuges, specialized equipment, specialized testing	OEM parts, equipment and services
A.W. Chesterton Company	Chesterton mechanical seals for the pumps in the main pumphouse at the WWTP	OEM spare parts for pump mechanical seals.
C & M Environmental Technologies Inc.	Environmental Dynamics International aeration diffuser bubbler system currently	OEM, replacement parts for the aeration systems.
Can-Am Instruments Limited	Hach/ Sigma samplers, pumps, motors, drives and other miscellaneous equipment.	OEM spare parts and services for existing equipment utilized by Plant Operations.
Cancoppas Limited	Aysix oxygen analyzers in the aeration tanks.	OEM spare parts for aeration analysis
Conval Equipment Ltd.	Golden Anderson Pressure Reducing Valves (PRV)	OEM spare parts and training for Golden Anderson Valves.
Devine & Associates Ltd.	Cla-Val Pressure Reducing Valves (PRV)	OEM spare parts and training for Cla- Val Valves. Require maintenance and repair on a
Dynamic Filtration Ltd.	Dynamic Filters	OEM support and supplies
Eaton Yale Company	Cutler Hammer Control equipment and switchgear.	Preventive maintenance, replacement parts, equipment and on-site services for Eaton
Delta Controls	HVAC system from Optimira Energy	OEM equipment and software support. Monitor and service the system in order to maintain the
Fisher Heating Inc.	Investigate and repair the diesel fuel storage and delivery system in order to bring the	Provide all labour, equipment and materials necessary to complete emergency repairs to

**Parts, Supplies, Equipment and Services for the
City of Hamilton Water Treatment Plant**

General Electric Canada	General Electric equipment	OEM spare parts and on site support services for General Electric equipment and products.
H2Flow Equipment Inc.	OEM support and supplies for Trojan Ultra-Violet (UV) disinfection units	OEM spare parts for existing systems and equipment utilized by plant operations
Hach Sales & Service Canada Inc.	OEM support and supplies for Hach equipment.	OEM preventative maintenance and calibration by technicians with technical resources,
Hibon Inc.	Hibon blowers currently provide air into the aeration system of the WTP	OEM spare parts for existing equipment utilized by Plant Operations
John Crane Canada Inc.	John Crane seals designed and fabricated specifically for centrifugal pumps	OEM spare parts
Lakeside Process Controls Ltd.	Rosemount Analyzers used in numerous processes throughout the water treatment	OEM spare parts and equipment for Rosemount Product.
L.J. Barton Mechanical Inc.	Waste gas flares (burners)	Provide all labour, equipment and materials necessary to maintain the existing Waste Gas
Metcon Sales & Engineering Ltd.	ABB Turbidity Meters, including analyzers, switches, valves and other associated equipment and components. Peristaltic Metering pumps	OEM spare parts for existing ABB, Prominent and Watson-Marlow Equipment utilized by Plant Operations.
National Process Equipment	Recirculation chopper pumps that were manufactured by Vaughan Pumps and	OEM spare parts for existing equipment utilized by Plant Operations
Pencon Equipment Company	RoFlo Gas Compressors within the process systems, including full compressor	OEM spare parts for existing systems and equipment utilized by plant operations
Pro Aqua & Shadrack Inc	Siemens Industry, Inc. Envirex Products	OEM spare parts supplies and services for existing Siemens Equipment and associated
Gerrie Electric	Rockwell (Allen-Bradely) VFD parts components and services	OEM spare parts for existing systems and equipment utilized by plant operations
Romatec Process Solutions	Seepex Pumping Systems, including pumps, motors, drives, etc.	OEM spare parts and assembly's for existing equipment utilized by Plant Operations
Rotork Controls (Canada) Ltd.	Rotork actuator systems, including various equipment and components such as	OEM spare parts and services

**Parts, Supplies, Equipment and Services for the
City of Hamilton Water Treatment Plant**

Schneider Electric Canada Inc.	Schneider Electric. Electrical supply and control systems	OEM parts, Equipment and On-site services for Schneider Electrical Equipment & Products.
Schwing Biozet	Schwing replacement parts	OEM spare parts for existing equipment utilized by Plant Operations
S.I.E. Millwright and Maintenance Services	Aerzen Blowers. SIE for repair and replacement.	OEM spare parts for existing equipment utilized by Plant Operations
Siemens Canada Limited	Siemens replacement parts and services	OEM spare parts supplies and services for existing Siemens Equipment and associated
Smart Turner Pumps	Smart Turner water pumps and motors.	OEM spare parts and support services for existing systems and equipment utilized by
Smith & Loveless Inc.	Smith and Loveless process systems, including pumps, classifiers, grit separators,	OEM spare parts for existing equipment utilized by Plant Operations
SPD Sales Limited	Grundfos Products including Alldos Products, ATI Technology Inc. Products and Blue-White Metering Pumps.	OEM spare parts for existing equipment utilized by Plant Operations
Syntec Process Equipment	Singer Pressure Reducing Valves (PRV), Val-Matic, Red Valve, Trueline, Tideflex	OEM spare parts and service for valves.
T.D. Rooke Associates Ltd./ Gratec Limited	Gratec Lightnin Mixers process systems, including mixers, drives, controllers, etc.	OEM equipment and spare parts for existing equipment utilized by Plant Operations
Transcat Inc.	Providing on-site calibration services to the instrumentation testing equipment.	On-site calibration of Instrumentation testing equipment.
Technical Standards & Safety Authority	Providing safety management consultation for businesses and industries in Ontario.	Quality Assessed Facility (QAF) program: to ensure that each piece of equipment is
Wajax Industrial Components	Moyno Pumping Systems, including pumps, motors, drives, etc. and other miscellaneous	OEM spare parts and assemblies for existing equipment utilized by Plant Operations
Xylem Water Solutions / Xylem Inc.	ITT Flygt process systems, including pumps, mixers, drives, controllers, etc. and other	OEM spare parts for existing systems and equipment utilized by Plant Operations.
Indachem Inc.	Polyblend Polymer systems, including pumps, mixers, drives, controllers, etc. ORP, Strantrol Analyzers and Chemical Feed/mixing systems.	OEM spare parts for existing systems and equipment utilized by Plant Operations.