

**REPORT OF  
THE CITY GENERAL AUDITOR  
TO  
THE CONSEIL MUNICIPAL AND TO  
THE CONSEIL D'AGGLOMERATION**

**For the year  
ended December 31, 2006  
and the quarter  
ended March 31, 2007**

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# TABLE OF CONTENTS

|  | Page |
|--|------|
| Introduction   | 1    |
| Follow-up on the recommendations of the general auditor                | 2    |
| IT master plan for the Ville de Montréal (PDI)                         | 8    |
| Mayors' report to the city and borough councils                        | 15   |
| <br>   |      |
| <b>AUDIT RESULTS: VILLE DE MONTRÉAL</b>                                |      |
| <b>FINANCIAL AUDITING</b>  |      |
| Ville de Montréal  | 3    |
| Breakdown of mixed expenditures between the City and the agglomeration | 4    |
| Mixed expenditures   | 6    |
| Other municipal organizations  | 21   |
| <br>   |      |
| <b>VALUE-FOR-MONEY AND MANAGEMENT AUDITS</b>                           |      |
| Statements of offence for traffic and parking violations               | 3    |
| E-Mail at the Ville de Montréal  | 19   |
| Information processing centres' environment                            | 45   |
| Environment–Petroleum tanks  | 50   |
| Cost estimates for public works contracts                              | 59   |
| Management of occupational health and safety                           | 93   |
| Management of the cleanliness of public streets                        | 121  |
| Monthly CSST reports audit process and temporary assignments           | 145  |
| Rehabilitation of water infrastructure systems                         | 163  |

## APPENDIX

|  |   |
|--|---|
| Article 107 of the <i>Cities and Towns Act</i>                           | 3 |
| List of audit reports issued (statements or other financial information) | 8 |
| Employees of the General Auditor's Office                                | 9 |

### VALUE-FOR-MONEY AUDITS FLOW CHART

|                                |    |
|--------------------------------|----|
| - Planning                     | 11 |
| - Auditing and report          | 12 |
| - Annual report and follow-ups | 13 |

### SCHEDULE OF EXPENSE ACCOUNTS OF THE GENERAL AUDITOR'S OFFICE

|                              |
|------------------------------|
| External auditor's report    |
| Schedule of expense accounts |

## Introduction

According to the provisions of the *Cities and Towns Act* (the Act) , the general auditor is bound to:

- provide, not later than March 31 of every year, a report to city council on the audit of the financial statements of the municipality and the statement fixing the aggregate taxation rate;
- transmit to city council, not later than August 31 of every year, a report presenting the results of the audit for the fiscal year ending on the previous December 31 and indicate any fact or irregularity the auditor considers expedient to mention.

With the creation of the Montréal agglomeration on January 1, 2006, the presentation of the financial statements of the Ville de Montréal was considerably changed. In addition, the obligations of the general auditor in terms of auditing these statements, as well as the statement fixing the aggregate taxation rate, were further extended from that date onward. These changes have led to the inclusion of a new section in my annual report for 2006.

As in the past, the report that I am submitting today covers the entire body of my work, namely the financial, management and value-for-money audits, for the period from April 1, 2006 to March 31, 2007, for all Ville de Montréal activities, including those related to the agglomeration.

As always, I have chosen to favour the search for and implementation of sustainable solutions to the underlying causes of the problems identified during the course of our work.

Using an approach based on partnership with elected officials and managers, we sought to:

- identify the significant risks or obstacles that may hinder the achievement of the desired results and/or objectives, as well as potential solutions to manage these risks and obstacles;
- evaluate the performance of key activities and programs within the Ville de Montréal in terms of effectiveness, efficiency and the economical use of resources;
- seek out and take advantage of opportunities to improve, and/or reduce the cost of, services provided to residents.

Accordingly, once again this year, our reports include the action plans proposed by managers in order to remedy the problems encountered, along with their anticipated timetables.

## Follow-up on the recommendations of the general auditor

If there is one indicator that is key to determining whether my partnership approach is effective, it is the percentage of recommendations from the general auditor that bring about concrete remedial measures.

Following are the results of follow-ups conducted on recommendations made from 2002 to 2005:

| Recommendations                  | Follow-up conducted in March 2004 | Follow-up conducted in March 2005 | Follow-up conducted in March 2006 | Follow-up conducted in March 2007 |
|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>Made in 2002:</b>             |                                   |                                   |                                   |                                   |
| Carried out                      | 23                                | 6                                 | 3                                 | 5                                 |
| In progress                      | 17                                | 17                                | 10                                | 7                                 |
| Postponed                        | 8                                 |                                   | 3                                 |                                   |
| Cancelled                        |                                   | 2                                 | 1                                 | 1                                 |
| <b>Total</b>                     | <b>48</b>                         | <b>25</b>                         | <b>17</b>                         | <b>13</b>                         |
| <b>Made in 2003:</b>             |                                   |                                   |                                   |                                   |
| Carried out                      |                                   | 27                                | 6                                 | 7                                 |
| In progress                      |                                   | 21                                | 15                                | 3                                 |
| Postponed                        |                                   |                                   |                                   |                                   |
| Cancelled                        |                                   |                                   |                                   |                                   |
| Not carried out                  |                                   |                                   |                                   | 5                                 |
| <b>Total</b>                     | <b>0</b>                          | <b>48</b>                         | <b>21</b>                         | <b>15</b>                         |
| <b>Made in 2004:</b>             |                                   |                                   |                                   |                                   |
| Carried out                      |                                   |                                   | 135                               | 74                                |
| In progress                      |                                   |                                   | 148                               | 76                                |
| Postponed                        |                                   |                                   | 17                                | 9                                 |
| Cancelled                        |                                   |                                   | 2                                 | 1                                 |
| Not carried out                  |                                   |                                   |                                   | 5                                 |
| <b>Total</b>                     | <b>0</b>                          | <b>0</b>                          | <b>302</b>                        | <b>165</b>                        |
| <b>Made in 2005:</b>             |                                   |                                   |                                   |                                   |
| Carried out                      |                                   |                                   |                                   | 95                                |
| In progress                      |                                   |                                   |                                   | 86                                |
| Postponed                        |                                   |                                   |                                   | 8                                 |
| Cancelled                        |                                   |                                   |                                   | 1                                 |
| Not carried out                  |                                   |                                   |                                   |                                   |
| Other                            |                                   |                                   |                                   | 10                                |
| <b>Total</b>                     | <b>0</b>                          | <b>0</b>                          | <b>0</b>                          | <b>200</b>                        |
| <b>Grand total for all years</b> |                                   |                                   |                                   | <b>393</b>                        |

It should be noted that in November 2006, the Directeur général of the City asked the business units to ensure that 100% of the action plans that resulted from my recommendations of 2002, 2003 and 2004 were carried out. This objective was not entirely achieved, as shown in the table above.

More specifically, in terms of the recommendations made in 2005, those whose status is considered to be "carried out" or "in progress" represent 91%, compared to the annual goal of 80% set by the municipal administration.

In general, the March 2007 follow-up shows the following results for all the recommendations made:

| <b>Summary of the status of the recommendations made from 2002 to 2005</b> | <b>Follow-up conducted in March 2007</b> |
|--|--|
| Carried out  | 181                                      |
| In progress  | 172                                      |
| Postponed  | 17                                       |
| Cancelled  | 3  |
| Not carried out  | 10                                       |
| Other  | 10                                       |
| <b>Grand total</b>   | <b>393</b>                               |

Moreover, since my appointment as the City's general auditor, it has been my habit to include in the introduction to my report certain comments and suggestions intended for the city administration. Since the resolution of these issues is not taken into account in the data presented above, I thought it would be appropriate to summarize them in a separate table.

Since I did not formally request the administration to provide me with an action plan addressing these comments and suggestions, I cannot rely upon the same structured process in their follow-up. I have therefore chosen to state my observations on their progress.

| Year                   | Suggestion  | Status   |
|------------------------|---|--|
| 2002–<br>2003–<br>2004 | Implementation of an integrated management system   | The integrated management system for Montréal (SIMON) has been implemented for the former Ville de Montréal and the former CUM, and is being implemented in Montréal-Nord.   |
| 2002–<br>2003          | Preparation of quarterly financial statements   | Postponed until the integrated management system is implemented throughout the City.   |
| 2002                   | Establishment of an audit committee   | The committee was created by a resolution of the Conseil municipal on September 17, 2003.  |
| 2002–<br>2003          | Integration of the following elements into the organizational model: <ul style="list-style-type: none"> <li>• Establishment of performance objectives (citizen services and fiscal plan)</li> </ul> | The 2003 and 2004 budget documents included certain performance indicators for the boroughs and the central services. This practice was later abandoned.   |
|                        | <ul style="list-style-type: none"> <li>• Systematic reporting (services provided and fiscal performance)</li> </ul>   | <p>A financial report has been issued each year since the merger. A comparison of results and budgeted figures is presented therein on the statements of financial activities and investments.</p> <p>In addition, the City issued an annual activity report in 2003, 2004 and 2005. However, this report does not contain any comparison with planned activities. The City did not issue such a report for 2006.</p>  |
|                        | <ul style="list-style-type: none"> <li>• Establishment of a single directory of decisions by the various bodies</li> </ul>  | <p>Since December 2006, the Greffe has prepared a new system for recording municipal by-laws. It includes the by-laws adopted by the Conseil municipal since 2002, as well as the by-laws adopted by the agglomeration council since its creation. The boroughs were invited to include their by-laws in this reporting system. Since December 2006, all the by-laws of the borough of Côtes-des-Neiges–Notre-Dame-de-Grâce are entered in this by-law database. I am told that the boroughs of Montréal-Nord, Sud-Ouest and Rivière-des-Prairies–Pointe-aux-Trembles have also begun entering their by-laws in this system.</p> |

|  |  |  |
|--|--|--|
|  |  | <p>The by-laws adopted by the city council of the former Ville de Montréal and the CUM council should be put on-line gradually. Employees and citizens can access this directory on the Internet.</p> <p>In addition, minutes of the meetings of the agglomeration council, city council and the Comité exécutif, as well as the majority of the minutes of borough council meetings, are available in the City's decision file management system.</p>   |
|  | <ul style="list-style-type: none"> <li>• Setting up of a mechanism to ensure: <ul style="list-style-type: none"> <li>- by-law consistency and soundness</li> <br/> <li>- a co-ordinated defence in the case of legal actions or suits</li> </ul> </li> </ul> | <p>No City unit has the formal mandate to ensure the consistency and soundness of by-laws. The borough councils, Comité exécutif, city council and agglomeration council all have autonomous regulatory powers. In the case of corporate bodies, interventions by the Greffe, Contentieux and Bureau de l'analyse et du processus décisionnel ensure the consistency and soundness of municipal by-laws. At the local level, the boroughs can call on specialized resources placed at their disposal by the Contentieux to assist them in drafting by-laws and thus ensure their soundness.</p> <p>As a result of the Comité exécutif decision (CE05-1299) based on section 130.2 of the charter, the vast majority of legal actions against the City arise from the Comité exécutif's power to sue and be sued, whether or not the incident at the origin of the legal action is the result of the action of one or another body (borough, city council or agglomeration council). The Contentieux of the Ville de Montréal oversees almost all legal actions involving the City.</p> |



|                        |   |  |
|------------------------|---|--|
|                        | <ul style="list-style-type: none"> <li>• Unambiguous definition of the role and responsibilities of the central services essential to good governance: <ul style="list-style-type: none"> <li>- Finance</li> <br/> <li>- Legal department</li> <br/> <li>- Registry</li> <br/> <li>- Human Resources</li> </ul> </li> </ul> | <p>In 2006 the Service des finances undertook to modernize the finance function, mainly in light of the municipal reorganization stemming from the adoption of Bill 33 (December 18, 2003) and the rollout of the SIMON integrated management system. The project should continue in 2007.</p> <p>Mandate given by the Comité exécutif to the Direction du contentieux (see the comment above concerning co-ordinated defence in cases of legal action or suits.)</p> <p>Development and operation of a system for recording municipal by-laws and putting the minutes of the various bodies on-line. By virtue of Bill 33, the boroughs acquired many powers in terms of managing their human resources, including hiring and firing staff, creating departments, defining their mandate, appointing their directors and assistant directors, and negotiating many elements of collective agreements. The Service du capital humain, therefore, redefined its mission in order to:</p> <ul style="list-style-type: none"> <li>• exercise leadership in the management of human capital;</li> <li>• propose directions, programs and services in line with the City's strategic plan;</li> <li>• offer expert advice to managers.</li> </ul> |
| 2003–<br>2004–<br>2005 | Development of an IT strategic plan   | An IT master plan for the Ville de Montréal (PDI) was prepared in 2005, but has still not been approved by the Comité exécutif. For more information, see the section "IT master plan for the Ville de Montréal."  |

|           |  |   |
|-----------|--|---|
| 2004      | Strengthening of computer security                             | <p>An information security policy was adopted by the Comité exécutif on May 17, 2006. Two security directives, accompanied by their respective guides, one dealing with Internet use and the other dealing with e-mail use, have been issued since then. An employee awareness campaign was started in early 2007.</p>  |
| 2004–2005 | Development and dissemination of a strategic plan for the City | <p>The strategic directions of the City were made widely known by the document <i>Imagining &gt; Building Montréal 2025</i>. The Montréal 2025 initiative is clearly displayed on the home page of the City's Web site under the heading "News from City Hall." The 2007 Budget, another important public document in terms of directions, this time of a financial nature, is also available on the City's official Web site, under the heading "Municipal Administration," which is accessible from the "Mayor's Office" button, under the "News from City Hall" heading on the site's home page.</p> <p>Between these two, I had hoped to find a document intended for managers, which would have been communicated to them in order to:</p> <ul style="list-style-type: none"> <li>• enable them to understand the administration's choices and priorities;</li> <li>• promote the alignment of the wishes of all interested parties;</li> <li>• encourage the convergence of all stakeholders' actions;</li> <li>• avoid scattering forces.</li> </ul> |

## **IT master plan for the Ville de Montréal (PDI)**

In accordance with Resolution CE02 2018 of November 13, 2002, the City assigned an external firm to develop an information technology (IT) master plan. Completed during 2005, the plan has still not been able to be submitted to the Comité exécutif for approval.

In my opinion, the importance of the IT function (an annual budget of around \$100 million for some 400 employees) is such that the issues raised in this plan cannot go without mention and should be tabled before the Comité exécutif as soon as possible. The summary of these issues presented below was prepared using the external firm's summary, dated June 12, 2006.

### **Management complexity stemming from IT diversity**

The inventory of applications and technologies is extremely diverse, which is at one and the same time a source of management complexity and underoptimized use and productivity of resources. For example:

- Almost 400 applications, some of which are redundant, developed over the years to respond to the needs of various groups and citizens;
- More than 550 servers located in 63 different sites;
- Nine different operating systems, many database management systems (some of which are obsolete), a host of development tools.

### **Aging applications**

Overall, the inventory of applications and the technologies that support them are showing major signs of age, thus increasing the level of risks:

- 25% of the applications of the City are severely outdated, meaning that these applications function with operating systems that are no longer supported by their suppliers (e.g., Natural/Adabas technology);
- Some 20 of these applications are critical to City operations, that is, they are required to ensure continuity of service. The non-availability of these applications could seriously disrupt, if not stop, some operations (e.g. Gescour and Stop + at the Municipal Court, Payroll for the former Ville de Montréal);

- Almost 50% of the applications have reached the mature stage, that is, while not being very up to date, they do not present any short-term risk. However, such applications should be monitored in order to avoid becoming outdated in the mid term;
- The other applications, or 25%, are recent and designed in accordance with modern technological platforms. For example: SIMON, Portal, and others.

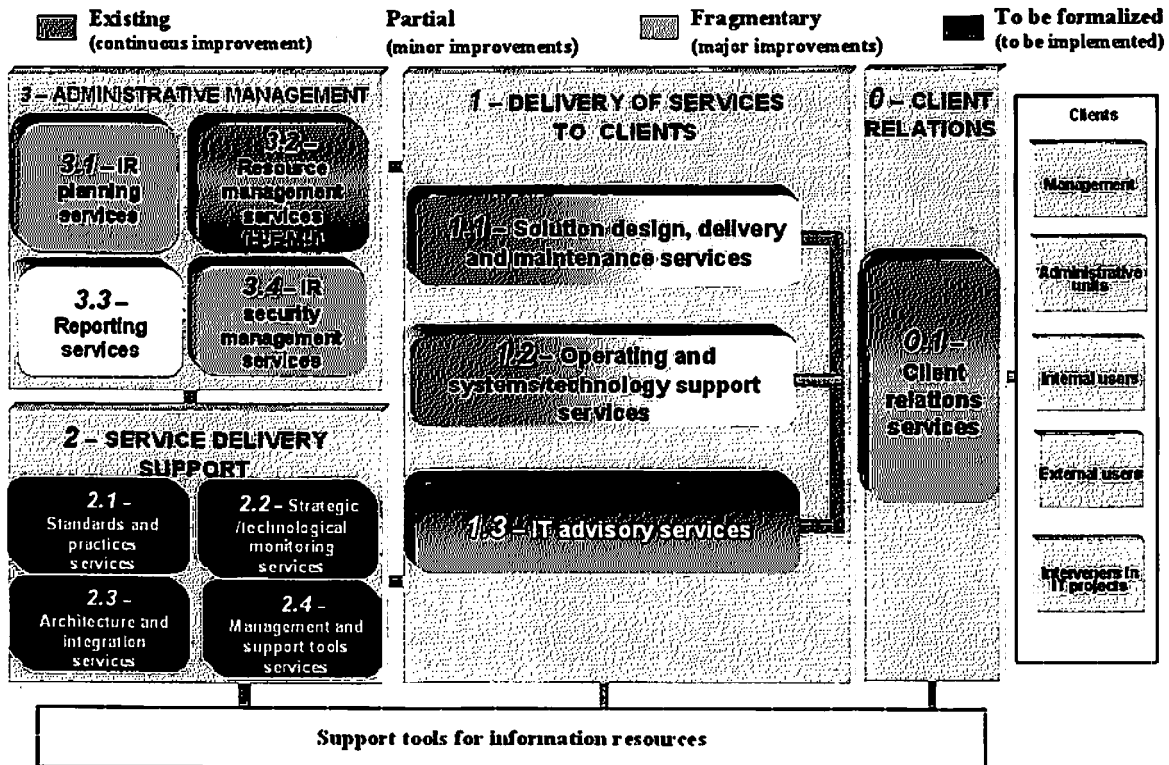
### **Deficiencies in the IT function's practices**

In relation to other governmental organizations around the world, the IT function of the Ville de Montréal demonstrates slightly below-average performance, while, in terms of IT practices, it shows marked deficiencies in spite of numerous efforts to reduce them.

In the IT world generally, several organizations have listed or established practices that characterize all the best performing organizations. These industry best practices take the form of standards, guides and recognized methods, such as ISO, COBIT, Mehari, ITIL, and others.

The City's IT practices mainly consist of DTI practices to manage, support and deliver services to its various clienteles. The following diagram shows the major processes:

## Summary of services offered by the DTI



Note: To be formalized signifies "non-existent" as in section 2 – service delivery support  
 Fragmentary refers back, for example, to section 3.1  
 The colour "blue" signifies an optimized stage (high level) – not present

Referring to the diagram, the following main conclusions can be drawn about the practices underlying the various services:

- There is no high-level practice, i.e., at the optimized stage (blue);
- In respect to service delivery (services 1.1 and 1.2), some practices exist and are used to varying degrees; improvements, however, are required. In respect to advisory services (1.3), practices are non-existent or very minimal;
- In respect to client relations, practices exist but only partially cover the field. Work is under way, however, to address this;
- In the case of the entire service delivery support group (group 2), practices are essentially non-existent or minimal;

- In respect to management, the situation varies greatly and is characterized by the use of fairly well established practices (in particular, for reporting), whereas resource management includes some well-established practices that do not cover everything that is required.

### **Maintaining existing IT already takes up a major portion of resources**

With a major portion of the available resources devoted to maintaining existing systems, it becomes more difficult to identify the flexibilities needed to ensure IT development and change:

- More and more time must be devoted by the available resources to maintaining applications that are critical to the support of the City's operations;
- It is difficult, if not impossible, to change or adapt applications in order to satisfy the new needs determined by management, the various clienteles, or that stem from legislative or regulatory changes;
- Suppliers will be putting more and more pressure on the City to replace technology that they will no longer support.

### **Proposed solutions**

In an effort to help the City resolve these issues, while keeping in mind a certain number of overall needs, such as information sharing, the summary includes several possible solutions. These are outlined below:

#### **Development of IT business plans (PAI)**

It is recommended that each borough and corporate service begin developing IT business plans (PAI). An essential complement to the PDI, the PAI is fundamentally a "plan for IT use intended to ensure that support is aligned with business" for each unit of the City.

#### **Improvement of technology infrastructures**

The diversity and complexity of the City's technology assets argues for greater rationalization of technology infrastructures. In general, it is recommended that a group of service zones adapted to the specific needs of various categories of users and capable of supporting the required levels of services be structured around a core network.

### **Rationalizing and updating applications**

Applications that are outdated or that present major risks should be eliminated and replaced, as necessary. Mature applications should also be consolidated to preserve assets and should be built on the most current and best performing systems. Moreover, applications should be updated in cases where there is a high potential for benefit.

### **Unified view of data**

Imperatives for sharing and accessing information imply that there be a unified architectural view of available information. This view should also include the prospect of increased and concerted use of georeferenced data.

### **Development of a municipal business architecture (AEM)**

A business architecture is a map or plan based on business and IT processes that identifies, represents and characterizes the various IT components involved (information, applications, technology) and their interrelationships. According to best practices, this kind of architecture tends increasingly to be an arrangement of reusable components that can be assembled in order to define solutions more easily and quickly.

### **Towards more “informational” IT**

Outside the main operational (transactional) applications portfolio, major needs are not being met but could be with a more informational IT, one in which information would be organized not according to direct service delivery activities, but according to a flexible operation for uses that are not or cannot always be defined as *a priori*. These uses could address needs in such areas as management, decision making, communication, analysis and synthesis.

### **“Self-serve” solutions**

The City has already begun, and should continue, to produce self-serve mechanisms (for example, the Web site). Moreover, several units are looking at increasing their use of “self-service” solutions for citizens, partners and employees.

### **Adoption, adaptation and use of best practices in the DTI**

In accordance with the City's overall framework, consideration should be given to basing the evolution of the IT function, and in particular the processes of the DTI, on the adaptation and use of IT best practices and trends. The practices available cover a wide variety of aspects and are used by organizations recognized for their success.

### **Strengthening the DTI's roles of architect and adviser**

Given the new reality, there is good reason to strengthen the DTI's roles of architect and adviser and encourage greater versatility. This action fits well within the perspective of evolving the DTI's role from that often associated with a "supplier of technical services" to that of a true partner. The situation desired in terms of governance, the prospect of developing a municipal business architecture, and the overall needs mentioned above argue for such action.

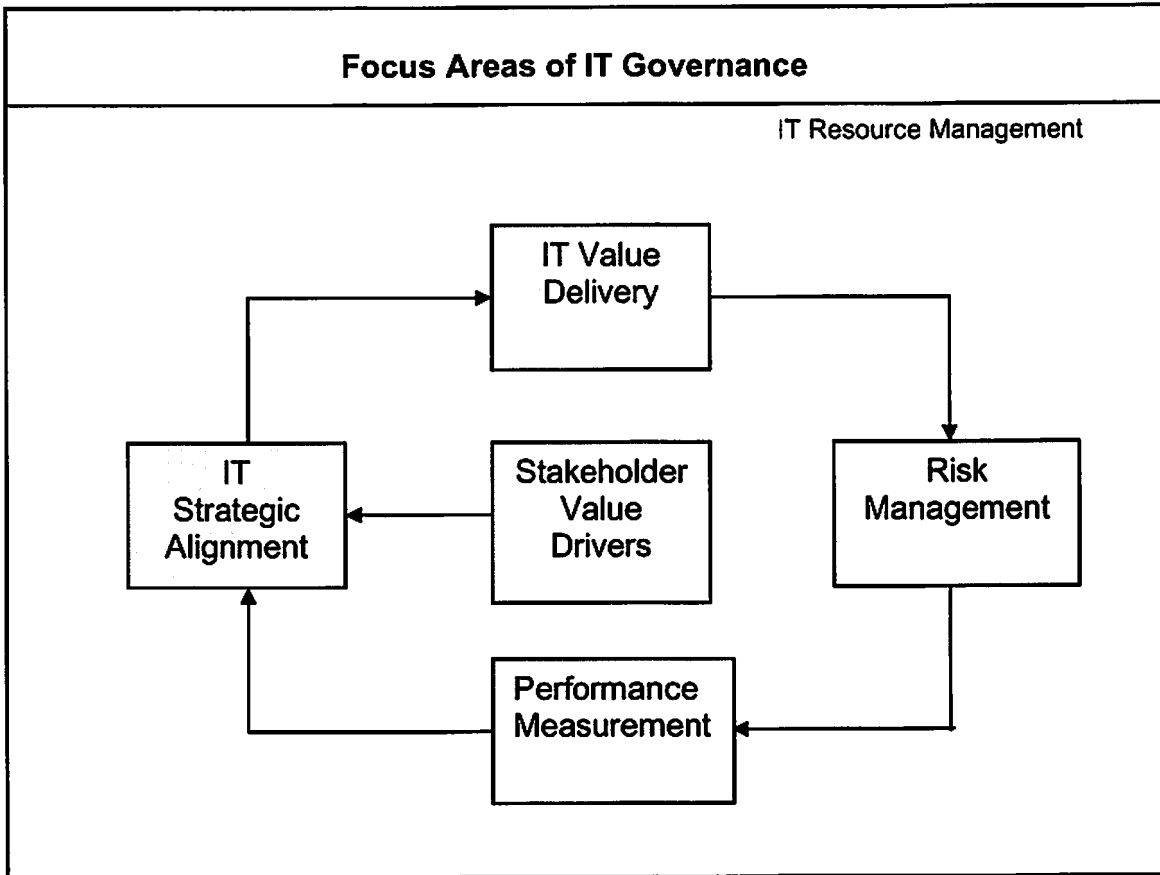
### **Updating governance of the IT function**

The major shift that has characterized the context and organizational model for the City (and, as a result, for the IT function) in recent years and the elements highlighted above are at the origin of this action to update IT governance and management. This update focusses on several aspects, including bringing IT into line with business, the ability to adapt to change, value management, information resource management (in particular through the use of ITIL best practices), risk management and performance measurement.

The recommended model aims at enabling each administrative unit to actively participate in optimal IT management by ensuring that prioritized projects respond well to their needs, while at the same time relate to the City's strategies and priorities.

It should be noted that this model is in complete accordance with the IT governance model inspired by COBIT that is presented in the second edition of *Board Briefing on IT Governance*, published in 2003 by the IT Governance Institute, and which appears on the following page:





All these recommendations are intended to encourage the use of IT's full potential in order to support the delivery of services to citizens. The main objectives are to:

- put in place an IT function that supports the "citizen-focussed" business strategy;
- bring the IT function to within the ranks of the best performing organizations in major North American cities, both in terms of processes and costs, and in respect to its capability and flexibility to adapt rapidly to business and technological changes;
- evolve the IT function from that of a supplier to a business partner.

In my opinion, by not commenting on the place that IT should occupy in the delivery of services to citizens and in the management of its affairs, and by not formally clarifying among all stakeholders the role of the DTI in achieving this vision, the City is depriving itself of an important lever in increasing its efficiency.

## **Mayors' report to the city and borough councils**

Section 474.1 of the *Cities and Towns Act* stipulates that, at least four weeks before a budget is submitted to council for adoption, the mayor report on the municipality's financial situation (section 144.7 of the charter of the Ville de Montréal for the boroughs) during a council meeting.

In this report, the mayor must present:

- the most recent financial statements, the most recent external auditor's report, the most recent general auditor's report, if applicable, and the most recent three-year capital works budget (in this instance, for the year 2005);
- preliminary indications as to the financial statements for the fiscal year preceding that for which the next budget will be drawn up (the year 2006);
- the overall directions for the next budget and the next three-year capital works budget.

I received a copy of the report of the City's mayor, as well a copy of all the borough mayors' reports, and reviewed them in order to identify the best practices for the disclosure of financial and budgetary information.

### **2005 results**

It should be noted that only the financial statements of the City were audited jointly by the general auditor and the City's external auditors. In the audit reports presented to city council, the auditors indicated that they were of the opinion that the financial statements of the City give, in all material respects, a fair presentation of its financial position as at December 31, 2005, as well as the results of its operations and the change in its financial position for the year then ended, in accordance with the accounting principles described in the notes accompanying the financial statements.

Thus, the mayor of the City could rely on these audited statements in preparing his report. Accordingly, he was able to reduce to a minimum the amount of attention needed to be given to the 2005 results. Furthermore, he made no reference to the reports of either the external auditors or the general auditor.

Only the borough of Mercier-Hochelaga-Maisonneuve referred to the general auditor's report for the year ended December 31, 2005, and the quarter ended March 31, 2006, stating that none of its conclusions directly involved the borough's management.

Incidentally, given that the borough mayors did not have audited financial statements, one would expect that they would have given more prominence to the 2005 results. Yet few of them did this.

Of those boroughs that did choose to address their 2005 financial results in a relatively detailed fashion, the borough of Ville-Marie stood out with a statement of financial activities, shown below, that included a comparison with its modified budget.

| <b>Statement of Financial Activities</b><br><b>Year ended December 31, 2005</b><br><b>(In thousands of dollars)</b> |                        |                        |
|---|------------------------|------------------------|
| <b>Revenue and share</b>  | <b>Modified budget</b> | <b>Actual outcomes</b> |
|   | <b>\$</b>              | <b>\$</b>              |
| Central city allocation   | 55,771.4               | 55,771.4               |
| Other revenue from local sources  | 7,782.4                | 10,021.2               |
| <b>Total revenues</b>   | <b>63,553.8</b>        | <b>65,792.6</b>        |
| <b>Expenditures</b>   |                        |                        |
| General administration  | 10,945.4               | 10,446.8               |
| Public safety   | 1,565.6                | 1,394.7                |
| Transportation  | 23,732.7               | 25,411.9               |
| Environmental health  | 9,721.5                | 11,475.4               |
| Health and well fare  | 643.3                  | 539.4                  |
| Urban planning and development  | 2,793.3                | 2,858.3                |
| Recreation and culture  | 15,094.4               | 14,643.7               |
| <b>Total expenditures</b>   | <b>64,496.2</b>        | <b>66,770.2</b>        |
| <b>Surplus or deficit before appropriation</b>  |                        | <b>(977.6)</b>         |
| <b>Appropriation</b>  |                        |                        |
| Surplus   | (942.4)                | (942.4)                |
| <b>Surplus (Deficit) for the fiscal year</b>  | <b>0.0</b>             | <b>(35.2)</b>          |

While not presenting a table indicating all their financial activities, several boroughs, nonetheless, provided explanations for discrepancies, whether positive or negative, that appeared in respect to their 2005 budget estimates. Among those worthy of mention are the boroughs of Outremont and Pierrefonds-Roxboro.

As an example, the borough of Outremont specified that the "preliminary deficit of \$530,800 in the budget for expenditures was caused by two specific factors. On the one hand, we paid out \$265,700 in a special contribution to the pension plan and we absorbed \$675,600 in matching costs for collective agreements. In order to limit the effect of these additional expenditures, without affecting services to the public, labour costs were reduced by approximately \$100,000 and professional and communications fees were reduced by \$278,000 from the original 2005 budget. Subsequently, a \$941,300 adjustment to our allocation was recorded after the end of the fiscal year, which resulted in a surplus of \$410,500."

the boroughs to balance the 2002 budget and, finally, \$17 million in recognition of the management surplus generated by the boroughs."

Nonetheless, in the case of few boroughs only (LaSalle, Mercier-Hochelaga-Maisonneuve, Rivière-des-Prairies-Pointe-aux-Trembles), the mayor's report did state how their surplus had been used in 2005. As for the borough of Sud-Ouest, the mayor's report focussed rather on how the 2005 surplus was appropriated.

For its part, the borough of Montréal-Nord was the only one to present a statement outlining all surpluses since the merger of January 1, 2002. Its citizens can therefore see how the surpluses made by the borough during the years since the merger have been used. Table 2 below reproduces the statement in question.

|  | Surplus of the former Ville | Surplus of the borough |                  |
|--|-----------------------------|------------------------|------------------|
|  |                             | Not allocated          | Snow reserve     |
| Balance as at December 31, 2001                                | \$10,034,252                |                        |                  |
| Transactions for fiscal year 2002                              |                             |                        |                  |
| Year-end results   |                             | \$239,700              |                  |
| Creation of a reserve to stabilize the costs of snow removal   |                             | (\$239,700)            | \$239,700        |
| Financing of capital works expenditures                        | (\$1,666,664)               |                        |                  |
| Advance to the new Ville de Montréal                           | (\$1,436,700)               |                        |                  |
| Transactions for fiscal year 2003                              |                             |                        |                  |
| Year-end results (unadjusted)                                  |                             |                        | (\$16,800)       |
| Financing of capital works expenditures                        | (\$542,872)                 |                        |                  |
| Reimbursement of the advance – 1st portion                     | \$287,340                   |                        |                  |
| Transactions for fiscal year 2004                              |                             |                        |                  |
| Year-end results   |                             | \$1,043,200            |                  |
| Transfer to the reserve to stabilize the costs of snow removal |                             | (\$77,100)             | \$77,100         |
| Financing of capital works expenditures                        | (\$2,725,990)               |                        |                  |
| Reimbursement of the advance – 2nd portion                     | \$287,340                   |                        |                  |
| Transactions for fiscal year 2005                              |                             |                        |                  |
| Year-end results   |                             | \$1,239,400            |                  |
| Financing of capital works expenditures                        | (\$1,396,389)               |                        |                  |
| Reimbursement of the balance of the 2002 advance               | \$862,020                   |                        |                  |
| Reimbursement for adjustments of the 2002 and 2003 surpluses   |                             | \$179,500              |                  |
| Interest on the 2002 advance                                   |                             | \$7,600                |                  |
| <b>Balance as at December 31, 2005</b>                         | <b>\$3,702,337</b>          | <b>\$2,392,600</b>     | <b>\$300,000</b> |

### **Preliminary indications for 2006**

The second part of the mayor's report consisted of preliminary indications in respect to the anticipated results for 2006. With only a few exceptions, the indications supplied by the mayors were few in number.

While the mayor of Montréal anticipated a slight surplus of approximately \$25 million, most boroughs simply indicated that they expected to balance their budgets.

Three boroughs, however, stand out.

The report of the mayor of the borough of LaSalle begins with an overview of the borough's property taxes since the merger. She stated: "In 2006, almost all (99.8%) LaSalle residential property owners benefited from a fourth consecutive decrease in their property taxes." After reporting on the increased costs that the borough faced in 2006, she indicated that the borough council "was prepared to finance them from the accumulated surpluses," while warning taxpayers that "a readjustment of taxes will not be felt until 2007 in LaSalle."

The borough of Mercier-Hochelaga-Maisonneuve presented a table comparing its original budget, results and anticipated surplus in terms of both expenditures and revenues. The explanations accompanying the table state that "the anticipated surplus is in large part due to favourable results in local revenue sources."

It is also specified that the "borough must respect its budget target in the area of operating expenditures. The savings achieved in terms of snow removal in the spring of 2006 will enable us, in particular, to offset the structural deficits in overtime hours for roadwork and the increase in electricity costs, underestimated in the 2006 budget."

Finally, the borough indicates that "\$2.4 million in operating expenditures will be financed in 2006 by the borough's surplus."

For its part, the borough of Villeray-Saint-Michel-Parc-Extension presented a summary of its 2006 budget, reviewed the major directions of its operating budget and broke down its operating expenditures by activity (roadwork, sports and recreation, snow removal, and so on) and by item (salaries, benefits, professional and technical services, maintenance and repair of rolling stock and property, and so on). Added to that is the breakdown of its three-year capital works budget for 2006.

This reminder was followed by a summary of the borough's various achievements in 2006. This touched on each of the borough's seven services. For example:

- **Public works:**
  - repairs to nine sections of streets that were among the most damaged;
  - 2006 cleanliness campaign;
  - continuation of the plan to replace wastebaskets and garbage containers;
  - landscaping and bringing up to standard parks and playgrounds.
- **Culture and libraries:**
  - participation in the "Montreal, World Book Capital" event;
  - number of visitors and library loans, and operating hours of the libraries;
  - number of shows and visits to the Maison de la culture.
- **Sports and recreation:**
  - number of activities offered to residents through partners;
  - opening of a swimming pool;
  - investment to reduce energy consumption at Patro Le Prévost.
- **Social development:**
  - financing of projects aimed at fighting social exclusion, isolation and social tensions, as well as drug addiction;
  - financing of Tandem;
  - financing of the Vivre Saint-Michel en santé action plan.

#### **2007 directions**

The financial constraints facing the City and the boroughs dominate the overall directions for the 2007 budget, as well as the three-year capital works budget for 2007–2009.

Thus, the mayor of the City once again underlined the "imbalance between revenues and expenditures" that continues to grow. Apart from the impact of the government of Québec's fiscal and financial partnership with municipalities and the Québec public transit policy, he made reference to the detailed review of activities, services, operations and programs (RASOP) carried out by the City during the course of the summer, which should free up a certain amount of financial flexibility.

Most borough mayors took a similar approach in their respective reports.

For its part, the borough of Mercier–Hochelaga-Maisonneuve added a comparison of its 2007 and 2006 budgets, taking care to explain the main variances between the two years.

Nonetheless, we will have to wait for this kind of report to go further than the law requires in order to enable citizens to become aware of and able to appreciate the "overall directions" underlying the preparation of future budgets and 3-year capital works budgets. Essentially, the elements that guided the administration's choices should be revealed in such a way that citizens will be able to understand the choices, objectives targeted, priorities, major projects selected and, possibly, the performance criteria they could use to assess whether or not the expected results have been achieved.

No report whatsoever makes any reference to long-term planning, be it a strategic, business or development plan. However, some boroughs—Saint-Laurent, Sud-Ouest and Verdun, to name but a few—have or are in the process of preparing such plans.

For his part, the mayor of the City refers to his major priorities only when addressing the 3-year capital works budget for 2007–2008–2009, putting it into the context of the *Imagining > Building Montréal 2025* plan, as follows:

- Restoring the water and sewer networks, as well as upgrading the water production and treatment plants;
- Continuing to invest in road repairs;
- Giving the boroughs full autonomy to manage local services;
- Putting in place a financial structure to support projects that offer potential for generating wealth.

Finally, some boroughs, such as Mercier–Hochelaga-Maisonneuve, Montréal-Nord and Rivière-des-Prairies–Pointe-aux-Trembles, presented a list of their main capital investment projects for 2007.

In conclusion, the information presented to citizens in the mayors' report varies considerably from one borough to another. A combination of the best elements noted above would have the advantage of giving citizens a more complete picture of the affairs of the City and the boroughs. The picture would be all the more informative if, in addition to a comparison of budget estimates and results, there were a comparison between the services planned and those rendered, in either quantitative or qualitative terms.

**AUDIT RESULTS: VILLE DE MONTRÉAL**

**FINANCIAL AUDITING**

*VILLE DE MONTRÉAL* ..... 3  
*BREAKDOWN OF MIXED EXPENDITURES BETWEEN THE CITY AND THE*.....  
*AGGLOMERATION* ..... 4  
*MIXED EXPENDITURES* ..... 6  
*OTHER MUNICIPAL ORGANIZATIONS*..... 21



## **VILLE DE MONTRÉAL**

Delays in the preparation of the City's financial statements led to delays in the presentation to the city council and agglomeration council of my audit reports on the municipal financial statements, the breakdown of mixed expenditures and the aggregate taxation rate statements for the City and the agglomeration.

As a result, my audit report on the City's financial statements was submitted to the city council on April 23, 2007, and to the agglomeration council on April 26, 2007. In this report, I have stated that the financial statements present fairly, in all material respects, the financial position of the City as at December 31, 2006 and the results of its operations and the changes in its financial position for the year then ended.

Simultaneously, I submitted to both bodies my report on the breakdown of mixed expenditures. In this report, I stated that it presents fairly, in all material respects, the breakdown of mixed expenditures between the City and the agglomeration for the year ended December 31, 2006, based on the criteria established in the by-law adopted by the agglomeration council and the interpretation of this by-law.

It is only in May that I submitted my audit reports on the aggregate taxation rate of the City and the agglomeration. In these reports, I stated that these rates adhered to the provisions of the by-laws adopted under section 262 of the *Act respecting Municipal Taxation*.

The work involved in the financial audit is considerable in scope. In 2006, it required roughly 46% of the available hours at the Bureau du vérificateur général (roughly 45% in 2005 and nearly 50% in 2004). This work represents a significant, albeit under-recognized, added value for the City, in that it provides assurance to elected officials and administrators that the financial reports provided to them are complete and reliable (i.e., accurate, representative, relevant, timely and so forth).

## ***BREAKDOWN OF MIXED EXPENDITURES BETWEEN THE CITY AND THE AGGLOMERATION***

Under section 70 of the *Act respecting the Exercise of Certain Municipal Powers in Certain Urban Agglomerations*, I am responsible for auditing the breakdown of mixed expenditures between the City and the agglomeration of Montréal for the year ended December 31, 2006.

The *Act respecting the Exercise of Certain Municipal Powers in Certain Urban Agglomerations* and Decree 1229-2005 concerning the agglomeration of Montréal outline the powers of the agglomeration. Under this law, expenditures undertaken to perform an act that comes under both an agglomeration power and another power are considered to be mixed expenditures and are thus subject to the agglomeration council by-law that sets out the criteria that determine which portion of the expenditure is attributable to the agglomeration.

Mixed expenditures are broken down between the City and the agglomeration of Montréal according to criteria established in By-law RCG06-016, which was adopted by the agglomeration council on January 27, 2006 and took effect on January 1, 2006. Accordingly, the portion of a mixed expenditure related to transportation, environmental hygiene, health and well-being, urban planning and development, recreation and culture, all of which are considered agglomeration powers, is determined on the basis of factual quantitative data or a quantitative assessment of the human, material and/or financial resources devoted to it. Furthermore, the portion of the mixed expenditure for a general administrative activity that constitutes an expenditure undertaken in the exercise of an agglomeration power is established according to the relative portion of the budget allocated for agglomeration powers in respect to the City's general budget.

Real mixed expenditures are broken down according to the rates in use at the time the City's 2006 budget was established.

## **AUDITING WORK**

Our auditing work involved two separate, yet interrelated, stages. First, we audited the establishment of the breakdown rates for mixed expenditures used in the preparation of the 2006 budget, both for the City and the agglomeration. The result of this work is summarized below, in the section titled "Mixed Expenditures."

Second, we ensured that the rates established when the budget was prepared were the same as the rates used to break down the mixed expenditures in the Ville de Montréal financial statements.

In this regard, we determined that some changes had been made in these rates in order to take into account administrative restructuring operations during the year, to correct certain errors and to reflect the recommendations of the appointee of the Minister of Municipal Affairs and Regions with respect to the objections filed by the councils of the 15 reconstituted municipalities in relation to the by-laws on taxes and mixed expenditures.

We ensured that these changes complied with the provisions of the by-law on mixed expenditures, as well as the spirit of the budget, and adequately reflected the recommendations of the minister's appointee.

Finally, we ensured that the calculations for the breakdown of mixed expenditures used to prepare the financial statements were correct. It should be noted that these expenditures were reviewed more closely in this phase than in the first one, the goal of which was to assess the reasonableness of the breakdown formula.

As I specified in my report to the councils, "the schedule of the breakdown of mixed expenditures fairly presents, in all material respects, the breakdown of these expenses between the City and the agglomeration of Montréal for the year ended December 31, 2006, based on the criteria set out in the by-law adopted by the agglomeration council and the interpretation of this by-law."

This schedule and the corresponding audit report were both submitted at the same time as the financial statements of the Ville de Montréal and my audit report on those financial statements.

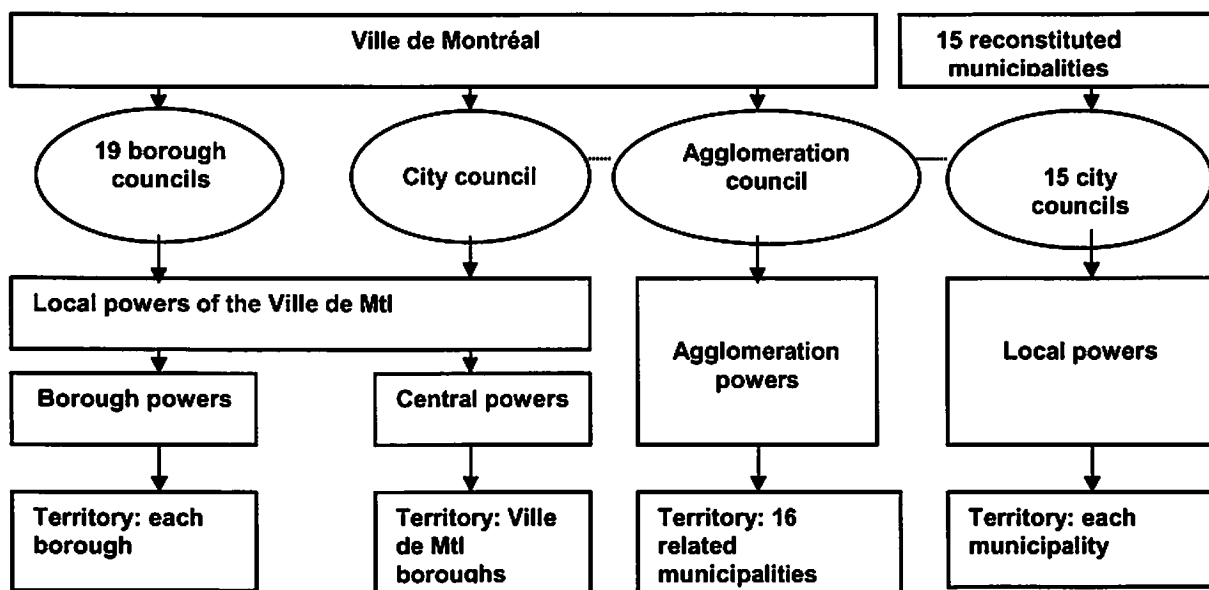
## MIXED EXPENDITURES

### BACKGROUND

On January 1, 2002, a new Ville de Montréal took the place of 28 municipalities and the Communauté urbaine de Montréal under Bill 170, adopted in December 2000. In December 2003, the adoption of Bill 9 granted the public the right to participate in a referendum on this amalgamation and thus allowed former municipalities to reconstitute. Following on the outcome of the referendum, Bill 75 was adopted in December 2004, authorizing the reconstitution of 15 former municipalities and creating the agglomeration of Montréal as of January 1, 2006. The territory of the agglomeration covers the territory of the Ville de Montréal and the reconstituted municipalities.

Bill 75 establishes the municipal powers that, rather than being exercised separately by each municipality in the agglomeration, must be exercised in a general way for all municipalities (agglomeration powers). It defines the notions of “related municipalities” and “central municipality.” It designates the Ville de Montréal as the central municipality—the only municipality entitled to exercise agglomeration powers by way of its agglomeration council. Consequently, the powers of the Ville de Montréal, as they pertain to the agglomeration (see table below), extend beyond its own territory to cover that of the related municipalities as well.

### New governance



Bill 75 lists the various areas defined as being under the jurisdiction of the agglomeration, including public transport, police and fire protection services, thoroughfares forming the arterial road system, water supply and purification, residual materials management and economic development. It goes on to stipulate that equipment, infrastructures and activities of collective interest, such as Mount Royal Park, the Maurice Richard Arena and the Francolies de Montréal festival, are also considered to be under the jurisdiction of the agglomeration. Other powers, such as those related to thoroughfares at the local level, local water and sewer mains and the collection and transportation of household waste, remain local.

Expenditures made by the central municipality in the exercise of its agglomeration powers are agglomeration expenditures, whereas those made in the exercise of local powers constitute local expenditures. Certain expenditures, however, are mixed, fulfilling both an agglomeration and a local function. These represent roughly 8% of all of the expenditures budgeted by the central municipality for 2006, or just over \$334 million.

These distinctions are essential because the funds for agglomeration expenditures come primarily from taxes collected across the entire territory of the agglomeration and not simply the territory of the Ville de Montréal, as is the case for local expenditures.

Bill 75 requires agglomeration and local expenditures to be treated separately. In the case of mixed expenditures, this means that a breakdown is necessary. Pursuant to this obligation, the central municipality produced two operating budgets for 2006, one of which was approved by the city council (\$1.935 billion) and the other by the agglomeration council (\$1.991 billion). Separate financial reports are also required, by law.

Finally, on June 21, 2006, the Minister of Municipal Affairs and Regions made public the recommendations of the ministry's appointee in regard to the objections related to the by-laws on taxation and mixed expenditures that were filed by the councils of the 15 reconstituted municipalities .

Bound to express an opinion on the breakdown of mixed expenditures under section 70 of Bill 75, the General Auditor decided, upon adoption of the 2006 budgets, to examine the way in which expenditures were allocated between these two budgets in order to ensure that the new division of powers stipulated in the corresponding legislative and regulatory provisions were respected.

## **OBSERVATIONS AND RECOMMENDATIONS – 2006 BUDGET**

### **By-law on mixed expenditures and the operating budget**

#### **Adoption of the agglomeration budget and the by-law on mixed expenditures**

Under Bill 75, the Ville de Montréal must prepare two separate budgets. An agglomeration budget must be approved by the agglomeration council and a budget for local expenditures must be approved by the city council.

The development of these budgets requires a breakdown of expenditures in keeping with the powers prescribed by the acts and decrees in force. Some of these expenditures are made in the exercise of either an agglomeration power or a local power. In this case, it is easy to attribute the expenditures to the appropriate budget. However, other expenditures that involve both agglomeration and local powers may be incurred. In these cases of mixed expenditures, Bill 75 stipulates that the agglomeration council must establish the criteria to determine which portion of a mixed expenditure constitutes an expenditure made in the exercise of agglomeration powers.

In this respect, the agglomeration council approved a by-law on mixed expenditures (RCG06-016) at a meeting of the agglomeration council on January 27, 2006. The agglomeration budget was approved on January 26, 2006.

Although the January 27 minutes mention that the draft by-law had been distributed two days prior to the meeting, we nevertheless feel that any by-law pertaining to the criteria for allocating mixed expenditures should be approved prior to the adoption of the budget or, better yet, at the beginning of the budgetary process.

#### **Recommendation**

**We recommend that, in future, the Service des finances ensure that it obtains the approval of the agglomeration council for all criteria related to the breakdown of mixed expenditures prior to the adoption of the agglomeration budget.**

***Actions proposed by the Service des finances***

***"Presentation, during a working session, to the Commission du conseil d'agglomération sur les finances et l'administration on the method for allocating the mixed expenditures planned for 2007. (Planned completion: August 24, 2006)***

***Public presentation to the Commission du conseil d'agglomération. (Planned completion: September 6, 2006)***

***Decision-support file presented to the agglomeration council in preparation for the adoption of a new by-law on the breakdown of mixed expenditures." (Planned completion: November 30, 2006)***

**By-law on mixed expenditures**

A by-law on mixed expenditures must make it possible to determine which portion of an expenditure qualifies as being made in the exercise of agglomeration powers.

The by-law approved by the agglomeration council on January 27, 2006 outlines the criteria for two types of mixed expenditures, namely those directly related to core activities (transportation, environmental hygiene, health and wellness, urban planning and development, and recreation and culture) and those related to general administration.

***Mixed expenditures related to core activities***

The criteria for mixed expenditures related to core activities are:

- the factual quantitative data;
- a quantitative evaluation of the human resources devoted to such activities;
- a quantitative evaluation of the material and financial resources devoted to such activities.

The breakdown rates for mixed expenditures in the 2006 budget are based on the data available in 2005, when the budget was being prepared. Accordingly, with regard to the financial data used, a pro forma budget was prepared using the original 2005 budget and a breakdown established on the basis of agglomeration and local powers, taking into account various modifications made (e.g., the withdrawal of the reconstituted municipalities, and changes in the city's organizational structure).

**We are aware that the criteria used do not make it possible to accurately establish which portion of the mixed expenditures constitutes expenditures made in the exercise of agglomeration powers. However, as long as the factual information and quantitative evaluations specified in the criteria are backed by adequate documentation, clearly showing the assumptions and calculation methods used so that expenditures can be tracked as the related activities are being carried out, we feel that these criteria reasonably enable us to formulate an opinion concerning the breakdown of the mixed expenditures.**

*Mixed expenditures related to general administration*

The relative portion of mixed expenditures related to general administration made in the exercise of agglomeration powers is determined on the basis of the proportion of the budget allocated for agglomeration powers in comparison with the total budget of the City.

The calculation of the relative portion must be carried out after deducting the corresponding mixed expenditures related to general administration from the agglomeration council budget and the total City budget.

The allocation percentages for general administration expenditures for the agglomeration budget and the local budget were established by the Service des finances. We ensured that these percentages, i.e., 55.3% for the agglomeration budget and 44.7% for the local budget, are those that were used in the development of the 2006 budget.

However, the Service des finances did not keep on file the documentation related to these calculations. However, with the help of the pro forma budget and information submitted on the various elements used by the Service des finances, we were able to reconstruct these percentages to within 1%.

The breakdown of mixed expenditures related to general administration by the Service des finances has been objected to by the reconstituted municipalities, specifically as regards the elements of the formula. In this respect, the minister declared on June 21, 2006 that she approved the by-law on mixed expenditures but that, as of 2007, a single general administration rate would have to be used.

**Recommendation**

**We recommend that the Service des finances keep a record of and make available all documentation forming the basis of the calculation of the breakdown of mixed expenditures related to general administration (or a general administration rate) in order to facilitate**



successive audits and increase the transparency of information pertaining to budget preparation.

***Actions proposed by the Service des finances***

*"A detailed presentation of the calculation of a general administration rate applicable to the agglomeration expenditures for 2007 was delivered at the agglomeration council's public meeting on finance and administration. It is also available on the Internet and intranet sites." (Planned completion: September 6, 2006)*

**Breakdown of expenditures between the agglomeration budget and local budget**

**Breakdown of expenditures by the Service des finances**

The preparation of separate budgets for the city council and agglomeration council must take into account the division of powers established in all applicable acts and decrees, as well as the by-law on mixed expenditures.

In order to produce a breakdown of these expenditures, a change was made in the database containing the budgets by business unit (corporate services and boroughs) or by expenditures not directly attributable to a business unit (contribution, financial and common expenditures).

Additional fields were added to include allocative keys. A first-level allocative key was used to identify each of the budget activities as an agglomeration, local or mixed activity.

As for mixed expenditures, they were divided into two categories, as per the provisions of the by-law on mixed expenditures. The first category (variable rates) covers mixed expenditures that can be specifically identified with local or agglomeration powers associated with business units such as the Service des infrastructures, transport et environnement or the Service de la mise en valeur du territoire et du patrimoine.

The second category (fixed rates) encompasses mixed expenditures related to general administrative activities (e.g., Service du capital humain, Service des finances, Commission de la fonction publique).

To produce a breakdown of the mixed expenditures in the first category, a second allocative key related to the nature of the activities was used, based on three facets:

- Specialized key (e.g., weighted percentage of the arterial road system as compared to the entire system);
- Key based on the human resources used;
- Key based on the financial resources used.

In the case of mixed expenditures related to general administration, they were allocated in accordance with the respective proportion of agglomeration expenditures and local expenditures in the total City budget, once the mixed expenditures belonging to the first category had been broken down between the agglomeration and the local budgets.

These breakdowns were established by the Service des finances, the department responsible for the co-ordination and preparation of operating budgets (agglomeration and local), with input primarily from corporate services.

**The work performed by the Service des finances allowed us to clearly distinguish between agglomeration expenditures and local expenditures in the database and identify the proportion of mixed expenditures made in the exercise of agglomeration and local powers. We also ascertained that this data corresponded to that contained in the operating budgets approved by the agglomeration council or city council.**

#### *100% local expenditures*

Expenditures classified as 100% local account for \$1.88 billion. They are found at the borough level for activities associated with the powers attributed to them (\$710 million), at the corporate services level (\$396 million) and in other budget categories, including financial expenditures (\$618 million), common expenditures (\$117 million) and contribution expenditures (\$42 million).

We reviewed the justifications for each of these expenditures in order to determine whether or not they corresponded to powers other than those of the agglomeration, as defined in the applicable legislation. Based on our analysis, we agree that these expenditures should be classified as 100% local, since they are not included in the agglomeration powers stipulated in the applicable acts and decrees.

#### *100% agglomeration-related expenditures and mixed expenditures related to general administration*

Expenditures classified as 100% agglomeration-related represent some \$1.83 billion and mixed expenditures related to general administration some \$207.8 million. These mixed expenditures are allocated based on a breakdown formula specified in the by-law on mixed expenditures. As we

mentioned earlier, the breakdown rates are 55.3% for agglomeration expenditures and 44.7% for local expenditures.

We selected the main expenditures in terms of monetary value and then reviewed the corresponding justifications of the Service des finances in order to determine whether they corresponded to powers that were 100% agglomeration-related or mixed expenditures (general administration) under the applicable acts and decrees. Moreover, in the case of corporate services, we examined their mission, main activities and organizational chart in order to establish links consistent with the division of powers. As for the boroughs, we examined the subdelegation by-laws granting them powers in this regard. Finally, we compared the amounts in the 2006 budget with those in the 2005 budget and obtained explanations for any variations deemed significant.

The selected expenditures are divided as follows:

| <b>Business units or other budget categories "selected" for our analysis</b>  | <b>100% agglomeration-related expenditures<br/>\$</b>  | <b>Mixed expenditures related to general administration<br/>(note 1)<br/>\$</b>                                   |
|---|--|---|
| Corporate services  |  |   |
| • Direction générale  |  | \$23.7 million  |
| • Service du développement culturel, de la qualité du milieu de vie et de la diversité ethnoculturelle  | \$37.0 million   |   |
| • Service des finances  |  | \$50.3 million  |
| • Service des infrastructures, transport et environnement   | \$177.4 million  |   |
| • Service de police   | \$486.4 million  |   |
| • Service de sécurité incendie  | \$278.3 million  |   |
| • Services administratifs   |  | \$43.1 million  |
| Other budget categories   |  |   |
| • Common expenditures   |  | \$39.6 million  |
| • Contribution expenditures   | \$352.2 million  |   |
| • Financial expenditures  | \$145.8 million  |   |
| Boroughs  |  |   |
| • Ville-Marie   | \$39.5 million   |   |
| • Villeray—Saint-Michel—Parc-Extension  | \$9.9 million  |   |
| <b>Total<br/>(selected expenditures)</b>  | <b>\$1.53 billion<br/>(84% of the total of<br/>100% agglomeration-<br/>related expenditures)</b> | <b>\$156.7 million<br/>(75% of the total of<br/>mixed expenditures<br/>related to general<br/>administration)</b> |
| <b>Note 1: The breakdown rate for these general administration-related mixed expenditures is 55.3% for agglomeration expenditures and 44.7% for local expenditures.</b> |  |   |

The results of our analysis of these selected expenditures are as follows:

*100% agglomeration-related expenditures*

Corporate services

**Based on our findings, we agree with the classification of the expenditures of the selected departments as 100% attributable to the agglomeration, since they were made in the exercise of the agglomeration powers outlined in all the applicable acts and decrees. Moreover, we are satisfied with the explanations provided to us concerning the variations observed between the expenditures in the 2005 and 2006 budgets.**

Other budget categories

These expenditures mainly included contribution expenditures related to the Société de transport de Montréal (\$278.0 million), the Agence métropolitaine de transport (\$30.5 million), the Conseil des arts (\$10.0 million) and the Société du parc des Îles (\$8.8 million), as well as financial expenditures (\$145.8 million). **For all of the selected expenditures, we agree that they be classified as 100% attributable to the agglomeration, since they were made in the exercise of the agglomeration powers outlined in all the applicable acts and decrees.**

Boroughs

The expenditures of the boroughs of Ville-Marie and Villeray—Saint-Michel—Parc-Extension that were classified as 100% agglomeration-related (\$49.4 million) were the object of a separate allocation related to agglomeration activities that were subdelegated to the boroughs by the city council (\$17.3 million for the maintenance of the arterial road system, \$5.2 million for the elimination and reclamation of residual materials) and to expenditures related primarily to equipment, infrastructure or activities of collective interest (\$26.9 million).

However, with regard to the downtown core, the minister stipulated that only the development and redevelopment of public property, including infrastructure facilities, are the responsibility of the agglomeration. Accordingly, activities such as the collection and transportation of residual materials and the maintenance of secondary streets and parks constitute local expenditures. The agglomeration will be eligible for a tax credit for these expenditures (net spending of roughly \$20.9 million) in 2007.

**We agree with the classification of these expenditures as 100% attributable to the agglomeration, pursuant to the provisions of all the applicable acts, decrees and by-laws, as well as the decision rendered by the minister on June 21.**

*Mixed expenditures related to general administration*

Of the \$570.7 million in general administration expenditures in the total budget, mixed expenditures account for \$207.8 million, \$156.7 million of which constituted the focus of our work. These expenditures are allocated according to one general allocative key used for general administration expenditures: 55.3% agglomeration, 44.7% local.

Corporate services

The expenditures for the three selected corporate services represent \$117.1 million. **We agree with their classification as mixed expenditures under Bill 75, given that they were made in the exercise of both agglomeration and local powers. In addition, we ascertained that these expenditures were in effect allocated according to the general allocative key associated with mixed expenditures related to general administration. Finally, we are satisfied with the explanations provided to us concerning the variations observed between the expenditures in the 2005 and 2006 budgets.**

Common expenditures

Common general administrative expenditures amount to \$39.6 million and primarily comprise various provisions (\$25.7 million), the integrated management system project (\$6.5 million) and priority cleanup initiatives (\$4.5 million).

**With the exception of the expenditures related to the priority cleanup initiatives, we agree with the classification of these expenditures as mixed expenditures under Bill 75, given that they were made in the exercise of both agglomeration and local powers. In addition, we ascertained that these expenditures were in effect allocated according to the general allocative key associated with mixed expenditures related to general administration. Finally, we are satisfied with the explanations provided to us concerning the variations observed between the expenditures in the 2005 and 2006 budgets.**

In the case of the priority cleanup initiatives, these expenditures are directly related to operations rather than general administration. According to the information obtained, these operations were carried out in the downtown core. The expenditures have therefore, as mentioned earlier, been the object of dispute.

Given the decision announced by the minister responsible on June 21 concerning expenditures related to the downtown core, these expenditures should be classified as local.

### **Recommendation**

**We recommend that the Service des finances ensure that the actual expenditures related to priority cleanup initiatives be properly accounted for in the appropriate operating budget, in keeping with the minister's decision.**

### ***Actions proposed by the Service des finances***

*"Issue of an internal memo so that the activities and all credits of the related decision-support file, financed through the operating budget of the agglomeration council, constitute actual expenditures in the city council budget." (Planned completion: December 31, 2006)*

### ***Variable-rate mixed expenditures***

This category represents approximately \$126.9 million, composed primarily of corporate services expenditures of nearly \$122.4 million. The rate of allocation of these expenditures at the agglomeration and local levels is variable. It is generally determined by the business units responsible for the expenditures. The units must therefore choose an allocative key (specialized, allotted human resources or allotted financial resources) and an appropriate calculation method for each expenditure in order to determine the agglomeration and local amounts.

We selected the main expenditures from this category based on monetary value, as follows:

| <b>Business units or other budget categories "selected" for our analysis</b>   | <b>Mixed expenditures (allocation rates varying in accordance with second-level keys) (Note 1)</b>  |
|--|---|
| <p><b>Corporate services</b></p> <ul style="list-style-type: none"> <li>• <b>Service du développement culturel, de la qualité du milieu de vie et de la diversité ethnoculturelle</b></li> <li>• <b>Services des infrastructures, transport et environnement</b></li> <li>• <b>Service de la mise en valeur du territoire et du patrimoine</b></li> </ul> <p><b>Total of selected expenditures</b></p> | <p style="text-align: right;"><b>\$19.5 million</b></p> <p style="text-align: right;"><b>\$37.5 million</b></p> <p style="text-align: right;"><b><u>\$49.7 million</u></b></p> <p style="text-align: right;"><b>\$106.7 million</b><br/>(84.1% of the total mixed expenditures at variable breakdown rates)</p> |
| <p><b>Note 1: Second-level allocative keys are specialized keys, allotted human resources and allotted financial resources.</b></p>  |   |

Following is a summary of the work carried out and the corresponding findings:

*Corporate services*

For this category of expenditures, we analysed the documents produced by the corporate services to support the breakdown rates they had established for budgeting purposes. This required, among other things, the examination of organizational charts and department missions, familiarization with the concerned activities and the comparison of breakdown rates used in the 2006 budget with those in the 2005 pro forma budget. The analysis also made it possible to determine the relevance of the selected second-level keys, examine the calculation methods used and evaluate the supporting documentation for the breakdown rates.

**Although we ascertained that the choice of allocative keys used was appropriate, our findings reveal that there are improvements to be made in the documentation regarding the calculation methods used to establish breakdown rates.**

In total, the variable-rate mixed expenditures of the Service du développement culturel, de la qualité du milieu de vie et de la diversité ethnoculturelle and the Service de mise en valeur du territoire et du patrimoine come to \$69.2 million. More specifically, as regards the expenditures allocated based on human resources and specific keys, the documents provided by the departments do not specify the calculation methods used to establish breakdown rates (e.g., estimated number of files and time spent per agglomeration or local project). Although the expenditures allocated based on these keys represent \$17.5 million, we feel that the documentation for the criteria used, as well as the assumptions underlying

the establishment of these rates, are important in order to demonstrate an equitable breakdown of expenditures between the two budgets and to allow the rates to be reviewed periodically. The rigour with which these rates are established is even more important in that they are used to establish other allocation rates based on financial resources (e.g., breakdown rate applied to divisions, administrative support and administration). For these two departments, the portion of the budgets allocated in accordance with this allocative key for financial expenditures represents \$51.7 million.

For the Service des infrastructures, du transport et de l'environnement, a significant proportion of the budget was allocated on the basis of two specialized keys (i.e., the proportion of the weighted number of kilometres of the arterial road system and the proportion of the weighted number of kilometres of sewer mains). The two keys cover the municipal road system (\$19.5 million) and the water supply and sewer network (\$2.0 million), out of a total \$37.5 million budget of variable-rate mixed expenditures. We ascertained that, overall, the establishment of these breakdown rates was sufficiently documented, with the exception of the breakdown rate for the water supply and sewer network. At the time of our audit, the department could not provide us with information on the methods used to calculate this breakdown rate.

Considering that the actual expenditures will have to be broken down in order to produce separate financial statements, the criteria and calculation method behind the established rates should be documented so that they can be used by the resources concerned in order to update the rates for the 2007 budget.

Finally, for the three corporate services examined, we observed that the breakdown rates for the various mixed expenditures were not approved by the managers responsible for the corresponding activities.

### **Recommendations**

**We recommend that the Service des finances produce a set of guidelines for corporate services in respect to documenting the criteria used to establish the breakdown rates and calculation methods for mixed expenditures so that they can update these rates in the 2007 budget.**



**VALUE FOR MONEY AND MANAGEMENT AUDITS**

*STATEMENTS OF OFFENCE FOR TRAFFIC AND PARKING VIOLATIONS* ..... 3  
*E-MAIL AT THE VILLE DE MONTRÉAL* ..... 19  
*INFORMATION PROCESSING CENTRES' ENVIRONMENT* ..... 45  
*ENVIRONMENT—PETROLEUM TANKS* ..... 50  
*COST ESTIMATES FOR PUBLIC WORKS CONTRACTS*..... 59  
*MANAGEMENT OF OCCUPATIONAL HEALTH AND SAFETY*..... 93  
*MANAGEMENT OF THE CLEANLINESS OF PUBLIC STREETS* ..... 121  
*MONTHLY CSST REPORTS AUDIT PROCESS AND TEMPORARY ASSIGNMENTS*..... 145  
*REHABILITATION OF WATER INFRASTRUCTURE SYSTEMS*..... 163

# **STATEMENTS OF OFFENCE FOR TRAFFIC AND PARKING VIOLATIONS**

## **BACKGROUND**

On the territory of the Ville de Montréal (the City), drivers who violate Québec's *Highway Safety Code*, as well as municipal parking by-laws, will receive a statement of offence.

Police officers of the Montréal Police Service (the SPVM) are the only municipal representatives authorized to issue statements of offence against the *Highway Safety Code* (the Code) for moving vehicles. Certain violations of the Code will result in the awarding of demerit points. For their part, parking agents from the Service des infrastructures, transport et environnement (SITE), as well as those who serve the former suburban municipalities, enforce the municipal by-laws and the Code when it comes to parking, and issue citations when necessary.

In 2005, 1.5 million statements of offence were issued: 21% by police officers and 79% by parking agents. These citations generated revenue from fines and fees totalling \$120 million. On average for that year, the City received \$49 for a citation issued by a parking agent (\$37 for the fine and \$12 in fees), whereas it received \$135 for a citation issued by a police officer (\$100 for the fine and \$35 in fees).

A statement of offence constitutes the originating document under the *Code of Penal Procedure*. It remains at the citation stage as long as proceedings have not been instituted by the Court. Proceedings are initiated when the defendant contests or fails to pay the citation. In such cases, the possible steps are: judgment rendered (by default or following a hearing before a Court judge), request for payment, issue of a writ of seizure, issue of a warrant of arrest, or suspension of the rights and privileges of driving and owning a vehicle by the Société de l'assurance automobile du Québec (SAAQ).

A conviction occurs when the offender pays the fine, when a default judgement is rendered, or when the offender pleads guilty or is found guilty following a hearing before a Court judge.

In 2002, with the merger of the Island of Montréal's 28 municipalities, the territory's 23 existing municipal courts also merged to form the Ville de Montréal's current municipal court, which, in addition to its main courthouse, has six points of service. The agglomeration is responsible for management of the Court's operations. However, Bill 75 stipulates that amounts for fines (for certain matters) originating in the reconstituted municipalities shall be returned to them, while the related fees shall be retained by the agglomeration.

The 2006 budget (local and agglomeration) provides for a total of \$156 million in revenue from statements of offence, which represents approximately a 27% increase over 2005.

## **METHODOLOGY AND SCOPE**

Our audit of statements of offence covers the 2004 and 2005 fiscal years. It included interviews, inquiries, extracted data and other substantive procedures deemed appropriate in obtaining corroborating audit evidence.

This audit is part of our wider audit of the City's financial statements for the years ended December 31, 2004 and 2005. Our work mainly focussed on revenue from statements of offence, the resulting accounts receivable and the provision for doubtful receivables.

## **OBSERVATIONS AND RECOMMENDATIONS**

For offenders, statements of offence indicate the nature of the offences that they have committed, the amount of the fine, applicable fees, the amount of contribution to the IVAC victims of crime compensation fund, and the number of demerit points, where applicable. The citation represents the originating document from which revenues are accounted for.

It is essential that all such citations be properly managed, in order to achieve the objectives in terms of changing offenders' behaviour and collecting full revenues.

### **Completeness of the statements of offence numerical sequence**

Statements of offence are prenumbered by the printer. Each citation number is unique and becomes the file number created in the criminal offence processing system (STOP<sup>+</sup>). Representatives of the Court assign numerical sequences to police officers and parking agents throughout the territory, and notify them of this. According to the information obtained, these groups are informed on the technical specifications related to printing citations and, as a general rule, are themselves responsible for

ordering the citations, distributing them to their staff and implementing controls to ensure that the citations handed out are eventually processed.

After a statement of offence is recorded in STOP<sup>+</sup>, its accounting results in an increase in accounts receivable, revenue accounts and accounts payable to the Indemnisation des victimes d'actes criminels (IVAC) fund, if applicable. The accounting of its receipt supposes an increase in the bank account and a decrease in accounts receivable.

We have noticed that some citation-related inflows collected by the City have no corresponding files in the STOP<sup>+</sup> system. This situation results in inflows related to delayed registration of citations in STOP<sup>+</sup> files or issued citations not sent to CGI for processing.

When an inflow cannot be matched to a file in the STOP<sup>+</sup> system, it is classified as a rejected inflow and accounted for as a negative accounts receivable. Periodically, inflows without a file in STOP<sup>+</sup> that date back more than three years are allocated to revenue for the current year.

The report entitled *Reject file status*, produced by STOP<sup>+</sup> and dated December 31, 2005, shows a total of 16,262 rejected inflows in 2005 and previous years for a cumulative amount of \$1,200,723. The same report indicates that, as at December 31, 2004, there were 17,741 rejected inflows totalling \$1,172,084.

Although this report contains the numbers of the citations paid but not entered in the STOP<sup>+</sup> system, the information that we have gathered tells us that this element is not sufficient for recording these citations *a posteriori* in the system. The cashier's copy of the citation does not include the driver's name, vehicle licence number, driver's licence number or even the code of the violation, if applicable.

Without this essential information, the judicial process cannot be set in motion and the amounts collected are reimbursed to the offender, when the latter can be identified. We have not been able to find related statistics. However, according to the information that we have obtained from the inflows section of the Service des finances, in the majority of cases such reimbursements are not made. Moreover, we did not find documentation justifying this type of reimbursement.

As for unidentified offenders, we ascertained that the amounts received were considered as revenue, and accounted for as such.

Using files extracted from the STOP<sup>+</sup> system that contained all the citations issued in 2005, we also noted the presence of 74,231 gaps in the numerical sequences assigned to police officers and 30,826 gaps in those assigned to parking agents. One or several citations could be missing in each gap. These significant gaps in the numerical sequence suggest that statements of offence were not entered in STOP<sup>+</sup>.

To sum up, our inquiries enabled us to note:

- 1) the lack of control over citations that the Court does not receive, whether or not they are issued;
- 2) the absence of a management report making it possible to ensure that each existing citation is effectively recorded;
- 3) that only the citations entered by CGI and transferred into STOP<sup>+</sup> are followed up.

In our opinion, tracking the numerical sequence of citations constitutes a control ensuring:

- that the City receives all amounts it is due;
- that legal proceedings are initiated against all non-payers;
- that the presence of a credit balance for an account receivable, resulting from an inflow that has no corresponding accounts receivable, does not trigger the reimbursement process and that the City can keep the amounts due that it was paid;
- an improved processing time for statements of offence missing from the numerical sequence of those recorded in the STOP<sup>+</sup> file and, as a result, faster communication of the information required by the SAAQ, if applicable;
- gathering of information required for analysis of all citations printed;
- the safeguarding of the public's perception of fair treatment.

## **Recommendations**

**We recommend that the Direction des affaires pénales et criminelles:**

- 1) **implement the necessary control mechanisms to ensure the completeness of the numerical sequence of statements of offence, thus maximizing the resulting revenue;**
- 2) **obtain an independent legal opinion on the pertinence of reimbursing the amounts received for citations not recorded in the STOP<sup>+</sup> system.**

**Actions proposed by the Direction des affaires pénales et criminelles**

- 1) *"The Direction des affaires pénales et criminelles has always recognized the need for tracking and control to ensure the completeness of the numerical sequence of statements of offence, but does not currently have as part of its information management systems the functionalities that make such tracking and control possible. We will provide for such a control mechanism in a future computer system. Furthermore, the SECI (Système d'émission des constats informatisés) project—a joint project with the SPVM—provides a solution for this problem as its implementation will eliminate the use of statement of offence booklets. A computer program will determine the numerical sequence of statements of offence when they are issued, thus eliminating any risk of losing forms. By eliminating the need to use statement of offence booklets, this system will not only make it possible to issue and record each citation, but also to automatically establish and track the numerical sequence of statements of offence from the moment they are issued.*

*The SPVM is the prime contractor on this project. The introduction of the first phase of this project is planned for 2007, and it is foreseeable that, starting in 2008, all issuing departments will be equipped with SECI to issue statements of offence." (Planned completion: December 31, 2008)*

- 2) *"In those cases in which the Court has never received the original or even a copy of the issued statement of offence, we obviously cannot take it for granted that it was issued, or proceed as if criminal proceedings were instituted in accordance with section 156 of the Code of Penal Procedure. Furthermore, section 162 of the Code creates a presumption of guilt in respect to the payment in full of the fine and fees charged by the citation. To be able to apply this presumption, the amount charged must be known. Under section 165, a guilty plea such as that described in section 162 equates to a judgment deemed rendered—but in respect to what offence, since the nature of the alleged offence is unknown?*

*All of these findings of a legal nature forced the administration to adopt a fair treatment protocol in such matters.*

*The City's Service des finances reimburses the payment to the individual who has made it, whenever it is possible to positively identify the individual concerned. If this is not possible, this money is deposited in a miscellaneous revenue account. The Service des finances keeps a record of the amounts transferred and, if required, will perform a new reconciliation, regardless how late it might be. In light of these facts, we do not feel it is appropriate to request an outside legal opinion." (Planned completion: completed)*

### **Delay in recording statements of offence in the STOP<sup>+</sup> criminal offence processing system**

The STOP<sup>+</sup> system is used for administrative and judicial follow-up of statements of offence. Therefore, it is important that, on the one hand, all citations issued are recorded in it and, on the other, they are so recorded as quickly as possible in order to ensure proper processing.

Many police officers and parking agents (more than 4,000) working throughout the entire territory of the City issue statements of offence. Under the agreement between the City and CGI, CGI collects the citations issued by police officers and parking agents from the former suburban municipalities from the drop-off point located at the municipal courthouse on a daily, Monday-to-Friday basis. Parking agents from the former Ville de Montréal deliver their own citations to CGI. This agreement provides one day for scanning and entering the documents and an additional day for sending and recording citations in the STOP<sup>+</sup> system.

Using citations issued in 2005, we tested various time frames for each of the two issuing groups:

- 1) time between issuing and scanning;
- 2) time between scanning and recording in STOP<sup>+</sup>;
- 3) time between issuing and recording in STOP<sup>+</sup>.

| <b>Citation issuer</b> | <b>Number of citations issued and recorded in 2005</b> | <b>Average time between the date of issue and the date of scanning/entering at CGI</b> | <b>Average time between the date of scanning/entering at CGI and the date of entry in STOP<sup>+</sup></b> | <b>Average time between the date of issue and the date of entry in STOP<sup>+</sup></b> |
|------------------------|--|--|--|---|
| <b>Parking agents</b>  | <b>1,172,072</b>                                       | 7 days   | 9 days   | 16 days   |
| <b>Police officers</b> | <b>320,600</b>   | 13 days  | 9 days   | 22 days   |
| <b>Total</b>           | <b>1,492,672</b>                                       |  |  |   |

We see that the average time between the date the citation is issued and the date it is recorded in the STOP<sup>+</sup> file differs from what is provided for in the agreement between the City and CGI. We have not found the standard issued by the Court in regard to this matter.

Furthermore, considering that the police officers issue citations under the *Highway Safety Code* and that demerit points may be applied, it is important that the handling and processing be carried out quickly and efficiently so that the City can be prompt in issuing the information to the SAAQ. In this respect, according to the *Highway Safety Code*, the Court has a 30-day time frame.

Although the delay between the time the citation is issued and recorded in STOP<sup>+</sup> has no effect on offenders who pay their citation in a timely manner, it can nonetheless contribute to a delay in sending reminder notices, thus deferring the inflow of sums due to the City when the citation is recorded more than 30 days following the date it was served.

### **Recommendation**

**We recommend that the Direction des affaires pénales et criminelles establish a standard for the time period to respect between the date a citation is issued and the date it is recorded in the criminal offence processing system (STOP<sup>+</sup>), and take the measures necessary to ensure compliance with this standard.**

### ***Action proposed by the Direction des affaires pénales et criminelles***

*“The SECI project should eliminate this problem since the issuing departments will send statements of offence in their entirety electronically, every day, directly into the Court’s systems. Delays in recording them in the Stop+ system will thus be eliminated.” (Planned completion: December 31, 2008)*

### **Extended presence of uncollected citations in the STOP<sup>+</sup> system**

The offender has 30 days to pay the fine and fees indicated on the citation. If, after 35 days, the offender has not paid what is owed, nor entered a plea of not guilty, the Court issues the offender a notice which provides an additional 21 days to pay the amount due. This additional time increases the period for payment without additional fees to about 60 days.

According to information we obtained from the Direction des affaires pénales et criminelles, the proportion of citations paid by offenders in the 60 days following their date of issue is estimated at 80%; legal proceedings are required for the remaining 20%. We inspected the STOP<sup>+</sup> system in order to determine the collection period, meaning the time from the citation issue date to the date the amount due is paid at any financial institution within the network.



The following table compares revenues and receivables (unpaid citations) for the years 2003 to 2005:

| Year | Revenues<br>(in<br>millions)<br><br>(1) | Number of<br>uncollected<br>files as at<br>December<br>31 (in<br>thousands)<br><br>(2) | Dollar<br>amount of<br>uncollected<br>amounts as<br>at<br>December<br>31 (in<br>millions)<br><br>(3) | Provision<br>for<br>doubtful<br>receivables<br>as at<br>December<br>31 (in<br>millions)<br><br>(4) | Increase in<br>accounts<br>receivable<br>(in millions)<br><br>(5) | Accounts<br>receivable<br>prior to the<br>year of<br>issue<br>(in millions)<br><br>(3) – (5) |
|------|---|--|--|--|---|--|
| 2003 | 108                                     | 901  | 87   | 43   | 30  | 57   |
| 2004 | 111                                     | 713  | 80   | 43   | 35  | 45   |
| 2005 | 120                                     | 693  | 84   | 56   | 33  | 51   |

Note: Column (1) indicates the values on an accrual basis, i.e., taking into account the year-end cutoff, while column (5) indicates the values on the basis of recording in the STOP\* system, i.e., without taking into consideration the year-end cutoff. Column (3) indicates the accounts receivable as at December 31.

The 2004 uncollected amount of \$80 million would have been much higher had approximately \$26 million worth of accounts not been written off during that year. The age of accounts, which is provided by STOP\*, enables us to know the amounts receivable by the year the citations were issued, the citation-issuing group (police officers or parking agents), offenders' place of residence (Québec, outside of Québec) and at what stage in the procedure each file is, i.e., citation, judgment, writ of seizure or warrant of arrest.

Our examination of the age of accounts enabled us to ascertain that:

- although there were significant write-offs in 2004, receivables still appear for years as far back as 1980 in the report of uncollected files as at December 31, 2005;
- many files have not gone beyond the citation stage, meaning they have not had a judgment brought against them. This is the case for about 408,000 citation files that were issued between 1993 and December 31, 2005, 83,800 of which were issued by the SPVM. Therefore, in those cases where demerit points were noted on the citation, this information would not have been sent to the SAAQ due to the fact that a decision of guilty had not been rendered. According to the current procedures, a citation cannot remain at the citation stage for more than 60 days before other procedures are implemented;
- more than 163,000 files totalling \$7 million are related to citations issued between 1993 and 2005 and involve non-Montréal residents. The majority of these do not go beyond the citation stage and collecting these amounts due to the City remains a problem;

- in certain situations, uncollected files periodically increase in value as they go through each stage, due to the addition of fees for the various procedures.

### **Recommendations**

**We recommend that the Direction des affaires pénales et criminelles periodically evaluate the validity of uncollected statements of offence in the criminal offence processing system (STOP<sup>+</sup>) in order to:**

- 1) take the actions required to move the file to the next level or have it written off, whichever applies;**
- 2) obtain convictions in a more timely manner, thereby enabling information concerning demerit points on these files to be forwarded more quickly to the SAAQ, if applicable.**

### ***Actions proposed by the Direction des affaires pénales et criminelles***

- 1) "Several actions were taken during the past few years to correct some of these delays, namely in terms of default judgments and administrative audits.*

*Proceedings in respect to all current files progress according to a previously established schedule, rate and quotas. This method of working has been set up to enable the Court, through close monitoring, to use all the means made available to it by law.*

*Grounds for write-offs are set and respected in line with the procedure in effect. However, over the years write-offs have only been performed sporadically, without following a set schedule. In 2007, the Direction des affaires pénales et criminelles intends to review its write-off procedure and incorporate a schedule within it.*

*We will prepare a report in order to proceed with write-offs in Stop+ by June 2007, and will focus especially on files dating from 1993 to 1999." (Planned completion: June 30, 2007)*

- 2) "It has been established that 80% of defendants pay their statement of offence in the first 60 days, which enables the Direction to collect without having to intervene and justifies the implementation of administrative delays.*

*Of the remaining 20% of defendants, 5% contest the offence by pleading non-guilty and 15% take no action. For the 15% of defendants who take no action, justices of the peace under the employ of the Direction have rendered default judgments, without delay, since October 2, 2006, pursuant to the new procedure introduced by Bill 105 (An Act to Amend the Code of Penal Procedure and the Courts of Justice Act).*

*The enactment of Bill 105 enabled the Direction to deploy the personnel and measures required to avoid accumulated delays. However, the Highway Safety Code obligates the Court to issue a notice of infraction to the SAAQ for any conviction of an offence that includes the entry of demerit points on an individual's file within 30 days. A conviction can take the form of the payment of a statement of offence, the judgment of guilty following a hearing or by default. The reports issued to the Direction by the SAAQ establish that the Court meets this obligation and maintains its performance level between 93% and 98%, which is a highly acceptable rate and meets the legal obligation imposed by the Highway Safety Code.*

*Nevertheless, certain situations beyond the Direction's control will continue to cause problems in relation to respecting this timeframe. This is why the implementation of the SECI project should almost completely eliminate any delay in issuing such notices by speeding up the processing of these procedures." (Planned completion: December 31, 2008)*

#### **Determination of the provision for doubtful receivables**

The table presented on the previous page shows that a provision for doubtful receivables (column [4]) of \$43 million is entered in the books for 2003 and 2004; this amount increases to \$56 million for 2005. We can see here that, from 2003 to 2005, the percentage of the provision grew from 50% to 67% of accounts receivable (column [3]), despite the Code's strict stipulations in terms of facilitating the collection of fines imposed.

The provision is calculated by block of citations, according to the stage of procedures (citation, judgment, etc.). The rates used up until 2005 were set in 1998 with the approval of the Service des finances.

In the case of fines, the manual for the presentation of municipal financial information recommends the establishment of two provisions for doubtful receivables. The first provision must reflect situations in which non-guilty decisions are contested by reducing revenues through the creation of a provision based on previous experience or statistics, whichever applies. This condition could, for example, be translated into a percentage of citations issued for which a decision of acquittal was rendered.

The second provision consists of reflecting situations in which, although there has been a decision of guilty, the receivable is difficult to collect. The provision is therefore created by way of operating expenditures, through an uncollectable account. According to the information we have received, there are no statistics on the collection history of old files in the STOP\* system and, therefore, no information on the non-collection rate of receivables. Furthermore, we have observed that the Court does not have any statistics on the number of unserved and incomplete files that change status during the year, making it difficult to achieve a higher level of accuracy in respect to the determination of the provision for doubtful receivables.

### **Recommendations**

In order to ensure the fair value of amounts accrued as the provision for doubtful receivables related to statements of offence, we recommend that the Service des finances, together with the Direction des affaires pénales et criminelles:

- 1) **determine the provision for doubtful receivables in accordance with the directives contained in the *Manuel de la présentation de l'information financière municipale*;**

and that the Direction des affaires pénales et criminelles:

- 2) **obtain the information required concerning unserved and incomplete files that are subject to further corrections.**

### ***Actions proposed by the Direction des affaires pénales et criminelles and the Service des finances***

- 1) ***"From the outset, it is important to specify that a procedure exists for establishing a provision for doubtful receivables at the Direction des affaires pénales et criminelles, and that it was established in concert with the Service des finances.***

*Early in 2004, a major operation to write off bad debts was carried out according to new categories of files to be written off. The implementation of the automatic computerized controls to regulate the process was postponed due to the reorganization of the Court and the setting up of the agglomeration.*

*Furthermore, at the end of 2004, all active files from the former municipalities were integrated into the new municipal court's computer systems, but without taking into consideration their potential for being acted upon. This operation considerably increased the accounts receivable.*

*Managers are concerned by the amounts included in the accounts receivables, and will undertake the necessary actions in the coming days. However, the Direction des affaires pénales et criminelles feels it is important, in the given context, to appropriate the procedures related to the collection of amounts due to the Ville de Montréal and the enforcement of judgments. In this matter, the actions taken to efficiently recover fines and fees were examined and possible solutions were put forward. The collection rate is being monitored, corrective measures have been taken and indicators introduced." (Planned completion: June 30, 2007)*

- 2) *"The Direction des affaires pénales et criminelles, not having the required information, will file a request with the DTI for a change to the computer system in order to create this statistical report." (Planned completion: February 28, 2007)*

#### **Presence of suspended, incomplete or unserved files in the STOP<sup>+</sup> system**

The files or citations recorded in the STOP<sup>+</sup> system are varied: complete served files correspond to those left on the windshields of offenders' vehicles or that are handed directly to offenders when they are issued, while complete unserved files correspond to those that could not be left on the windshield or handed directly to offenders. To remain valid, they must be served (e.g., by a bailiff) within the year following the date of the violation. Incomplete files result from files with errors that have not been corrected. Throughout the process, some files will be identified as "suspended" for one or the other of the following reasons:

- i) Prejudgment: to undergo administrative verification;
- ii) Postjudgment: as part of certain legal proceedings.

In both cases, the suspended status results in stopping the progress of the file and, as a result, no court costs will be added.

An analysis of the STOP<sup>+</sup> system as at December 31, 2005 revealed certain anomalies. The file contains more than 109,000 suspended files, 35,000 of which were issued by police officers and 74,000 by parking agents; 110,800 unserved files, 10,800 of which were issued by police officers and 100,000 issued by parking agents; and 209,000 incomplete files, 15,000 and 194,000 of which were issued by police officers and parking agents, respectively. Certain files from these three categories, for which the issue year is given, go back as far as the beginning of the 1993s.

Also deserving of note is the initiative of the borough of Côte-des-Neiges–Notre-Dame-de-Grâce to raise the awareness of its citizens about the variety of activities related to the local services offered, as well as underlining the amount of work associated with these services, even if the relevance of the data would have been greatly enhanced by the addition of a comparison, either with the budget's planned targets or with the previous year's results. More than 30 activities were cited as examples, in particular:

- Tons of asphalt laid;
- Tons of waste removed;
- Square metres of lawn mowed;
- Number of transactions at the counters of the borough's two Accès Montréal offices;
- Number of calls by citizens to these two offices and to Accès Montréal's main line;
- Number of loans in the borough's four libraries;
- Number of visitors to the borough's two Maisons de la culture;
- And so on.

The most exhaustive review of achievements for 2005 was found in the report of the mayor of the borough of Saint-Laurent. For example, the report presented covered the following items:

- Administration:
  - Adoption of an equality in employment action plan;
  - Continuity in applying the policy governing the awarding of contracts and supervision of work adopted in 2004;
  - Start-up of steps toward providing the borough with a back-up and business continuity plan.
- Community development:
  - Various subsidies, donations and grants given out by the borough to community and sports organizations;
  - Agreement with the Red Cross in respect to first-line humanitarian assistance services to disaster victims;
  - Continuation of the recognition program introduced in 1993.
- Environment and sustainable development:
  - Pilot project for selective collection in buildings of nine units or more;
  - Subsidies to 19 schools to carry out a landscaping project after a spring cleaning drive on their grounds;

- Signing of an agreement with Communauto;
- Adoption of a by-law regulating garage sales;

Various investments were also listed in the mayor's report, in particular:

- The new Côte-Vertu terminus, carried out by the Agence métropolitaine de transport;
- \$5.9 million of repairs to Marcel-Laurin Boulevard between du Collège and Côte-Vertu;
- \$2.6 million program of repairs to sidewalks and pavement;
- Construction of wading pools and water play areas in Poirier and Marlborough parks;
- Replacement of vehicles up to the amount of \$1.8 million;
- Bringing an administration building up to standard at a cost of \$736,000

### **2005–2007 three-year capital works budget**

While some boroughs, such as Rivière-des-Prairies–Pointe-aux-Trembles and Saint-Léonard, supplied a list of work carried out in 2005 as part of their three-year capital works budget, it was the report of the mayor of the borough of Mercier–Hochelaga-Maisonneuve that provided one of the best pictures of achievements related to this program. The report detailed the various funding sources for these investments in 2005:

- \$2.5 million net borrowing in respect to all citizens of the Ville de Montréal;
- \$2.6 million net borrowing in respect to borough citizens, payable on the 2007 tax bill;
- \$1.6 million operating budget;
- \$1.5 million in government subsidies.

The report specifies the breakdown of amounts between protection and development.

In addition, the report explains the borough's decision to limit the portion of its capital works expenditures that would become the taxpayers' responsibility in this way: "The budgetary envelope allotted the borough for 2005 authorized us to carry out projects that would have resulted in borrowings of \$8.3 million, which would have been chargeable to the borough's taxpayers. However, based on the information we had, borrowings over \$5.3 million would have had led to a tax increase in 2007..."

### **Surplus**

The report of the City mayor referred, summarily, to the use in 2005 of the previous year's surplus. He also reported on how the 2005 surplus was allocated: "\$52.2 million to balance the 2006 budget, \$34.2 million to replenish the contingency reserve, \$18.1 million for total reimbursement of a loan agreed to by

Furthermore, these guidelines should incorporate the approval of the breakdown rates by the managers concerned in order to validate the reliability of the rates used.

***Actions proposed by the Service des finances***

*"As part of the 2007 budget guidelines concerning the allocation of mixed expenditures, the Service des finances will ask the relevant corporate services for a detailed workup on each of the selected allocation rates, including:*

- *breakdown criteria selected;*
- *calculation method used;*
- *explanations for any changes made between 2006 and 2007;*
- *approval of the designated manager." (Planned completion: October 15, 2006)*

**Budget transfers and breakdown of actual expenses**

The approval of the budget by the city council or agglomeration council must reflect the choices made by the entire municipal apparatus concerning the delivery of the services. Clearly, mechanisms must be in place to allow these entities or their delegates to make changes during the year. Separate monitoring mechanisms for these two budgets must be implemented and actual expenditures attributed to the financial reports of the agglomeration council or the city council must correspond to the services delivered in the exercise of the powers of the two bodies.

As such, in a context where, for the first time, the two budgets must be simultaneously tracked by the business units, the risk of error and the corresponding consequences are serious.

As a result, sufficient controls must be introduced to ensure that all budget transfers are approved by the proper entities or delegates, as specified in all the applicable acts and by-laws. Controls must also be implemented to ensure that actual expenses are accounted for and allocated in a manner that respects the division of powers between the agglomeration council and city council.

We are aware that there is a certain cost associated with implementing these controls. However, the development and tracking of the two budgets, as well as the preparation of separate financial reports, are not administrative decisions—they are the result of obligations imposed by Bill 75.



Through this audit, we were able to clearly identify the mixed expenditures (\$334 million) that will need to be analysed and determine which were most significant in terms of monetary value and which involved the highest risk of error.

### **Recommendation**

**We recommend that the Service des finances set up mechanisms supported by the appropriate guidelines in order to allocate actual mixed expenditures in a way that ensures they reflect the services rendered as accurately as possible.**

### ***Actions proposed by the Service des finances***

*“Distribution of a budget note on the financial aspects (expenditure component) related to local and agglomeration powers. (Planned completion: June 13, 2006)*

*In the 2007 budget guidelines, with respect to the allocation of mixed expenditures, the Service des finances will issue a reminder for 2006 and 2007 as to the inextricable nature of allocation rates in the budget and the accounting of actual mixed expenditures.” (Planned completion: October 15, 2006)*

## ***OTHER MUNICIPAL ORGANIZATIONS***

I also audited the financial statements for the year ended December 31, 2006 for a number of organizations under the control of the Ville, including the Société de transport de Montréal, the Société de développement de Montréal and the Société d'habitation et de développement de Montréal.

A list of all audited organizations can be found in the appendices.

The justifications for this "suspended" status are not specified. However, certain files are suspended after a judgment is rendered in a legal context under the *Code of Penal Procedure* in respect to discharge. As such, the files that are the object of an agreement for payment by instalment, community service, bankruptcy or voluntary deposit must legally be suspended while awaiting the fulfilment of the conditions stipulated in the agreement or sequestration order.

Among the suspended files that were issued by police officers, we count 174 that have remained at the citation stage, although they were issued between 1998 and 2004. As the SAAQ only updates demerit point status following a guilty plea, these offenders will not have had any demerit points applied against their driver's licences.

Concerning suspended files issued by parking agents, among which the oldest file identified by an issue date goes back to 1985, we found 664 that have remained at the citation stage. We observed that other citations have been recorded in the STOP<sup>+</sup> system more than two years after they were issued.

We have not found any justification ensuring that these citations are not barred as for unserved citations.

STOP<sup>+</sup> system data as at December 31, 2005 indicated a high percentage of incomplete citations among those issued by parking agents. Thus, the number of incomplete citations issued by parking agents is almost 13 times higher than those issued by police officers (194,000/15,000), while the number of citations issued in 2005 by parking agents is almost four times higher than those issued by police officers (1,172,072/320,600).

### **Recommendations**

**We recommend that the Direction des affaires pénales et criminelles:**

- 1) periodically review the status of suspended files in order to reinitiate their processing in a timely manner;**
- 2) ensure that citations that were not initially served are served within the statutory time limit in order to reduce the risk of overstating revenue;**

- 3) define and implement a procedure that periodically writes off incomplete citations in order to avoid their unjustified presence in the criminal offence processing system (STOP\*);
- 4) raise issuing departments' awareness about the need to reduce the number of incomplete citations.

***Actions proposed by the Direction des affaires pénales et criminelles***

- 1) *"The statutory review of suspended files is performed regularly, for all statutes, by the divisions of the Direction des affaires pénales et criminelles, which nonetheless notes that certain files are not subject to computerized processing when procedures are issued, which is done according to an inventory control table that does not display delays.*

*Technical reasons explain the continued presence of old files in the Stop+ system, despite previous operations to purge such files and, according to our reports, the absence of files awaiting processing. Therefore, only an electronic data processing operation will eliminate these isolated files." (Planned completion: June 30, 2007)*

- 2) *"The Code of Criminal Procedure stipulates that a statement of offence must be served within the year following the commission of the infraction. This is why we recommend that issuing departments serve statements of offence when the infraction is committed to speed up the judicial process.*

*If this is not possible, the Direction des affaires pénales et criminelles must serve the statement of offence. We use the methods stipulated by the Code for this, meaning by mail or bailiff.*

*To serve a statement of offence, the defendant's address must be current. However, a number of defendants shirk their legal obligations by not communicating changes of address to the SAAQ. In this case, it is impossible to serve statements of offence without using special methods.*

*Serving statements of offence by public notice and posting is currently being developed by the DTI to move these files along, and the associated computer work should be complete this year.*

*A new integrated system could include a feature that automatically verifies the status of each file in the system and ensure the statement of offence is served before the end of the stipulated time period." (Planned completion: December 31, 2007)*

- 3) *"The Direction des affaires pénales et criminelles will establish a joint working group comprising its divisions, the DTI and the Service des Finances to study the necessity, feasibility, possibility and related costs of such a change to the computer system." (Planned completion: June 30, 2007)*
- 4) *"The Direction des affaires pénales et criminelles, through its Division de la poursuite, has various committees on which sit issuing department representatives, and it has instituted a number of approaches in order to raise their awareness of various issues.*

*The Direction also offers training courses intended for issuing departments that are available on request and target specific areas of the Code. The Direction therefore intends to continue to deploy efforts to raise the awareness of the issuing departments about reducing the number of incomplete statements of offence." (Planned completion: December 31, 2007)*

#### **Access to the criminal offence processing system (STOP<sup>+</sup>)**

In order to perform their work, employees in each specialized area of various departments of the City have access to the STOP<sup>+</sup> system, especially those who work for the Court, the SPVM and the Service des finances, and in Accès Montréal offices. The large number of users and the many changes resulting from staff moves require thorough monitoring in order to quickly authorize, restrict or cancel access to data contained in the STOP<sup>+</sup> system.

From the list of City employees who have STOP<sup>+</sup> access, we found names of former Court employees who are still listed as "active." The same situation exists for certain employees whose temporary access in query mode, authorized several years ago, continues to be valid, even though these individuals have not accessed STOP<sup>+</sup> for long periods of time.

Since the STOP<sup>+</sup> system contains personal and confidential information that must be managed with care, as well as represents the primary source of accounting and legal follow-up in terms of statements of offence, we are of the opinion that access to STOP<sup>+</sup> must be closely monitored in order to restrict it to only those users authorized to perform transactions or queries.

## **Recommendation**

**In order to limit access to authorized users only, we recommend that the Direction des affaires pénales et criminelles, with the co-operation of other stakeholders, establish strict control mechanisms in respect to managing access to the criminal offence processing system (STOP\*).**

### ***Actions proposed by the Direction des affaires pénales et criminelles***

*“Access to the STOP+ system is managed by the Direction des affaires pénales et criminelles and, in part, by the DTI. In order to provide an agglomeration-wide service within a community justice system, the Court must obtain access for numerous customer service agents working throughout the entire territory of the agglomeration, as well as for other departments, including the Service des Finances. We will ask the various units that have access to the STOP+ system to demonstrate more discipline in notifying the Court when they experience frequent changes of staff. Audits are performed regularly, but also require the co-operation of all stakeholders.*

*A biannual procedure will be established and put into effect this year.” (Planned completion: December 31, 2007)*

# **E-MAIL AT THE VILLE DE MONTRÉAL**

## **BACKGROUND**

Today, few companies or public agencies can conduct business without their employees having access to e-mail in their work. A growing number of agencies are even replacing the telephone in favour of this means of communicating with clients, suppliers and partners. Its ease of use has made e-mail the main service used on the Internet.

As with the traditional postal service, all one needs to know is the recipient's e-mail address in order to send an e-mail.<sup>1</sup> Its main advantages versus traditional mail include:

- transmission speed;
- possibility of sending an e-mail simultaneously to several recipients;
- possibility of adding various content to an e-mail (e.g., images, sound, video, documents).

The e-mail address is made up of a couple of elements separated by the at symbol or @, e.g., user@domain. The right portion of the address indicates the domain name<sup>2</sup> while the left portion indicates the name of the user belonging to this domain.

As with most large agencies, the Ville de Montréal (the City) also uses e-mail in the course of its activities. To receive e-mails, users of the City's e-mail service must use an e-mail address belonging to the domain of the City, which is ville.montreal.qc.ca.

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<sup>1</sup> According to *Le grand dictionnaire terminologique* of the Office québécois de la langue française, an e-mail is a message that is sent by a user to one or more recipients, from one computer to another, through a computer network, resulting in a rapid and unrestricted exchange between them.

<sup>2</sup> According to *Le grand dictionnaire terminologique* of the Office québécois de la langue française, a domain name is the portion of an Internet name that specifically identifies the Web site of a given organization.

## **METHODOLOGY AND SCOPE**

The purpose of this audit was to look at the e-mail service, especially the technology infrastructure and the frameworks and control procedures in place. The audit covered all e-mail services used by the corporate departments and boroughs of the former Ville de Montréal, with the exception of wireless technology. As far as the boroughs of the former suburban municipalities are concerned, we limited our review to the boroughs of LaSalle and Verdun.

Our audit was carried out between June and October 2006. We used the policies and guidelines of the City, as well as the industry's best practices, as our assessment criteria.

We did not audit the e-mail technology infrastructure of the Montréal Police Service (SPVM), since a major upgrade of its e-mail service hardware and software was under way. We did, however, contact the individual responsible for computer security at the SPVM to obtain the information needed to draw a picture of the overall situation of e-mail at the SPVM. Finally, we excluded from our mandate an audit of controls related to the physical protection of computer installations used in the provision of e-mail services.

## **OBSERVATIONS AND RECOMMENDATIONS**

### **The multiplicity of domain names**

As defined above, a domain name enables the specific identification of a given organization. Contrary to recognized practice, we uncovered the existence of several domain names in addition to the officially designated name<sup>3</sup> used to identify the City on the Internet. In the course of our audit, we uncovered the following domain names:

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<sup>3</sup> ville.montreal.qc.ca



| Domain name               | Products used      | Managed by                                    | Clients   |
|---------------------------|--------------------|---|---|
| ville.montreal.qc.ca      | Lotus Notes        | DTI <sup>(1)</sup>                            | Corporate departments and boroughs of the former Ville de Montréal  |
| spvm.qc.ca                | Microsoft Exchange | SPVM  | SPVM  |
| cum.qc.ca                 | Microsoft Exchange | DTI   | <ul style="list-style-type: none"> <li>- Wastewater treatment plant</li> <li>- Direction de l'évaluation foncière (part)</li> <li>- Conseil des Arts</li> <li>- IIGGM<sup>(2)</sup></li> <li>- DTI</li> </ul> |
| verdun.ca                 | Microsoft Exchange | Borough of Verdun                             | Borough of Verdun   |
| ville.lasalle.qc.ca       | Microsoft Exchange | Borough of LaSalle                            | Borough of LaSalle  |
| lachine.ca                | Microsoft Exchange | Borough of Lachine <sup>(3)</sup>             |   |
| mtlnord.qc.ca             | Bell Nexxia        | Borough of Montréal-Nord <sup>(3)</sup>       |   |
| ville.saint-laurent.qc.ca | Microsoft Exchange | Borough of Saint-Laurent <sup>(3)</sup>       |   |
| pierrefonds-roxboro.qc.ca | Microsoft Exchange | Borough of Pierrefonds-Roxboro <sup>(3)</sup> |   |

(1) Direction des technologies de l'information of the Service des affaires corporatives

(2) International Institute for the Management of Major Metropolises

(3) Borough not part of the scope of the audit's mandate

In our opinion, the City's use of several domain names risks having a negative impact on its image by creating a certain degree of confusion among its citizens, as well as its partners and suppliers.

This situation also affects budgetary planning since each domain name is associated with its own technology infrastructure (hardware, software and technical support). Each domain name thus has an independent e-mail service, which, from the standpoint of best practices, does not represent the recognized model of economy and efficiency.

We gathered the following comments in our talks with the individuals in charge of the e-mail service.

Domain name: cum.qc.ca

According to the individual in charge, the e-mail server is being phased out progressively. At the time of our audit, however, new user accounts were still being created for the wastewater treatment station group. As well, according to earlier agreements, the DTI of the former Communauté urbaine de Montréal (CUM) had agreed to host the following agencies on its server:

- Conseil des Arts;
- International Institute for the Management of Major Metropolises (IIMMM).

At the time of our audit, no action had been taken by the DTI to end these agreements. Regarding the Direction de l'évaluation foncière, the withdrawal procedure is moving forward on schedule. Finally, for the remaining user accounts, no justification was given to keep these users.

Domain names: ville.lasalle.qc.ca and verdun.ca

Both individuals in charge agreed with the concept that the City should only have one e-mail service. Nonetheless, they expressed the wish to maintain ownership of their e-mail service. The reasons justifying such a decision were the fact that they fear losing the quality of the service (slower speed of communication) and the risk that centralizing user accounts would bog down management of the service.

Domain name: spvm.qc.ca

The individual in charge objected to merging their e-mail service with the City's. The main reasons given were:

- the confidential nature of the information;
- the fact that user accounts (creation, changes, deletion) are managed by the SPVM information security team;
- the fact that the SPVM uses a protected network and that it is easier for it to manage the security of its own e-mail server, which would not be the case if the e-mail service resided on DTI servers.

Nonetheless, the SPVM already entrusts the technical support for its workstations as well as those of its servers to the DTI. As well, 250 users on the SPVM's protected network have a user account in the City's e-mail service. This access became necessary to allow them to use the decision support application (GDD), which requires an e-mail service user account. This use of the e-mail service by the SPVM's 250 users is in itself a breach in the security perimeter established by the SPVM. The same holds true for the City's integrated management system (SIMON), which must be accessed by users within the SPVM's security perimeter, although SIMON resides on externally located servers.

According to a study published in 2003,<sup>4</sup> the trend of administrations in the United States favours centralizing information management technology. Among the reasons cited is the need to ensure harmonious communication (e.g., e-mail to enable users to plan meetings using the same agenda function) as well as the desire to reduce costs through economies of scale.

The following example provides a case in point: on September 28, 2005, on the recommendation of the DTI, the Comité exécutif approved the acquisition, renewal, conversion and maintenance of Symantec's AntiVirus Enterprise Edition software to protect the City's computer population of 10,900 workstations and servers for a period of three years. However, following the audit in the boroughs of LaSalle and Verdun, we observed that the individuals responsible for computers in these boroughs had also acquired anti-virus licences for their borough's workstations and servers in addition to the licences already acquired by the DTI.

The problems caused by the multiplicity of domain names require an action plan by the DTI, to which the Comité exécutif entrusted, in November 2002, the following responsibilities:

- Selecting, for the entire City, the technology, equipment and software used by the organization, and defining the directions and business needs of the information system belonging to the departments and boroughs;
- Optimizing the use of computer resources and achieving economies of scale by harmonizing computer systems and technology.

### **Recommendations**

**We recommend that the Direction des technologies de l'information of the Service des affaires corporatives:**

- a) **ensure that the domain name ville.montreal.qc.ca is the only domain name used at the City and that only one e-mail service is associated with it;**
- b) **assess the possibility of allowing decentralized management of user accounts for units (e.g., corporate department and borough), through one authorized e-mail service only.**

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<sup>4</sup> Ingraham, Patrica; Joyce, Phillip; and Donahue, Amy. *Government Performance: Why Management Matters*, 2003.

**Actions proposed by the Direction des technologies de l'information**

- a) *“Carry out an opportunity study to assess the impacts and issues and targeted architectures for integrating the various domains into ville.montreal.qc.ca. Identify and list the current domain names (statistics on the use of these names, users, mail servers, e-mail switch) that could be integrated into ville.montreal.qc.ca; (Planned completion: March 31, 2008)*
- b) *Carry out an opportunity study in line with the need for the decentralization of the management of user accounts—review the current models of delegating the business’s directories (LDAP) — assess the various available technical solutions in relation to existing infrastructures and decentralization needs. Assess potential links with the identity management projects.” (Planned completion: March 31, 2008)*

**Given the concerns expressed by the Montréal Police Service (SPVM), we recommend that the Direction des technologies de l'information du Service des affaires corporatives, in collaboration with the SPVM:**

- a) **review the risk involved in integrating the SPVM e-mail service with that of the City;**
- b) **develop a transition plan, where needed.**

**Actions proposed by the Direction des technologies de l'information**

- a) *“A risk assessment/opportunity study is planned to identify the risks related to integrating SPVM e-mail with that of the Ville de Montréal. (Planned completion: March 31, 2008)*
- b) *If the analysis is conclusive, a transition plan will have to be established.” (Planned completion: June 30, 2008)*

**Actions proposed by the SPVM**

- a) *“We will collaborate with the DTI on a risk assessment or any other actions associated with the possible integration of SPVM e-mail with that of the City. (Planned completion: March 31, 2008)*
- b) *All actions undertaken should take into account operational issues and the security criteria with which the SPVM must comply.” (Planned completion: June 30, 2008)*

## Oversight of e-mail

Following interviews held with the managers in charge, it was established that e-mail was part of the City's major systems. It has become indispensable to the proper functioning of several activities and applications, for example:

- the integrated management system (SIMON);
- the DTI's computer services centre;
- Sherlock;<sup>5</sup>
- the routing of alerts to the technical maintenance staff in the event of the failure of applications, systems or servers.

This criticality was confirmed during the current risk assessment exercise carried out by the DTI as part of the Plan directeur de sécurité de l'information (PDSI). In effect, it was established that were e-mail not available, it would have a major impact on the critical operations of the City.

Currently, the DTI is mandated to administer e-mail related to the City's official domain name. However, the DTI managers that we met indicated that they do not have the necessary authority to oversee e-mail. As a result, management is currently limited to the technology component. In our opinion, beyond the technical aspect, the DTI has neither a sufficient level of authority nor a clear mandate to deal with the many questions related to oversight of the e-mail service.

No one has ownership per se of the e-mail service, since it is common to all. However, there is a clear need for a better framework to govern use of e-mail at the City. In this regard, oversight of e-mail should be formally assigned either to the DTI, which can then act as the trustee of the application on behalf of the owner or the City, or at a senior level of authority (e.g., the Direction générale), leaving the DTI with responsibility for the technology component. The unit responsible for oversight would then have the mandate to implement a process to identify required changes on an ongoing basis. It would also be tasked with setting rules for the use of e-mail, for example:

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<sup>5</sup> Sherlock is considered the municipal databank. It contains information on several topics related to city life in Montréal. Citizens can access Sherlock via the City's Web site.

- exclude distribution of personal e-mail to all staff and departments (e.g., an invitation to an evening marking someone's retirement);
- make a decision regarding the current trend, as a result of various scandals such as Enron and Norbourg, requiring that a copy of all e-mails received be archived to preserve the original message (archiving principle) since e-mails are increasingly being used as reference documents in court cases;
- maximize the use of product functions (currently underutilized);
- determine and limit the authorized disc space per user (quota).

Regarding setting quotas, e-mail service administrators at the DTI indicated to us that, in spite of the technical means at their disposal, they do not have sufficient authority to impose a limit on the disc space allocated per user. In this regard, the audit showed that 40% of users exceed the current theoretical limit of 60 MB,<sup>6</sup> and that 13% of users exceed the limit of 120 MB, which the administrators would want to see mandatory.

#### **Recommendation**

**We recommend that the Direction générale assume responsibility for oversight of e-mail at the City, or officially delegate such oversight to the DTI, and confirm the role of the Direction des technologies de l'information of the Service des affaires corporatives as expert advisor in all matters related to the technology component.**

#### ***Actions proposed by the Direction des technologies de l'information***

*"The DTI has been given the mandate to make a recommendation in this regard to the Directeur général.*

*Responsibility for practically all information systems has raised few questions in as much as these systems are under the control of a business unit or a borough. In the specific case of e-mail, we are dealing with a multipurpose corporate system that is used by everyone. We must press on with our consideration of the factors involved in the oversight of e-mail, that is, specify the implications and required controls, as well as identify all City business units that should be involved in the oversight of technology content. This process has not yet been completed, but the DTI will be submitting a full report to the Directeur general. In the meantime, the DTI will assume responsibility for oversight e-mail." (Planned completion: June 15, 2007)*

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<sup>6</sup> Limit at which users receive a message advising them that their allocated disk space has been reached.

## **Guideline on e-mail use**

### Distribution of the guideline

The Sécurité informatique section of the DTI developed a guideline on the use of e-mail and had it approved by the Comité de sécurité de l'information of the Ville de Montréal (CSIVM). This guideline has several objectives aimed at producing a better framework for e-mail use. For example:

- ensure that all computer assets are used and adequately protected when sending or receiving a message;
- make authorized users accountable for their e-mail use;
- protect the City against any unauthorized use of e-mail.

To achieve these objectives, the guideline sets out several guiding principles, including:

- e-mail should be used strictly for business purposes;
- the user must not use any defunctive means to send e-mail anonymously or in another person's name;
- incoming and outgoing e-mails will be filtered, or blocked if need be, based on content or nature of the attachments, in order to ensure the security of the City's computer assets;
- automatic forwarding of e-mails outside the City will not be allowed.

At its meeting of May 17, 2006, the Comité exécutif adopted the City's information security policy (the policy) and recommended that all borough councils adopt the policy before July 31, 2006. However, this period ran out without the policy being adopted by all borough councils.

This situation has delayed the distribution of the guideline since its distribution before adoption of the policy would have weakened its legitimacy.

Finally, we were informed that the Sécurité informatique section is preparing to launch an information security awareness program. The objective of this program is to inform users of:

- potential risks and threats in the daily management of data;
- implementation of an information security policy (once it is adopted by all concerned parties);
- guidelines, procedures and manuals that will flow from this policy.

The program also aims at making users aware of the issues related to the management of information security, as well as leading them to adopt secure behaviour.

In this regard, we believe that, given the importance of the policy's objectives as well as the guidelines that will flow from it, it is paramount that the launch of the awareness campaign precedes the distribution of the guidelines.

According to a study published by CompTIA<sup>7</sup> in April 2006, more than 60% of security breaches of computer systems in companies in 2005 were caused by humans. Whether through ignorance or the adoption of delinquent behaviour, users can cause serious damage to the City's systems and data. According to the same study, it remains that technology alone cannot be fully effective without a strong commitment to security awareness and training at all levels in the organization. Implementation of such a program would then make it possible to inform users, raise their awareness and make them responsible for information security, thus reducing the risks of computer problems.

## **Recommendations**

**We recommend that the Direction des technologies de l'information of the Service des affaires corporatives launch its security awareness program for the staff of the Ville de Montréal as soon as possible.**

### ***Actions proposed by the Direction des technologies de l'information***

*"The internal awareness campaign was approved in the fourth quarter of 2006. It was officially launched after the Holidays: the Directeur général sent a message to all employees on January 9, 2007. The awareness program is, therefore, officially launched." (Planned completion: completed)*

**We also recommend that the Direction des technologies de l'information of the Service des affaires corporatives:**

- a) take all the necessary precautions, including recourse to a higher authority, to obtain without delay the adoption of an information security policy for all the concerned parties;**
- b) distribute the guideline on e-mail use as soon as all concerned parties adopt the information security policy.**

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<sup>7</sup> Computing Technology Industry Association



### ***Actions proposed by the Direction des technologies de l'information***

- a) *"The Direction des technologies de l'information (DTI) will continue to report on progress made on the adoption of the policy to Ville de Montréal management. (Planned completion: under way)*
- b) *The guideline was signed by the Directeur général on November 23, 2006. Since then, the directives can be found in the City's guidelines data base and on the Information Security Intranet site. On December 5, the Directeur principal du Service des affaires corporatives sent a memo to all directeurs généraux adjoints, all directeurs principaux and borough managers specifically asking them to disseminate the directive and e-mail user guide." (Planned completion: completed)*

### **Review of the guideline**

After reviewing the guideline, two elements came to our attention. The first appears in the statement of guiding principles, more specifically in the section dealing with confidentiality. It stipulates that confidential or personal information—restricted or for internal use—may not be sent outside the City without the prior approval of the owner of the information.

According to the information received from the manager of the Division gestion des documents et archives (DGDA) of the Direction du greffe, this requirement cannot be met because the City has no other policy or framework in place to deal with filing information. This situation exposes the City to the possibility that confidential or personal information could be sent out, since it is up to the user to decide what is considered information of a personal, confidential or restricted nature, or intended for internal use only.

The second element also appears in the statement of directing principles. It stipulates that the records retention schedule must also apply to e-mails. That said, we noted that no specific mention of e-mails appears in the records retention schedule (the schedule) drawn up by DGDA.

At the time of our meeting with the manager of the DGDA, we were informed that the *Act respecting the legal framework for information technology* determines an e-mail is now considered a document. We were also told that the schedule applies to e-mails, based on the nature of the information that they contain. Depending on their content, the user must then keep electronic or paper copies of the e-mails in order to meet the requirements of the schedule.

In our opinion, the City's managers and employees as a whole are unaware of the storage requirements for e-mails. This situation is a result of the fact that policies and frameworks are issued by the Direction du greffe in the absence of an information security awareness and information program. To correct the situation, the DGDA should develop an information program outlining its policies and frameworks for all City employees. To achieve this, the DGDA would do well to tie in with the information security awareness program that the DTI will soon be launching.

### **Recommendations**

**We recommend that the Direction du greffe of the Service des affaires corporatives develop a policy on classifying information.**

**We also recommend that the Direction du greffe of the Service des affaires corporatives take steps to tie the issuing of its policies and frameworks in with the information security awareness program developed by the Direction des technologies de l'information of the Service des affaires corporatives.**

### ***Actions proposed by the Direction du greffe***

- 1) *"In collaboration with the Computer Security Section (DTI) and the Information Security Committee, the Direction du greffe will develop a procedure and standards for classifying information relating to security. This classification will reflect the Act respecting access to documents held by public bodies and the protection of personal information and the broader business requirements of the City in respect to the security of information.*
- 2) *The Direction du greffe is playing an active role on the Information Security Committee. The procedures issued by the Direction du greffe were tabled before the Information Security Committee for approval. These procedures will be integrated into this committee's awareness program. At the same time, the Direction du greffe will involve the borough secretaries in the development and implementation of these procedures." (Planned completion: December 31, 2007)*

## **E-mail and the propagation of computer viruses**

Within the framework of an audit of the e-mail technology infrastructure of corporate departments and boroughs of the former Ville de Montréal, we concluded that all incoming and outgoing e-mails are checked using anti-virus software. We also concluded that some of the identified viruses originated from workstations located within the City's internal network.

Nevertheless, at its meeting of October 11, 2005, the Conseil authorized the DTI to acquire, renew, convert and manage Symantec's AntiVirus Enterprise Edition software in order to protect the City's computer population of 10,900 workstations and servers against virus attacks and other vicious programs.

The e-mail administrators mentioned to us that they did not have the tools needed to identify precisely those workstations from which the viruses originated. After obtaining the necessary authorization, we audited the console used to administer the antivirus software installed on the workstations of the corporate departments and boroughs of the former Ville de Montréal, for which the DTI ensures technical support.

Our audit showed a lack of supervision of the administration console and confirmed that several of the City's workstations were infected with computer viruses. According to the information we received, this situation was attributable to the fact that, for almost two years, no technician was given the responsibility to manage the administration console.

According to a study conducted by IBM in March 2006 for the DTI as part of an audit of the architecture of the e-mail servers, the prevention and detection of computer viruses and spam are essential activities for companies. These activities ensure greater productivity of staff using PCs and also help to prevent loss of information essential to the company.

Finally, to ensure adequate protection from computer viruses, a complete and updated inventory of all workstations requiring protection is essential. Based on the information we received, no link exists between the list of workstations showing on the administration console as having antivirus software installed and the list of workstations controlled by the GIT.<sup>8</sup>

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<sup>8</sup> GIT is the acronym used to designate the Gestion Intégrée des postes des Technologies application. This application consists of several components, including the management of workstations.

The lack of such reconciliation creates a risk that discrepancies will not be detected quickly. For example, once a workstation is moved, it is no longer able to communicate with its "parent server." In that case, the workstation becomes vulnerable to virus attacks because the parent server cannot update the antivirus software's virus definition file.<sup>9</sup>

Finally, in the absence of proper management controls, it is foolhardy to think that the use of sophisticated computer tools alone will effectively protect against the destructive consequences of virus attacks.

### **Recommendations**

**We recommend that the Direction des technologies de l'information of the Service des affaires corporatives:**

- a) conduct regular surveillance of the administration console of the antivirus software installed on workstations;**
- b) design and implement a procedure describing the technical stages required to destroy all computer viruses quickly.**

### ***Actions proposed by the Direction des technologies de l'information***

- a) "Controls exist in the environment of the servers, which then overclock updates on the microcomputers. The current surveillance architecture still needs to be evaluated in order to validate the capacities required to regularly check the status of antivirus infrastructures for the microcomputers and teams' surveillance procedures, in order to guarantee that the tasks related to this surveillance form an integral part of daily surveillance procedures. (Planned completion: September 30, 2007)*
- b) Update the crisis management procedure when a computer virus is detected to favour a step-by-step resolution process. Inform the major stakeholders and integrate this action into the security and communication policies of the Ville de Montréal." (Planned completion: December 31, 2007)*

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<sup>9</sup> The virus definitions file contains technical information used by the antivirus software to detect the presence of computer viruses.

We also recommend that the Direction des technologies de l'information of the Service des affaires corporatives establish mechanisms to ensure that all relevant changes made to the list of workstations controlled by the GIT are made to the list of workstations under the antivirus software administration console.

***Actions proposed by the Direction des technologies de l'information***

*"Every workstation that is standardized and integrated into the GIT automatically identifies itself to the appropriate antivirus definition server according to its location. This enables the definitions to be updated. When a workstation is moved, the antivirus definition server is automatically changed."  
(Planned completion: completed)*

**Review of technology infrastructures**

We then looked at the technology infrastructure supporting e-mail services in the following environments:

- DTI's Lotus Notes serving the corporate departments and boroughs of the former City;
- DTI's Microsoft Exchange serving mainly the former CUM;
- Borough of LaSalle's Microsoft Exchange;
- Borough of Verdun's Microsoft Exchange.

**DTI's Lotus Notes Environment**

*Licences*

We established that a discrepancy of 1,954 licences exists between the number of licences paid and the number of licences noted in the Lotus Notes corporate address book.<sup>10</sup> According to the administrator, 956 user accounts are currently locked and awaiting deletion. He also estimated that between 400 and 500 user accounts are to be suspended, leaving a balance of 400 to 500 unpaid licences.

We also concluded that one e-mail server hosts 276 POP3 user accounts, while the administrator estimates that the maximum need is 30 accounts. As with the Notes user accounts, the DTI must pay the cost of these additional licences although there is no justified need for them.

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<sup>10</sup> The corporate address book database is the heart of the Lotus Notes system since it contains the list of all the City's Notes users.

### *Remote supervision*

At its meeting on September 14, 2005, the Comité exécutif granted a contract to a specialized firm to install infrastructures for the remote supervision of networks and critical systems and to provide this remote supervision.

The contract also provided for the possibility of using the firm's equipment to conduct an audit to find any vulnerabilities in the technology infrastructure. Since the contract was granted, however, the DTI has not taken advantage of the facilities offered by the firm to assess the infrastructure's vulnerabilities.

During our audit, we asked the firm to assess the vulnerabilities of the e-mail servers. Their review did not uncover any flaw, with the exception of two elements, which the firm rated as high risk. Nonetheless, we believe that all elements found could have been easily identified and corrected by the DTI using the features they had at their disposal for a year.

### *Tivoli Storage Manager (TSM)*

The DTI uses IBM's TSM software to centrally save and archive files from several platforms. Therefore, TSM creates the e-mail server security copies. In order to do this properly, TSM administrators need major access privileges.

We concluded that the number of individuals listed in the TSM administrators' group should be reduced. We also noted that the parameter requiring changes to administrators' passwords has only been activated for one member of the group, which is contrary to recognized practices in the field.

### *IBM Lotus Domino*

All the e-mail servers use version 6.5.4 of IBM's Lotus Domino. However, in a notice that appeared on January 6, 2006, IBM indicated that this version contains multiple vulnerabilities that could cause the server to break down. The company recommended corrective action by upgrading to version 6.5.5.

### *E-mail server administrators*

After reviewing the corporate address book, we concluded that two groups have administration rights over e-mail servers.

Following discussions with the administrators, we established that one of the groups should be eliminated. We also concluded that the number of individuals listed in the group of administrators should be reduced.

As well, a review of firewall rules revealed that administrators were given access to the secured area of servers based on their workstation address. Furthermore, authorized workstations were listed in the Notes group of administrators and they had unrestricted access to all the area's communication ports. However, following our review, we concluded that the number of workstations authorized to access this area should be reduced.

Finally, following the review of the list of administrators authorized to access the operating system<sup>11</sup> of one of the e-mail servers, we established that one user should be eliminated.

### *Security policies*

All the e-mail servers use either Microsoft Windows 2000 Advanced Server or Windows 2003 Server Standard Edition as their operating system. Following a review of the security policies of the servers, we concluded that they are not subject to any standard. The lack of common policies results in increased risk to the security of the servers.

It is a recognized fact that increasing security and ensuring uniform application cannot be done by exhaustively creating policies but by encouraging the dissemination of a minimum number of common policies throughout the company. In this regard, we have identified the policies that, in our opinion, should be kept:

- password strategy;
- requirements for complex passwords;
- strategy for locking accounts;

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<sup>11</sup> According to *Le grand dictionnaire terminologique* of the Office québécois de la langue française, the **operating system** is a computer's basic software designed to command the execution of programs by ensuring work management, entry-exit operations on the peripherals, assignment of resources to various processes, and access to the programs' library and files, as well as the work accounting.

- audit strategy.

Nonetheless, at the time of our audit, we were informed that the DTI was currently distributing a new directory service<sup>12</sup> using Microsoft's Active Directory. The administrators of the new service told us that they had implemented certain policies but that these applied only to a very restricted group of application servers that did not include e-mail servers.

Finally, we are of the opinion that the adoption of policies should also be accompanied by common measures that increase the security level of the servers' operating system. Following are some of the most important measures we retained:

- rename the "administrator" user account and assign it a complex password;
- create a new "administrator" user account without any privileges;
- create user accounts with administrative powers on an individual basis;
- remove user accounts created by default when installed.

## **Recommendations**

**We recommend that the Direction des technologies de l'information of the Service des affaires corporatives:**

- a) complete a review of the number of required Notes user accounts to determine the amount of unpaid renewal rights;**
- b) rationalize the number of POP3 e-mail user accounts;**
- c) conduct regular audits of the vulnerabilities of the City's infrastructures beginning with the equipment included in the remote surveillance contract and correct any discrepancies revealed, if required;**
- d) correct the discrepancies revealed during the audit of vulnerabilities that we carried out;**
- e) review the number of authorized TSM software administrators and activate the control parameters forcing password changes within the timeframe established in the future standard governing access keys to computer resources;**

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<sup>12</sup> According to *Le grand dictionnaire terminologique* of the Office québécois de la langue française, the directory service is a centralized service that groups together the names and addresses of users, as well as the address of the computer and resources available on a network.



- f) update the IBM Lotus Notes software to correct the vulnerabilities identified by the manufacturer;
- g) review the number of users and groups holding the Notes administrator privilege;
- h) review the list of workstations authorized to access the secured zone of e-mail servers;
- i) remove the non-required administrator code.

***Actions proposed by the Direction des technologies de l'information***

- a) *"We have completed the streamlining of Notes accounts and have established the City's current user licence needs. (Planned completion: completed)*
- b) *Between January and May 2006, we carried out substantial streamlining, which enabled us to destroy 530 pop3-type accounts out of some 800 initial accounts. No new account requests have been accepted since then. Annual streamlining is being done to minimize the number of this type of account. (Planned completion: completed)*
- c) *Reports on e-mail servers and other servers considered critical are planned for the first Friday of each month. (Planned completion: completed)*
- d) *All the vulnerabilities have been corrected, with the exception of one. The latter is hardware related and is 50% completed. Work is under way to eliminate this vulnerability. (Planned completion: June 30, 2007)*
- e) *Conduct an audit of the number of authorized administrators and validate the relevance of having such privileges for each of the individuals concerned. (Planned completion: September 30, 2007) Using the access key standard, functionally validate the activation of control parameters in accordance with the standard and proceed with its activation. (Planned completion: December 31, 2007)*
- f) *The IBM Lotus software upgrade has begun. (Planned completion: May 31, 2007)*
- g) *Individual access has been withdrawn from the planned group holding Notes administrator privileges. Review of the groups enabled us to destroy one group. (Planned completion: completed)*
- h) *A new list that cancels and replaces those workstations authorized to access e-mail servers will be sent to the persons responsible for the firewall. (Planned completion: May 31, 2007)*
- i) *The ADMININFRA1 code has been destroyed." (Planned completion: completed)*

We also recommend that the Direction des technologies de l'information of the Service des affaires corporatives implement the following security policies for all e-mail servers and look into the possibility of applying them to all the organization's servers:

- a) password strategy;
- b) requirements for complex passwords;
- c) strategy for locking accounts;
- d) audit strategy.

***Actions proposed by the Direction des technologies de l'information***

***"Standardize the deployment of security policies prescribed for e-mail servers. (Planned completion: September 30, 2007)***

***Audit the policies currently in place and the technical and organizational measures to be implemented across all the organization's servers." (Planned completion: December 31, 2007)***

Finally, we recommend that the Direction des technologies de l'information of the Service des affaires corporatives implement the following security measures for all e-mail servers and look into the possibility of applying them to all the organization's servers:

- a) rename the "administrator" user account and assign it a complex password;
- b) create a new "administrator" user account without any privileges;
- c) create user accounts with administrative powers on an individual basis;
- d) remove user accounts created by default at the time of installation.

***Actions proposed by the Direction des technologies de l'information***

***"Audit these security measures currently deployed on mail servers. Review the procedure for installing servers. Establish a strategy to correct existing configurations." (Planned completion: September 30, 2007)***

## Microsoft Exchange Environment of the former CUM

### *Open relay*

At the time of our audit, we noted that it was possible, using the technology infrastructure of the former CUM, to send an e-mail via the Internet without having an authorized user account for the e-mail service.

It was thus possible for us to send e-mails by using the communication port normally reserved for the authorized e-mail server.

Known as "open relay," this loophole can be used to send anonymous e-mails containing defamatory and injurious messages or that may be considered harassment.

We asked the administrators to go over our actions in one of the available activity logs. After reviewing the log, the administrators were unable to find an information trail leading to the author of these missives.

### *Operating system update*

It is a recognized fact that ongoing corrective actions and security updates must be in place to promptly correct deficiencies affecting the security of the servers.

In order to do this, we noted that administrators have installed a WSUS (Windows Server Updates Services) server that allows daily updates to be made to the operating system of the e-mail server and certain Microsoft products.

Based on our audit, we concluded that eight patches classified as "Moderate" to "Critical" (Moderate: 1, Major: 2, Critical: 5), issued one to two months earlier, had not been installed.

### *Microsoft Exchange software update*

Using the same parameters mentioned above, we concluded that three patches classified as "major" to "critical" (major: 1, critical: 2), issued 9 to 20 months earlier, had not been installed.

#### *Update of the anti-virus software's virus definitions file*

As mentioned above, antivirus software must use the most recent virus definitions file to ensure effective protection against a virus attack. The technical information contained in this file enables the antivirus software to detect the most recent computer viruses.

It is well known that e-mail is used to propagate viruses. Consequently, it is essential that the e-mail server's antivirus software uses the latest version of the virus definitions file when filtering incoming and outgoing e-mails.

We concluded that the virus definitions files used to filter e-mails and protect the e-mail server had not been updated for two days, while the virus definitions file used by the Lotus Notes e-mail servers was updated every 15 minutes.

#### *Security policies*

The e-mail server also uses the Microsoft operating system. After reviewing the server's security policies, we concluded that the latter is not subject to any standard. The absence of common policies places the server at increased risk.

#### **Recommendation**

**We recommend that the Direction des technologies de l'information of the Service des affaires corporatives shut down the e-mail service associated with the domain name cum.qc.ca as soon as possible.**

#### *Actions proposed by the Direction des technologies de l'information*

*"The migration process is under way." (Planned completion: December 31, 2007)*

## Microsoft Exchange environment of the Borough of LaSalle

### *Open relay*

During our audit, we noted that it is possible, using the borough's technology infrastructure, to send an e-mail via the Internet without having an authorized user account for the e-mail service.

We were thus able to send e-mails using the communication port normally reserved for the authorized e-mail server.

Known as "open relay," this loophole can be used to send anonymous e-mails containing defamatory and injurious messages or that may be considered harassment.

We asked the administrators to go over our actions in one of the available activity logs. After reviewing the log, the administrators were unable to find an information trail leading to the author of these missives.

### *Security policies*

The e-mail server also uses the Microsoft operating system. After a review of the security policies governing the server, we concluded that the latter is not subject to any standard. The absence of common policies places the server at increased risk.

In this regard, we feel that the observations and conclusions drawn after the review of the security policies related to the DTI's Lotus Notes environment also apply to the borough's environment.

### **Recommendations**

**We recommend that the borough's Direction des services administratifs correct the vulnerability that allows the sending of anonymous e-mail from the borough's technology infrastructure.**

***Actions proposed by the borough of LaSalle***

*"Measures have been put in place to correct this vulnerability." (Planned completion: completed)*

We also recommend that the borough's Direction des services administratifs implement the following security policies for the department's e-mail server and look into the possibility of installing the following on all the borough's servers:

- a) password strategy;
- b) password complexity requirement;
- c) account lock strategy;
- d) audit strategy.

***Actions proposed by the borough of LaSalle***

*"These four security policies have been deployed." (Planned completion: completed)*

We also recommend that the borough's Direction des services administratifs apply the following security measures to e-mail servers and look into the possibility of applying them to all the borough's servers:

- a) rename the "administrator" user account and assign it a complex password;
- b) create a new "administrator" user account without any privileges;
- c) create user accounts having administration powers on an individual basis;
- d) remove user accounts created by default at the time of installation.

***Actions proposed by the borough of LaSalle***

- a) *"The "administrator account" has been renamed and a complex password has been assigned to it;*
- b) *A new "administrator" account has been created without privileges;*
- c) *User accounts having administrative powers on an individual basis already existed;*
- d) *User accounts created by default during installation have been destroyed." (Planned completion: completed)*

## Microsoft Exchange environment of the Borough of Verdun

### *Incompatible services*

During our audit, we noted that the e-mail server was also a domain name server<sup>13</sup> and a management server for the borough's Active Directory.

Recognized practices recommend that e-mail software be installed on an independent server whose resources are reserved exclusively for e-mail processing.

### *Security policies*

The e-mail server also uses the Microsoft operating system. Our analysis of the server security policies led us to observe that this system is not subject to any standard. The absence of common policies results in an increased level of risk to server security.

In this regard, we consider that the observations and conclusions drawn following a review of the security policies for the DTI's Lotus Notes environment also apply to the borough's environment.

### **Recommendations**

**We recommend that the borough's Direction des services administratifs install an e-mail service on an independent server whose resources are reserved exclusively for e-mail processing.**

### ***Actions proposed by the borough of Verdun***

*"The addition of a new server to isolate the e-mail function from the server farm would require tying up resources not currently available to the borough. At the moment, in addition to its regular functions, the server handles authentication of users, assignment of IP addresses and the numeric conversion of Internet addresses. This server is eventually set to disappear. Once the Lotus Notes e-mail service upgrade is stabilized, we will be able to transfer users to that environment."*

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<sup>13</sup> According to *Le grand dictionnaire terminologique* of the Office québécois de la langue française, a domain name server is a server hosting a database in which the Internet numbers of network computers along with the corresponding Internet address are recorded.

**We also recommend that the borough's Direction des services administratifs implement the following security policies for the e-mail server and look into the possibility of installing them on all the borough's servers:**

- a) password strategy;**
- b) password complexity requirement;**
- c) account lock strategy;**
- d) audit strategy.**

***Actions proposed by the borough of Verdun***

***"Password strategies are currently being revised to reflect the auditor's recommendations." (Planned completion: January 31, 2007)***

**We also recommend that the borough's Direction des services administratifs apply the following security measures to e-mail and assess the possibility of applying them to all the borough's servers:**

- a) rename the "administrator" user account and assign it a complex password;**
- b) create a new "administrator" user account without any privileges;**
- c) create user accounts with administration powers on an individual basis;**
- d) remove user accounts created by default at the time of installation.**

***Actions proposed by the borough of Verdun***

***"Strategies to manage user accounts are currently being revised to reflect the auditor's recommendations." (Planned completion: January 31, 2007)***



# **INFORMATION PROCESSING CENTRES' ENVIRONMENT**

## **BACKGROUND**

Technological progress has changed the design of computers, as well as the behaviour of users in relation to security. This evolution has left its mark on the architecture of computer centres. The widespread penetration of microcomputer-based, client-server type decentralized architecture, local area networks (LANs) and affordable, readily accessible telecommunications links has resulted in the reappearance of physical security requirements from which we were exempt with host-site systems.

These new architectures have given rise to the physical distribution of information systems in areas that are more or less secure. A definition currently used to describe a data processing centre states that it is typically a centralized facility used to fulfil a critical mission in respect to computers and telematics. In general, it involves environmental control (air conditioning, fire prevention system, and the like), emergency and redundant power, as well as high physical security.

During the course of its audit mandate on the consolidation of servers, the General Auditor's Office observed a decentralization of data processing and a major physical distribution of the City's computer centres. According to a study by an outside firm on the consolidation of servers for the Ville de Montréal, which was presented on September 9, 2003, to the Direction des technologies de l'information (DTI), the City has 63 computer centres that together have more than 309 servers, supported by eight different teams.

## **METHODOLOGY AND SCOPE**

Several criteria were used to identify the centres that were part of our sample and that were visited. We took into account the number of servers housed, the geographical location of the computer centre and the type of data processed (file or application servers). Our audit also included a separate assessment of controls for centres supporting telecommunications equipment housed in a separate location.

Our audit of computer centres focussed on all the infrastructures that support and house the City's computer servers and telecommunications equipment. We chose to examine nine out of 63 centres, representing 14% of the total, and we added the computer centre of the new administrative centre to our sample, which served as a model to draw comparisons between centres.

We used several reference frameworks in our work, including MARION, COBIT and various sources of information that list the best practices in specific areas (fire, electrostatic, air conditioning and others.) We identified 100 prevention and protection measures, each covering one or several security controls to be identified in each centre.

We assessed the centres on the same bases and with the same criteria, ignoring each one's individual risk level. As a reference we used the standards or best practices that are normally implemented in large computer and telecommunications centres.

The control objectives evaluated apply to the following areas:

- **Physical security** (internal and external environment, protection and access control);
- **Specific control environment** (means of prevention, detection and protection against fire, humidity, water, fluctuation in or loss of electrical power);
- **Physical configuration of systems and management of telecommunications** (presence of redundant links and equipment, and follow-up of problems);
- **Operation and management of computer networks** (assignment of responsibilities and management of staff, security incidents and escalation procedures);
- **Existence of a backup plan or continuity plan** (mechanisms to carry on essential functions in the event of disruption.)

## **OBSERVATIONS AND RECOMMENDATIONS**

For each of the chosen computer and telecommunications centres, specific findings related to the prevention and protection measures associated with the corresponding best management practices were conveyed to the relevant managers. Each centre presents a different environment, risks and conditions. Nonetheless, the number and scope of the observations made are evidence of a situation that was not under control. The assessment of individual risks should have an influence on the degree of robustness of the various security features to be implemented in each of the centres.

The server consolidation project, as well as several other real estate and technological projects at the City have already changed or will soon change the nature and environment of seven of the nine computer centres visited. These centres have been or will be moved, refitted or used for other purposes, based on the needs of the DTI's clients. At the time our mandate was defined, the centres we audited were identified as being the most important in terms of data processing and the information kept.

We provided the Direction des technologies de l'information, as well as the Direction des immeubles, with a series of detailed recommendations geared to best practices and having as their objective to ensure the security, availability and confidentiality of information, processes and equipment for all the chosen centres.

The results of our audit enabled us to issue other recommendations that are more general in scope but that summarize, in essence, all the detailed observations that characterize each of the chosen centres.

We were able to observe major changes at the time of our visit to the computer centre at the new administrative centre. Most of the recommendations that we had issued during earlier visits had been implemented in this new environment.

### **Recommendations**

**Consequently, we recommend that the DTI channel its implementation efforts on the following major points:**

- a) Assess the risks in each of the computer centres still in operation, based on the importance (critical, medium, low) of operations and the information being processed there in order to establish the level of control required for each centre;**
- b) Analyse the infrastructures and environmental controls of all the City's computer centres in order to identify existing weaknesses; review the need for decentralization and consolidation of critical functions;**
- c) Submit an action plan based on a cost-benefit analysis in relation to the risk level and analysis for each of the centres;**
- d) Confirm the standards required for the computer centres, keeping in mind our recommendations and applying them at the time of the design or refitting of a computer centre at the City;**
- e) Implement the recommendations related to governance applying to all the computer centres:**

- appoint a person in charge for each of the computer centres, with full responsibility for the physical security of all facilities and all changes to the centre's infrastructure;
  - define the frameworks, policies and guidelines for the design, layout and management of the computer centres;
  - conduct a review of the computer centres for the entire City and audit each centre to determine: the state of the centre, the importance of its information and processing, the inventory of equipment, infrastructures, and the like;
  - document crisis response procedures and ensure the ongoing training of computer centre staff to cope with potential threats;
  - audit the computer centres on a regular basis (at least yearly) with feedback on results.
- f) Assess the short- and long-term needs in respect to a backup plan; the existence of a functional backup plan for activities deemed critical for the City provides a continuing means to protect against and diminish several risks.

***Actions proposed by the Direction des technologies de l'information***

- a) *“Assess the (level of) risks of each of the computer centres in an exhaustive and detailed manner (the centres that were the subject of the BVG audit). These first analyses cover the organizational aspect (moving and change of vocation component). A more complete risk analysis (dealing with the long-term survivability of these centres) will be undertaken. This analysis will cover a broader perimeter (physical, organizational, operational). (Planned completion: February 28, 2008)*  
*Determine the required control levels—establish standards and norms based on best practices, industry standards and operational constraints of the Ville de Montréal. (Planned completion: February 28, 2008)*  
*Bind defined control levels to different operational centres that will continue operating in the medium term.” (Planned completion: December 30, 2007)*
- b) *“Based on best practices and standards recognized in the industry, define the standards that will enable current computer centres to conform and future centres to be built to these standards (building and computer infrastructures). (Planned completion: February 28, 2008)*  
*Assess the technical level of the current infrastructures (computer infrastructures)—identify gaps, validate consolidation/enhancement needs, group critical functions and quantify the future needs of these computer centres. (Planned completion: February 28, 2008)*

- Clarify current DTI standards and publish them.*” **(Planned completion: February 28, 2008)**
- c) *“Carry out a cost-benefit analysis based on the results obtained from the two preceding recommendations. Prepare an action plan for the remaining centres based on potential future moves.”* **(Planned completion: September 30, 2008)**
- d) *“Create a summary (table) drawn up jointly by the DTI and the Immeubles group to better categorize rooms and policies to be applied according to the type of rooms. This approach would also enable quick assessment of potential risks to the physical security of the rooms. During 2007, plans are to create tools to assess data related to the security standards of computer centres. By applying best practices in terms of the physical security of computer rooms, this activity will enable the creation of a control list to validate and document the state of the various computer rooms.”* **(Planned completion: February 28, 2008)**
- e) 1) *“Identify those in charge of the computer centres—DTI/Immeubles—as well as the data relating to these centres.”* **(Planned completion: February 28, 2008)**
- 2) *“The Direction des technologies de l’information (DTI), in cooperation with the Information Security Management Committee, will draft a directive on the security of processing rooms.”* **(Planned completion: December 31, 2007)**
- 3) *See recommendation b.* **(Planned completion: February 28, 2008)**
- 4) *“Create information media and integrate procedures into the roles of the persons in charge of the computer centres.”* **(Planned completion: June 30, 2008)**
- 5) *“Define the validation process of various computer centres and distribute the results.”* **(Planned completion: September 30, 2008)**
- f) *“The Plan directeur de sécurité de l’information (PDSI) includes an initiative that could be tied to this action. The necessary work to complete this initiative is under way and will be completed.”* **(Planned completion: December 31, 2007)**

## **ENVIRONMENT—PETROLEUM TANKS**

### **BACKGROUND**

Petroleum products and equipment are subject to the *Act respecting petroleum products and equipment*. The object of this Act is to ensure the safety of persons and the protection of property and the environment from risks arising from the use of petroleum products and equipment.

The City has petroleum tanks for supplying its vehicles (gasoline and diesel), running emergency generators (diesel), heating buildings and operating incinerators when natural gas cannot be used (fuel-oil). As well, tanks are used to collect used oil while awaiting disposal by specialized firms.

### **METHODOLOGY AND SCOPE**

We conducted an audit of the petroleum tanks belonging to the Ville de Montréal. Our audit consisted of site visits, interviews and examination of various documents.

The purpose of the audit was to assess the controls in use to prevent and detect leaks of petroleum products that might cause damage to the environment. In particular, we focussed on the following areas: the validity of permits issued for the use of high-risk petroleum products, periodic audits and inspections in accordance with the act and regulation governing petroleum products and equipment, and replacement of tanks at an opportune time.

We focussed mainly on the following business units: Service des infrastructures, transport et environnement (SITE); Service de la mise en valeur du territoire et du patrimoine; Service des affaires corporatives; and the boroughs of Pierrefonds–Roxboro and Saint-Laurent.

## OBSERVATIONS AND RECOMMENDATIONS

### Act and Regulation

The *Act respecting petroleum products and equipment* (the Act) and the *Regulation respecting petroleum products and equipment* (the Regulation) regulate the use of petroleum tanks. They specifically state, among other things, the following:

- the Regulation defines a tank as being a container with a capacity greater than 225 litres;
- there are three types of petroleum products: motor fuel (gasoline and diesel fuel), fuel-oil and used oil (from a motor vehicle or hydraulic equipment);
- “high-risk petroleum equipment” possesses one or several of the following characteristics:

| Petroleum products          | High-risk petroleum equipment |                             |
|-----------------------------|-------------------------------|-----------------------------|
|                             | Underground storage systems   | Aboveground storage systems |
| Gasoline                    | 500 litres or higher          | 2,500 litres or higher      |
| Diesel fuel                 | 500 litres or higher          | 10,000 litres or higher     |
| Fuel-oil and heavy fuel-oil | 4,000 litres or higher        | 10,000 litres or higher     |
| Used oil                    | 500 litres or higher          | N/A                         |

- A permit valid for 24 months is required for the use of high-risk petroleum equipment, except if the equipment is used exclusively for the transportation of petroleum products, as in the case of a tanker truck. The Minister of Natural Resources and Wildlife issues a permit under certain conditions, including the condition that a certificate has been issued by a certified registered inspector attesting that the equipment has been inspected.
- The permit is issued to the owner of the high-risk petroleum equipment or to the person designated by the owner to whom the responsibility of maintaining and repairing the equipment has been entrusted. However, the owner who so entrusts the custody of petroleum equipment must ensure that the designated person holds a valid permit. The owner must also take all reasonable steps to ensure that the third party to which they have delegated responsibility performs the required maintenance and repair work on the equipment. This third party must allow the owner to have access to the documents concerning the petroleum equipment so that they may verify any maintenance and repair work.

- To allow for the rapid detection and correction of any problem or defect, the operating performance of all high-risk petroleum equipment must be tested periodically by the person holding the issued permit, and the equipment must be inspected periodically by a certified inspector.

To this end, the Regulation sets out the requirement that the permit holder must record and keep various inspection- and testing-related information and documents in a register. For example:

- inspection certificates issued by a certified inspector;
- inspection reports of the corrosion protection system;
- inspection reports of the leak detection system, where applicable;
- leak detection test reports;
- all reports relating to the testing of the operating performance (e.g., a gasoline distributor must be equipped with a counter that must be calibrated every two years);
- level readings of products in the tanks;
- calculations allowing the determination of any product gain or loss.

The inspection of high-risk petroleum equipment must be carried out in accordance with the frequency prescribed by the Regulation (two, four or six years, depending on the risk). During the inspection, the certified inspector must be aware of the content of registers and ensure that the content complies with the Regulation and that the petroleum equipment subject to the inspection does not present any hazard to safety. The inspector must also search for leak signs and, if applicable, analyze the plans submitted.

Finally, the inspector must analyze the operating performance of the equipment and inventories to ensure that regulatory requirements are being met. Among these requirements is the obligation on the part of the permit holder to test the imperviousness when a suspected leak has occurred or replace underground steel tanks that are not protected against corrosion. The Regulations do not set any replacement date for underground anticorrosive steel tanks, fibreglass tanks or aboveground tanks.

- To ensure that the Act and Regulations are applied, a chief inspector and inspectors are named. According to the Act, an inspector can, among other things, have access to any location where there are petroleum products or equipment in order to inspect them. Ultimately, an inspector who has just and probable cause to suspect any petroleum equipment presenting a danger to the environment or public safety may order the closure of the place where the equipment is found.



- The Act sets out fines for any person who uses high-risk petroleum equipment without a permit as required under the Act. It also makes provisions for the interruption of delivery of petroleum products in high-risk equipment for which no valid user permit has been issued.

Note that the Act will be modified on April 1, 2007. In essence, the modifications are intended to transfer responsibility for petroleum equipment, including tanks, from the ministère des Ressources naturelles et de la Faune to the Régie du bâtiment du Québec. More specifically, the responsibilities assigned to the Régie will consist in ensuring the quality of construction work on petroleum equipment, ensuring the safety of persons using petroleum equipment, and monitoring and controlling compliance with construction and safety standards relating to petroleum equipment.

### Conclusions

We obtained the inventory of gasoline and diesel fuel, fuel-oil and used oil tanks from the business units involved, in order to determine which of these represented high-risk equipment based on the criteria set out in the Act. In all, 67 tanks were thus identified, including 56 gasoline and diesel fuel tanks, 10 fuel-oil tanks and one used oil tank. At the time of our audit, we were ascertained that there were valid user permits for these tanks and that the certificates issued by certified inspectors attesting that the inspection had been passed were retained.

In the case of used oil tanks not requiring a permit, we looked at the business units affected (SITE, Service des affaires corporatives, Borough of Saint-Laurent) to see if there were measures in place to prevent problems that could cause leaks of used oil on or in the ground. We visited 5 of the 12 used oil tanks and found that the measures in place were satisfactory.

On the whole, our audit showed a low risk of possible leaks of petroleum products that could cause damage to the environment.

Nonetheless, we determined that the following improvements should be made to three of the business units affected.

*Service de la mise en valeur du territoire et du patrimoine*

We audited two divisions of the Direction des immeubles: the Division des travaux d'entretien and the Division de l'énergie, de l'environnement et des expertises. The former is responsible for updating the inventory of all petroleum tanks for the nine boroughs of the former Ville de Montréal and its corporate departments. The latter is responsible for ensuring that permits required under the provincial Act are obtained and renewed.

Nevertheless, it should be noted that, in the case of the tanks of the Direction des muséums nature de Montréal; the Service du développement culturel, de la qualité du milieu de vie et de la diversité ethnoculturelle; and the Direction de l'épuration des eaux usées of the Service des infrastructures, transport et environnement, holding a valid user permit remains the responsibility of each.

To determine the tanks whose characteristics make them high-risk equipment that requires a user permit, we obtained the inventory lists of the Division des travaux d'entretien. Our examination of these lists showed that they were incomplete. For example, the capacity and precise location (aboveground or underground) of the fuel-oil tanks was not shown in the inventory. These characteristics are essential to establishing whether the tanks are high-risk petroleum equipment that requires a user permit. Also, some fuel-oil tanks and used oil tanks did not appear in this inventory.

We also obtained from the Division de l'énergie, de l'environnement et des expertises the list of tanks for which it provides follow-up to ensure that there are valid permits for all the high-risk tanks being used. This list showed 34 gasoline or diesel fuel tanks (service stations), 8 generator tanks and 4 fuel-oil tanks.

We concluded that, in the case of 44 of these 46 tanks, there were valid permits and that certificates issued by certified inspectors attesting that the inspection had been passed were retained. Nevertheless, in the case of two generator tanks (diesel), the permits had expired, in one case on June 30, 2005 (Montréal City Hall), and, in the other case, on April 11, 2006 (Centre Claude-Robillard). Based on information obtained from a representative of the Division de l'énergie, de l'environnement et des expertises, these tanks continued to operate after the expiry dates and even during upgrade (Montréal City Hall).

In the first case, according to information obtained from the Division de l'énergie, de l'environnement et des expertises, upgrades were almost completed by February 8, 2007. All that remained to obtain renewal of the user permit was to request the certificate issued by the certified inspector.

In the case of the tank at Centre Claude-Robillard, this Division received a bid to do upgrades. It felt, however, that the tendered bid was too high and wanted to ensure that the work would comply with regulations. The Division will be asking for a new assessment of the work needed and then go to tender again.

### **Recommendations**

The Direction des immeubles should update the inventory of petroleum tanks for all petroleum products subject to the Act (gasoline, diesel fuel, fuel-oil and used oil) and ensure that the City holds all required user permits.

As well, in the case of the tanks located at Montréal City Hall and Centre Claude-Robillard, it should renew, as soon as possible, the required user permits for high-risk petroleum equipment.

Finally, it should take steps to ensure that, in future, all necessary actions are taken at the opportune time so that there are valid user permits at all times. This would make the facilities more secure in the quickest time and reduce the risk of being fined, or ultimately, of not being allowed to refill or use a tank under the provision of the Act.

### ***Actions proposed by the Direction des immeubles***

- 1) *"The Section énergie et environnement has the inventory of high-risk petroleum facilities that require a user permit in the case of property located in the nine (9) boroughs of the former Ville de Montréal. An inventory of the other types of petroleum facilities will be drawn up by the Division de la gestion des travaux d'entretien." (Planned completion: July 2007)*
- 2) *"Work to bring the main tank for the generator at City Hall up to standard has been under way since fall 2006 and will be completed by the end of April 2007. The certified inspector will confirm that the facility meets the relevant standards and then act as liaison in obtaining the permit from the Ministère des Ressources naturelles et de la Faune. (Planned completion: June 2007)*

*Work to bring the petroleum facility of the generator at the Claude-Robillard sports centre up to standard will be completed by the end of July 2007. The certified inspector will confirm that the facility meets the relevant standards and then act as liaison in obtaining the permit from the Ministère des Ressources naturelles et de la Faune.” (Planned completion: September 2007)*

- 3) *“Inspections by certified professionals in order to have permits reissued are now carried out at least six (6) months before permits’ renewal dates.” (Planned completion: February 2007)*

#### *Borough of Pierrefonds–Roxboro*

We audited the Direction des travaux publics responsible for maintaining the inventory of petroleum tanks. This Direction is also responsible for seeing that audits and maintenance inspections are carried out, as well as for obtaining and renewing permits for three of the four borough tanks.

In the case of the fourth tank, located at the Pierrefonds marina, the borough has entrusted responsibility for the renewal of the user permit for the tank and for audits, inspections and maintenance work to a licensed operator. The Direction de la culture, des sports et loisirs et du développement social is responsible for ensuring that the licensed operator holds a valid permit.

We obtained the inventory of gasoline and diesel fuel, fuel-oil and used oil tanks from these departments in order to determine which of these was high-risk equipment based on the criteria set out in the Act. The inventory listed:

- three gasoline and diesel fuel tanks classified as high-risk equipment requiring a user permit;
- no fuel-oil tank;
- an underground used oil tank requiring a permit.

At the time of our audit, we ensured that there were valid user permits for all these tanks and that certificates issued by certified inspectors attesting that the inspection has been passed were retained.

In the case of one of the gasoline tanks, located at the Pierrefonds marina, the permit expired on January 31, 2007. According to information obtained from a representative of the Direction de la culture, des sports et loisirs et du développement social, the renewal request was only sent to the Ministère des Ressources naturelles et de la Faune on February 12, 2007.

As well, during our visit to the site, we concluded that the weekly gauging required under the Act when a permit holder does not use the system for a period of less than 180 days had not been performed. The purpose of this gauging is to ensure that there is no decrease in the level of gasoline, thereby facilitating detection of a leak, should one occur.

### **Recommendations**

The borough's Direction de la culture, des sports et loisirs et du développement social should:

- obtain, as soon as possible, a permit to use high-risk petroleum equipment for the tank located at the Pierrefonds marina and take the necessary steps at an opportune time, in future, to ensure that a valid permit is held at all times;
- ensure that the licensed operator of the marina conducts weekly gauging as required under the Act for the period during which the petroleum equipment is not being used, in order to detect leaks, should one occur.

### **Actions proposed by the Arrondissement Pierrefonds-Roxboro**

- 1) *"The permit was obtained on February 16, 2007. When the permit comes up for renewal in 2009, the renewal period is to be changed to the operating season (summer, August) in order to facilitate co-ordination." (Planned completion: August 31, 2007)*
- 2) *"In order to consistently monitor the weekly gaugings, we have asked the licensed operator to supply us with a monthly report of those four gaugings. This should enable us to ensure that checks are regularly performed and to issue warnings, if required." (Planned completion: May 31, 2007)*

## **SITE**

We audited the Direction de l'épuration des eaux usées, which is responsible for audits, inspections and maintenance of the tanks that it uses. It is also responsible for ensuring that it holds a valid user permit.

We obtained the inventory of tanks used by the wastewater treatment plant, which lists seven tanks (four gasoline and diesel fuel tanks, two fuel-oil tanks and one used oil tank), in order to determine those tanks representing high-risk equipment based on the criteria set out in the Act.

Of these tanks, six were classified as high-risk petroleum equipment according to the Act. In the case of these tanks, we ensured at the time of our audit that there was a valid permit to use high-risk petroleum equipment and that a certificate issued by a certified inspector attesting that the inspection had been passed was retained.

As well, given the expiry date of the permit, i.e., January 31, 2007, we obtained the new certificate from the certified inspector, dated January 31, 2007, to cover the six tanks of the wastewater treatment plant. According to the information obtained from the Department, the permit was issued on February 3, 2007.

### **Recommendation**

**The Direction de l'épuration des eaux usées should take measures so that, in future, all necessary steps are taken at an opportune time to ensure that there is a valid user permit at all times. This will reduce the risk of fines being imposed.**

### ***Actions proposed by the Direction de l'épuration des eaux usées***

***"The annual inspection mandate has already been granted to our certified inspector and the target date for the issuing of an inspection certificate by our certified inspector is January 15, 2009, which is 16 days before January 31, 2009, the deadline set out in the regulation." (Planned completion: March 8, 2007)***

# ***COST ESTIMATES FOR PUBLIC WORKS CONTRACTS***

## **BACKGROUND**

Every year, the Ville de Montréal must make greater capital works investments to develop, rehabilitate and replace its equipment, facilities and infrastructure.

The development of a new organizational model, made official by the adoption of Bill 33 in December 2003, bestows more powers and responsibilities in terms of capital works spending on the boroughs. They determine which investment projects will be included in their three-year capital works program (PTI) based on their priorities and administer the corresponding budgets.

A large number of projects planned under the PTI by the boroughs (\$244 million in 2004) and other business units of the City (\$349 million, including \$41 million for the Commission des services électriques in 2004) have to do with the execution of various public works related to road repair, park redevelopment and the construction of new infrastructure systems. These projects are often outsourced to specialized firms by way of public calls for tenders.

Given that the financial resources needed for these investments are limited compared to the scope of the needs expressed, it is more important than ever to estimate the costs accurately in order to facilitate the selection of projects to be included in the PTI and to set aside the funds required to execute them in the most cost-effective manner possible.

## **METHODOLOGY AND SCOPE**

The purpose of our audit was to examine the cost estimates made prior to project execution as well as contingency control measures.

More specifically, we analyzed, for selected contracts, the summary estimates presented to elected officials, the detailed cost estimates prepared before issuing a public call for tenders and the comparative analyses focussing on these estimates, the bids received and the actual costs incurred. Finally, we examined the controls surrounding the approval of the contingency work.

Our audit focussed primarily on public works contracts granted in 2004 by the following business units: the boroughs of Ahuntsic-Cartierville, Pierrefonds, Saint-Léonard, Verdun and Ville-Marie, and the Commission des services électriques (CSE). A few contracts awarded in 2005 were also selected in order to take into account the transfer of urban engineering resources from the Service des infrastructures, du transport et de l'environnement (SITE) to the boroughs of the former Ville de Montréal at the beginning of the year and the fact that one borough (Saint-Léonard) had introduced new management practices that same year.

## **OBSERVATIONS AND RECOMMENDATIONS**

For each of the boroughs, the investment priorities presented to the borough council are indicated in a list of PTI projects, which is subsequently submitted to the Comité exécutif of the Ville de Montréal for adoption by the Conseil municipal. For the Commission des services électriques (CSE), PTI investment priorities are presented to its board of directors, approved by the City's Comité exécutif and then adopted by the Conseil municipal.

The PTI incorporates a variety of capital works projects that the business units intend to carry out in order to respond to the needs of residents and users and to improve overall quality of life, within the confines of existing budgetary constraints.

Because of limited human and material resources and the level of expertise that may be required, depending on the nature of the work involved, certain capital works projects are entrusted to private firms.

The main steps involved in outsourcing these projects can be summarized as follows: preparation of a summary cost estimate, selection of the project to be carried out, inspection of the site, execution of specialized studies or analyses, development of plans and specifications, preparation of a detailed cost estimate, drafting of the bidding form, issue of the public call for tenders, preparation of decision summaries for approving contracts and the monitoring of actual costs.

### **Project cost estimates**

Estimating project costs is an essential step prior to awarding a contract. Among other things, cost estimates are used to assess the amounts required to execute a project based on the available budgets, ensure a more objective analysis of the bids received following a call for tenders and effectively monitor spending.



While performing our audit, we observed that there were two main types of estimates: first, a summary estimate of project costs prepared as part of the development of the PTI and, second, a more detailed estimate prepared as part of the tendering process.

### Summary cost estimate

#### *Determination of the summary cost estimate*

Based on the budget allocated to them, the City's business units must establish a list of projects they wish to incorporate into the PTI. As part of the planning process, the heads of the various administrative units concerned propose a list of potential projects, accompanied by the corresponding summary cost estimate.

These summary estimates, presented to elected officials, are not as accurate as subsequent estimates used in the tendering process. They must nevertheless be sufficiently reliable to enable well-informed decisions to be made about the choice of projects and the sound allocation of the required budgets.

Considering that there are generally no plans and specifications available when summary estimates are being prepared, these evaluations are often based on certain parameters or assumptions associated with the type of project (e.g., road repair program (PRR): comprehensive rehabilitation including levelling and resurfacing), the size of the area involved and the overall cost.

As for projects related to road repair and underground infrastructure rehabilitation, we have ascertained that, generally speaking, these estimates are calculated using a general unit cost (e.g., price/linear meter), including all foreseeable expenses required to execute the project, and then multiplied by the surface area listed for the corresponding street sections. According to the information obtained, these general unit costs are shaped by experience and the results of previous bids for similar work, to which certain changes may be made in order to take into account specific market characteristics (e.g., inflation, rise in prices, fuel costs).

In order to determine the soundness of the assumptions used, we carried out a comparative analysis between summary estimates and detailed estimates prepared in the past in business units where the availability of information enabled us to do so.

In certain cases, this analysis revealed wide gaps that cast doubt on the validity of the initial assumptions. However, in other instances, the variations appeared to us to be acceptable.

As such, in the boroughs of Ahuntsic-Cartierville and Ville-Marie, an analysis of PRR contracts revealed several major discrepancies, which in some cases were as high as 61%. The explanations obtained for the most significant variations emphasize the lack of accuracy in the underlying assumptions, especially those related to the nature and scope of the work to be carried out or to the total unit cost used for these estimates (see table on page 90).

As concerns the Borough of Saint-Léonard (see table on page 91), although the gaps observed in PRR-related contracts were not wide enough to cast doubt on the validity of the underlying assumptions (differences varied from under 1% to 31%), the borough nevertheless introduced measures in 2005 that will enable it to prepare PRR works in advance for 2006.

Accordingly, in the fall of 2005, an engineering firm was retained under a professional services agreement to take samples of materials used in the structure of a series of predetermined streets, analyze these samples and make the appropriate technical recommendations. According to the information obtained, the results of these analyses will make it possible to proceed more quickly with the drafting of plans and specifications and the preparation of detailed estimates for a number of street sections so that elected officials can make better-informed decisions as to the allocation of the available funds. In our opinion, these measures are consistent with good management practices and facilitate planning efforts, especially considering that they should make it possible to issue calls for tenders earlier in the year before contractors are committed to other projects. It is also reasonable to believe that this will lead to a reduction in the bid prices.

As regards the Borough of Pierrefonds, our audit revealed some negligible variations, varying between 0% and 2%. However, the way these gaps were minimized was by scaling back the detailed estimates as compared to the summary estimates. For example, in two of the contracts analyzed (Nos. 5 and 7), the number of linear metres of streets to be repaired was reduced by 11% and 15%, respectively (see

table on page 90). Although we feel that this decrease is acceptable under the circumstances, we still believe that this information should be formally disclosed to the borough council. In their acceptance of PTI projects based on summary estimates, the borough council expects all of the work outlined in the projects to be covered in the calls for tenders and subsequently performed.

As for the Borough of Verdun and the CSE (see table on pages 91 and 92), we were not able to evaluate the reliability of their summary estimates. With respect to the contracts examined in the Borough of Verdun, in one case, a summary estimate had been prepared, but no detailed estimate followed. In other cases, summary estimates were reported to have been drafted but not kept on file. With respect to the CSE, it turned out that the contracts examined were not part of the original annual PTI plan. Consequently, considering that the decision to execute these projects was made during the year, it was considered irrelevant to carry out a summary cost estimate.

We would reiterate that the summary cost estimate, presented to elected officials, must provide sufficiently reliable information to serve as a guide and promote well-informed decisions regarding the allocation of available funds to PTI projects. Consequently, we feel that it would be advisable for certain business units to re-evaluate their approach to preparing these estimates.

### **Recommendations**

**We recommend that public works officials in the boroughs of Ahuntsic-Cartierville and Ville-Marie take the necessary measures to establish summary cost estimates that are as accurate as possible for their various projects in order to help ensure that decisions made about the projects to be selected for the PTI are well informed.**

### ***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"The PRR preparations will begin in the fall in order to ensure that the following is possible by the subsequent summer:*

- *summary inspection of streets covered by the PRR (Planned completion: October 2005);*
- *transmission of the list of the streets to the City laboratory for the purpose of assessing their state of deterioration (Planned completion: November 2005);*
- *preparation of the summary estimate based on the recommendations issued by the laboratory (Planned completion: December 2005);*
- *review of the list." (Planned completion: February/March 2006).*

***Actions proposed by the Borough of Ville-Marie***

*"We submitted a proposal for a borough-wide maintenance program to the Direction générale for 2006–2010, with the list of streets that require work. (Planned completion: January 2006)*

*The provisional list established for 2006 contains double the number of streets where we can make repairs this year, which will give us a provisional list for 2007 that can be used to prepare plans and specifications as of the fall of 2006. Inspections of sewer and water supply systems and laboratories will be performed in summer 2006." (Planned completion: September 2006)*

**Furthermore, in order to improve the quality of the information submitted regarding the execution of PTI projects, public works officials in the Borough of Pierrefonds should formally advise the borough council when any work described in tendering documents differs from that outlined in the summary estimates. This information should be submitted on or before the date the contract is awarded.**

***Actions proposed by the Borough of Pierrefonds***

*"The decision summary issued when a contract is awarded will stipulate any differences between the summary estimate and the tendering documents." (Planned completion: September 2006)*

***Documentation of the cost summary estimates***

The documentation of the cost summary estimates and the assumptions used to calculate them is important. For one, it helps to guide decisions made about the projects to be carried out and the budgets required to do so. For another, it ultimately facilitates the analysis of discrepancies between the summary and detailed estimates. Based on the results of our audit, we ascertained that the documentation related to the summary estimates for the Borough of Ville-Marie was satisfactory in two cases, whereas in a third we were not able to locate a copy of the cost summary estimates.

For the boroughs of Ahuntsic-Cartierville, Pierrefonds and Saint-Léonard, we feel that certain improvements could be made. Accordingly, although the total summary estimate for a project appears in the documents presented, we were not able to find any background documentation on the

assumptions used to make the necessary calculations (e.g., the selected surface area, method used to determine general unit cost, nature of work to be carried out).

As far as the Borough of Verdun is concerned, we observed that the documentation for the summary estimate was adequate in one case, whereas in the others we were not able to determine the status because there were no records to consult. Finally, for the CSE, since the projects analyzed were not part of the planned work under the PTI at the beginning of the year, only one detailed cost estimate was required.

Bearing all of this in mind, we feel that the complete documentation of the summary estimates and corresponding assumptions would contribute to the continuous improvement of the estimation process, especially in terms of comparative analyses, which would be much easier to conduct and used to make any necessary changes in subsequent estimates.

#### **Recommendations**

**We recommend that public works officials in the boroughs of Ahuntsic-Cartierville, Pierrefonds and Saint-Léonard take the necessary measures to better document summary estimates, including the underlying assumptions, in order to support decisions made about the choices of projects to be carried out and to facilitate the analysis of discrepancies between summary and detailed estimates.**

#### ***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"For the PRR contracts operating on a unit-price basis, last year's bids will be input into the GESPRO system to establish average prices, which can be indexed as required.*

*The approach is similar for fixed-price contracts under the park redevelopment program." (Planned completion: October 2005)*

#### ***Actions proposed by the Borough of Pierrefonds***

*"Notes to this effect will be added to the file." (Planned completion: September 2006)*

### ***Actions proposed by the Borough of Saint-Léonard***

*"All of the PTI projects from now on will be accompanied by a summary estimate, at the very least, and a detailed estimate, whenever possible.*

*The estimate must include a sufficiently accurate description of the work so that decision-makers are able to understand the scope of the undertaking.*

*Each estimate must also refer to the source of information used to establish unit prices and lump sums." (Planned completion: July 2006)*

**For the same reasons, we recommend that public works officials in the boroughs of Verdun and Ville-Marie keep the documentation of the summary estimates on file, including the underlying assumptions.**

### ***Actions proposed by the Borough of Verdun***

*"A new memorandum will be addressed to all employees concerned in an attempt to normalize this administrative aspect of project management and to ensure that all the necessary documents are kept on file for each project." (Planned completion: April 2006)*

### ***Actions proposed by the Borough of Ville-Marie***

*"This information is compiled in a computer file, a copy of which will be attached to the decision summaries." (Planned completion: April 2006)*

### **Detailed cost estimates**

A detailed estimate of project costs must be performed prior to issuing a call for tenders. This detailed estimate helps to confirm if the various tasks in the summary estimate are still feasible, given the initial budget. Once the tendering process is under way, the detailed estimate makes it possible to determine whether the bids received are reasonable so that the lowest compliant bidder can be selected to carry out the project.

Given how important it is and the information it contains (quantities of materials and unit prices), the detailed estimate must be prepared carefully for all projects.

### *Estimate of required quantities of materials*

One of the documents provided to potential bidders during a call for tenders is the bidding form. In the case of public works contracts, this form contains such elements as a description of the required items, the unit of measure and the expected quantities as they appear in the detailed cost estimate. As a result, the only thing that bidders need to enter for each of the items is a unit price.

Consequently, considering the significance of the estimate of required quantities of materials, all of the necessary preparatory tasks must be carried out before this estimate can be finalized. These tasks include surveying, soil studies, on-site inspections, CCTV pipe inspections and plan preparation.

Following this, the estimated quantities must be reflected accurately in the bidding forms since, once the unit prices are added by the contractor, this is the information that will be compared to the detailed estimate in order to evaluate whether or not the prices bid are reasonable. The quantities indicated in the bidding form will also help keep track of the actual quantities used in the execution of the contract.

Despite the fact that our work did not enable us to determine the reliability of the quantities found in the detailed estimate, we are nevertheless assured that the quantities were reflected accurately in the bidding form.

Accordingly, we ascertained that, with the exception of the Borough of Pierrefonds, the quantities that appeared in the bidding forms were consistent with the quantities identified in the corresponding detailed estimates.

As for the Borough of Pierrefonds, in three of the four contracts examined (Nos. 5, 6 and 7) (see table on page 90), a number of discrepancies were found in the quantities listed in the summary and detailed estimates. With respect to these three contracts (road repair and underground infrastructure rehabilitation), a manager we met with mentioned that all of the preparatory work was carried out before the detailed estimate was drafted. However, other inspections were conducted after the approval of the detailed estimate. This led to modifications in the quantities of several items on the bidding forms, although no revisions were made to the duly approved estimates. Based on our analysis of these changes, we concluded that even though the monetary value of each of the changed values was sometimes significant, the overall monetary value for all of the changes together was minimal.

However, by not completing all the preparatory work before the detailed estimate is approved, the risk of error in the quantities listed in the bidding forms is greater. This makes it difficult to draw comparisons between the bids received and the prices indicated in the detailed estimate.

### **Recommendations**

**We recommend that the public works authorities of the Borough of Pierrefonds ensure that all preparatory work is completed before approving the detailed estimate, in order to improve the estimate of the necessary credits and help obtain the best possible prices.**

#### ***Actions proposed by the Borough of Pierrefonds***

*"All justifiable preparatory work will be carried out prior to the call for tenders and the summary estimate will be modified accordingly." (Planned completion: September 2006)*

**In addition, public works authorities of the Borough of Pierrefonds need to ensure that the quantities that appear in bidding forms are an accurate reflection of those found in the detailed estimate.**

#### ***Actions proposed by the Borough of Pierrefonds***

*"The summary estimates will be adapted to be consistent with the bidding form." (Planned completion: September 2006)*

#### ***Determination of unit prices***

**Estimated unit prices for materials must be established using a method that makes it possible to obtain reliable information on the most likely cost of the work in question so that the managers can confirm the execution of the project, ensure that the prices submitted are reasonable and recommend whether elected officials should accept or reject the bids received. Moreover, other monitoring mechanisms must be put in place to ensure that the bids submitted by contractors constitute the best possible prices.**



According to the information we obtained, although the approach for establishing unit prices may vary slightly from one business unit to the next, it is generally based on earlier bids and adjusted to take into account certain changes in the marketplace (e.g., fuel prices).

However, with the exception of the Borough of Ville-Marie, we were not able to easily track down the information used to calculate these unit prices or find documentation on the corresponding assumptions in order to make the changes related to market variations. As concerns the Borough of Verdun, given that the detailed estimates were not always kept on file, we could not reconcile this information. Finally, for the CSE, this observation applies exclusively to the unit prices that are not included in the price list (special codes). Consequently, it is difficult for us to draw a conclusion on the accuracy of all unit prices used.

Moreover, we believe that the use of a method based primarily on previous bids does not provide the business units reasonable assurance that the bids received are representative of the usual market costs for this kind of work. This approach does not make it possible to detect situations of competing prices and consequently optimize work quantities based on the available credits.

Based on this, and in order to corroborate the unit prices used and obtain greater assurance as to the reasonableness of bid prices, other mechanisms need to be introduced periodically. This could be achieved by comparing prices obtained to those received by similar entities or business units, or a second estimate prepared using a different method or by an independent firm.

The managers we met with told us that they did not use any other specific mechanisms to monitor bid prices.

### **Recommendations**

**We recommend that the administration of the boroughs of Ahuntsic-Cartierville, Pierrefonds, Saint-Léonard and Verdun, as well as the management of the Commission des services électriques, make improvements to the background documentation for their unit prices in order to facilitate comparison between bids received and detailed estimates.**

**Actions proposed by the Borough of Ahuntsic-Cartierville**

*"The unit prices used for the detailed estimates will be established using data compiled the previous year." (Planned completion: April 2006)*

**Actions proposed by the Borough of Pierrefonds**

*"Notes to this effect will be added to the files." (Planned completion: September 2006)*

**Actions proposed by the Borough of Saint-Léonard**

*"A reference database will be developed to standardize estimators' work and will include the following documents:*

- *standard document (RSmeans, equipment rental rates, etc.);*
  - *internal document setting the unit prices based on past bids;*
  - *external document setting the unit prices based on a costing method (road management only)."*
- (Planned completion: January 2007)*

**Actions proposed by the Borough of Verdun**

*"The comparison between the unit prices of the bids received and the detailed estimate based on the list of unit prices set by the borough will be commented on by the project manager in the decision files. A significant discrepancy (over 25%) in a specific project will be looked into by a firm specializing in cost evaluation and be addressed by a recommendation to the various entities involved.*

*It would nevertheless be interesting if the borough could use the unit prices proposed by the Service d'approvisionnement of the Ville de Montréal for projects of the same nature. This approach would enable everyone to work with a similar, reliable basis of comparison. We would also be available to participate in an ad hoc committee in this regard, so that a specific approach can be developed for the benefit of everyone involved (estimated unit prices, monitoring of bid prices, comparative tables, etc.). Accordingly, a cost comparison (for the same types of work) for all boroughs and City departments could be very beneficial." (Planned completion: May 2006)*

***Actions proposed by the Commission des services électriques***

*"We will draft a procedure that will contain the requirements to be respected when establishing prices for special codes, including the documentation related to the establishment of these prices." (Planned completion: June 2006)*

Furthermore, we recommend that the administration of the boroughs of Ahuntsic-Cartierville, Pierrefonds, Saint-Léonard, Verdun and Ville-Marie and the management of the Commission des services électriques implement other mechanisms that make it possible to periodically monitor the bid prices in order to obtain a reasonable degree of assurance that these correspond to the best possible prices.

***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"In the case of competing prices, comparisons will be made with other boroughs and the result submitted to elected officials." (Planned completion: April 2007)*

***Actions proposed by the Borough of Pierrefonds***

*"Estimates based on quantities in terms of time and material will be carried out periodically." (Planned completion: September 2006)*

***Actions proposed by the Borough of Saint-Léonard***

*"Set up an information-exchange mechanism with neighbouring boroughs and external consultants to compare current pricing trends.*

*Hire an engineering firm to establish a different estimate approach based on the costs of materials, machinery and labour (applicable to road repair work only).*

*For large-scale projects for which an estimate cannot be obtained using a standard costing method, hire an independent firm to validate the estimates." (Planned completion: January 2007)*

***Actions proposed by the Borough of Verdun***

*"The borough proposes verifying the list of unit prices for similar work in at least two other boroughs on an annual basis in order to obtain the required degree of assurance." (Planned completion: January 2007)*

***Actions proposed by the Borough of Ville-Marie***

*"The prices obtained will be compared to the prices obtained by a few other boroughs in their calls for tenders in 2006." (Planned completion: June 2006)*

***Actions proposed by the Commission des services électriques***

*"Analysis and establishment of mechanisms to compare unit costs in order to ensure that the bid prices are optimal.*

*Check with our partners (HQ, Ville de Montréal, Bell) about the possibility of exchanging pricing information.*

*Analyze various mechanisms that would make it possible to establish costs.*

*Recommend the optimal mechanism for the CSE." (Planned completion: June 2007)*

***Establishment of a provision for contingencies***

The purpose of establishing a provision for contingencies is to cover the cost of additional or unforeseen work that may arise and prove necessary in the execution of a project.

This amount, which is over and above the costs listed in the detailed estimate of the work to be carried out, must be established based on an analysis of the risk of unexpected occurrences while the project is under way. That being said, this provision must be kept as low as possible to ensure optimal cost control.

During the course of our audit, we observed that the boroughs of Ville-Marie, Ahuntsic-Cartierville and Verdun established this provision for each project, generally adding 10% to the estimated cost of the project. This approach led us to question the relevance of applying a fixed percentage to this provision.

Especially considering that the degree of accuracy sought in the preparation of the detailed estimate should be such that contingencies are kept to a minimum.

In addition, for the Borough of Pierrefonds and the CSE, the estimate for this provision varies from 4% to 6% and from 10% to 15%, respectively, depending on such elements as the nature of the work and the level of expertise involved, or the degree of accuracy of the established cost estimates based on the preparatory work.

As regards the Borough of Saint-Léonard, we observed that provisions for contingencies were not routinely integrated into detailed project cost estimates. The Borough of Saint-Léonard instead prefers that a request for additional credits be addressed to the borough council if unexpected expenses arise. Overruns in the budget originally approved for the work outlined in the contract are therefore inevitable.

In conclusion, we feel that it would be advisable to define the main criteria to be considered when establishing this provision based on an analysis of the risks inherent in the project (e.g., the nature or complexity of the work to be carried out, how different the work is compared to recurring projects or the geographical location of the work).

Moreover, our analysis of the various contracts also led us to the conclusion that there was no documentation to support the criteria used to establish the provision for contingencies. Moreover, very few explanations were given to us in this respect. As a result, in order to promote the creation of an appropriate provision for contingencies for each contract, we feel that it would be advisable to include in the file the identified risk criteria in order to evaluate the scope of the provision.

### **Recommendations**

**We recommend that the administrations of the boroughs of Ahuntsic-Cartierville, Verdun and Ville-Marie take the necessary measures to establish the provision for contingencies based on an evaluation of inherent project risks in order to achieve tighter cost control.**

***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"A fixed amount will be established for contingencies by the project manager based on a percentage of the estimate. The percentage used to determine the costs will be evaluated based on the risks inherent in the project and will not be revealed to contractors so that they will not be influenced accordingly."*  
***(Planned completion: April 2006)***

***Actions proposed by the Borough of Verdun***

*"The X% provision for contingencies has been an accepted practice for many years in the field of municipal civil engineering.*

*We feel that the measures taken by the borough in terms of controlling contingencies are sufficient to avoid the indiscriminate use of the provision for contingencies.*

*We therefore do not believe that it would be appropriate to modify this aspect of this process."*

***Actions proposed by the Borough of Ville-Marie***

*"The establishment of the provision for cost contingencies is based on an assessment of the risks inherent in the project, arising out of:*

- the results of water supply and sewer system inspections; (Planned completion: June 30, 2006)*
- the results of laboratory samplings." (Planned completion: September 30, 2006)*

**We recommend that the administrations of the boroughs of Ahuntsic-Cartierville, Pierrefonds, Verdun and Ville-Marie and the management of the Commission des services électriques keep the identified risk criteria on file so that their scope can be evaluated and used to support the establishment of a provision for contingencies.**

***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"All information relevant to the evaluation of the risk criteria will be included in the file." (Planned completion: January 2006)*

***Actions proposed by the Borough of Pierrefonds***

*"Notes to this effect will be added to the files." (Planned completion: September 2006)*

***Actions proposed by the Borough of Verdun***

*"The X% provision for contingencies has been an accepted practice for many years in the field of municipal civil engineering.*

*We feel that the measures taken by the borough in terms of controlling contingencies are sufficient to avoid the indiscriminate use of the provision for contingencies.*

*We therefore do not believe that it would be appropriate to modify this aspect of this process."*

***Actions proposed by the Borough of Ville-Marie***

*"The information gathered following the water supply and sewer inspection requests as well as laboratory sampling activities will be included in the files so that the information can be taken into account when evaluating the provisions for contingencies." (Planned completion: September 2006)*

***Actions proposed by the Commission des services électriques***

*"Keep on file the criteria used to establish the percentage for contingencies. Modify the project management system, as required, to integrate this information. Draft a procedure explaining the process." (Planned completion: June 2006)*

***Retention and approval of detailed estimates***

Given the importance of the detailed estimate, it should be approved by a person responsible for controlling the quality of the information it contains. In addition, this estimate must be kept on file because it is one of the key elements required to analyze variations between bid prices and actual costs. This approach makes it easier to justify any significant discrepancies that may occur when bids are opened and while projects are under way.

During the course of our audit, we observed that, for the most part, detailed estimates were kept on file by the business units. Only the boroughs of Verdun (in three out of four cases examined) and Pierrefonds (in one out of four cases examined) had not retained all of their detailed estimates for the contracts we analyzed.

As far as the approval process is concerned, we observed that different practices were applied by the business units. As such, in the boroughs of Pierrefonds and Saint-Léonard, the detailed estimates were approved in writing by the corresponding authorities.

In the boroughs of Verdun, Ahuntsic-Cartierville and Ville-Marie, however, and in the CSE, we ascertained that the detailed estimates we examined did not always contain proof of approval. Nevertheless, according to the information we obtained, the estimates were reportedly approved verbally by the immediate manager.

#### **Recommendations**

**We recommend that the public works authorities in the boroughs of Pierrefonds and Verdun keep the detailed cost estimates on file so that they can be used to show the results of comparative analyses related to the awarding of contracts and monitoring of actual costs.**

#### ***Actions proposed by the Borough of Pierrefonds***

***"A copy of the estimate prepared prior to the call for tenders will be included in the file." (Planned completion: September 2006)***

#### ***Actions proposed by the Borough of Verdun***

***"The borough usually keeps a detailed cost estimate for each project in the planning stages. This estimate is conducted when the project concept has been finalized. It appears in the form of a price schedule, a blank copy of which is subsequently incorporated into the call for tenders.***

***The borough intends to continue using this method and will keep the detailed cost estimates on file. The project manager will need to ensure that this information is included in the corporate file as soon as it has been established." (Planned completion: April 2006)***



In addition, we recommend that the public works authorities in the boroughs of Ahuntsic-Cartierville, Verdun and Ville-Marie and the management of the Commission des services électriques provide proof that detailed estimates are approved by the appropriate authority in order to attest to the reliability of the data used in the decision-making process.

***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"The estimates will be approved by the project manager who prepares and seals the bid." (Planned completion: January 2006)*

***Actions proposed by the Borough of Verdun***

*"From now on, the detailed cost estimate will have to be signed by the project manager, provided that they are an engineer recognized by the OIQ. If this is not the case, the detailed estimate will have to be signed and dated by the head of the engineering department of the borough (engineer and OIQ member) or their designated representative (engineer and OIQ member). The signed and dated copy will be kept on file." (Planned completion: May 2006)*

***Actions proposed by the Borough of Ville-Marie***

*"Detailed estimates will be approved by the head of the technical studies department." (Planned completion: Fall 2006)*

***Actions proposed by the Commission des services électriques***

*"Establish criteria for verifying estimates. Modify the estimation procedure in order to be able to identify the levels of approval." (Planned completion: July 2006)*

**Disclosure of information during the tendering process**

The main goal of a public call for tenders is to obtain the best possible price for work that complies with the requirements indicated in a set of project specifications. To provide their best price, bidders must have access to information on the work and the requirements outlined in the specifications. However, information related to the price estimates prepared by a business unit is not necessary to prepare a bid and, as such, must not be disclosed to contractors so as not to influence bid prices.

While analyzing the supporting information for the selected contracts, we observed that the bidding form included in the call for tenders generally referred to a provision for contingencies. In fact, three of the six business units visited, namely the boroughs of Ahuntsic-Cartierville, Verdun and Ville-Marie, always indicate the amount allocated for contingencies in their bidding form. Given that these boroughs generally use a provision of 10% of the detailed estimate for contingencies, bidders familiar with this practice can easily calculate what the borough's estimated price for the contract is.

In Pierrefonds, the bidding form also contains the amount of the provision for contingencies. However, given that the borough does not use a fixed percentage to establish this provision, it is more difficult to calculate the estimated price with any degree of precision.

At the CSE, the disclosure of the existence of a provision for contingencies in the bidding form is expressed as a percentage of the total price of the bid. This approach does not provide any indications as to what the City's estimated costs are. Similar to the various approaches used by the other boroughs, it nevertheless does reveal the existence of an additional budget that contractors may attempt to access.

As regards the Borough of Saint-Léonard, there is no mention of contingencies in its bidding form. The borough does not routinely include such a provision in the calculation of its detailed cost estimates.

Another piece of information that appears in the documents presented to bidders may hint at the price estimate prepared by the business unit. Contractors are routinely asked to provide a bid bond. Based on the information received, this bond is generally equivalent to 10% of the total price of the bid and is used as to warranty to cover any additional expenses that the City may incur should the bid be withdrawn by the contractor awarded the contract by way of a resolution.

In the boroughs of Pierrefonds, Saint-Léonard, Verdun and Ville-Marie, we observed that the bidding documents refer to a percentage applicable to the price of bid, although without any indication as to the total estimated price. However, we observed that the Borough of Ahuntsic-Cartierville and the CSE indicate the dollar amount of the required bond. Consequently, as stated above with respect to the provision for contingencies, it is our opinion that this approach indicates to contractors the rough size of the budget available for the execution of the work and may therefore have an impact on the bid prices.

Finally, we ascertained during our interviews that additional information related to price estimates, over and above the information that appears in the documents remitted to bidders, was shared verbally with those contractors who requested it. Managers in the boroughs of Pierrefonds, Saint-Léonard, Verdun and Ville-Marie confirmed that they have disclosed their rough estimates to contractors who asked for this information. In the Borough of Ahuntsic-Cartierville and the CSE, the managers we met confirmed that they did not give out this information.

### **Recommendations**

**We recommend that the administrations of the boroughs of Ahuntsic-Cartierville, Pierrefonds, Verdun and Ville-Marie and the management of the Commission des services électriques review their administrative practices pertaining to the disclosure of information relating to the provision for contingencies in order to maintain the confidentiality of information that may have an impact on whether or not the best possible prices are obtained.**

#### ***Actions proposed by the Borough of Ahuntsic-Cartierville***

***"Contingencies will be set at a fixed amount and calculated by the project manager based on a percentage of the evaluated estimate and the inherent project risks." (Planned completion: April 2006)***

#### ***Actions proposed by the Borough of Pierrefonds***

***"We will continue to vary the percentages used for our contingencies." (Planned completion: September 2006)***

#### ***Actions proposed by the Borough of Verdun***

***"The amount of the provisions for contingencies will no longer be specified in the price schedule that contractors are asked to complete when preparing their tenders.***

***This provision will be indicated as a percentage of the cost of the work on the bidding form to be completed by the bidder." (Planned completion: April 2006)***

***Actions proposed by the Borough of Ville-Marie***

*"When the PRR call for tenders is issued in 2007, we will set the amount for contingencies based on a percentage of the contractor's bid. This percentage will be evaluated according to information obtained following water supply and sewer inspection requests and laboratory sampling." (Planned completion: February 2007)*

***Actions proposed by the Commission des services électriques***

*"Modify the specifications, forms and project management system to remove the amount allocated for contingencies from the contractor's bid. The amount for contingencies will be factored into the budget when the contract is granted." (Planned completion: July 2006)*

**For the same reasons, we also recommend that the administration of the Borough of Ahuntsic-Cartierville and the management of the Commission des services électriques review their approach so that the bond required from bidders is indicated as a percentage of the bid rather than as a dollar amount.**

***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"The bond will be indicated as a percentage of the value of the contract." (Planned completion: April 2006)*

***Actions proposed by the Commission des services électriques***

*"Modify specifications and forms in order to replace the amount with a percentage." (Planned completion: April 2006)*

**Finally, we recommend that the boroughs of Pierrefonds, Saint-Léonard, Verdun and Ville-Marie stop disclosing figures pertaining to the detailed estimates to bidders asking for the information in order to ensure fairness in the tendering process and to achieve the best possible proposals.**

***Actions proposed by the Borough of Pierrefonds***

*"The information related to the budget and detailed estimates will no longer be disclosed." (Planned completion: September 2006)*

***Actions proposed by the Borough of Saint-Léonard***

*"Issue a notice to borough employees involved in the tendering process requesting that they put a stop to this practice. (Planned completion: March 2006)*

*Issue instructions to borough employees." (Planned completion: April 2006)*

***Actions proposed by the Borough of Verdun***

*"The borough will not disclose additional information pertaining to detailed cost estimates (especially while a call for tenders is under way). Instructions to this effect will be addressed by the borough administration to all concerned staff.*

*The information will be kept as confidential as possible by the project manager and other borough employees." (Planned completion: April 2006)*

***Actions proposed by the Borough of Ville-Marie***

*"For calls for tenders SP-24-06-02 and SP-24-06-03, the detailed estimates were not disclosed (bids opened March 27, 2006)." (Planned completion: March 2006)*

**Comparative analyses for the purpose of awarding contracts**

Bids received must be analyzed and compared to the detailed cost estimate in order to determine if there are any significant discrepancies and, if so, to provide sufficient explanations. The results of the comparative analysis, as well as an explanation of these discrepancies, must be included in the recommendation as to whether or not a contract should be awarded. We observed the following in this regard:

Following the approval of an operational procedure in 2005, the managers of the Borough of Saint-Léonard must provide explanations to the borough council for any variations exceeding 10% and make a recommendation on whether or not to award the contract.

Moreover, in this borough, as well as in the Borough of Ville-Marie and the CSE, our audit revealed that reports on the comparative analysis were produced and kept on file. These reports explain the key variations between detailed estimates and the lowest qualified bid, and compare the prices in the detailed estimate to the prices submitted by all of the bidders. We ascertained that these reports were

referred to in the decision files prepared for the borough council or board of directors of the CSE, when recommendations were made as to whether or not to award the contract.

More specifically with respect to the Borough of Ahuntsic-Cartierville, although comparative analysis reports are not documented, detailed cost estimates were nevertheless provided as an attachment to the decision summary when the contract was awarded.

As for the boroughs of Verdun and Pierrefonds, detailed cost estimates and bids received are reconciled, but no documentation is included to explain any significant discrepancies. Furthermore, decision summaries prepared for the borough councils related to the awarding of the contracts examined do not refer to any comparisons to the detailed estimates. However, since 2005, based on the information obtained from the Borough of Pierrefonds, the amounts of the detailed estimates have been appearing in the decision summaries, although without accompanying explanations for any significant discrepancies.

In conclusion, we feel that the results of the comparative analyses should be kept on file. In addition, the decision summaries should always contain the results of the comparisons between the detailed estimates and bids received. Our audit also revealed that, for all of the contracts examined, gaps between the detailed estimate and the lowest bid generally varied between 1% and 23%, although they were as high as 35% and 40% for contracts awarded by the boroughs of Saint-Léonard and Ville-Marie, respectively.

#### **Recommendation**

**We recommend that the public works authorities in the boroughs of Ahuntsic-Cartierville, Pierrefonds and Verdun document the comparative analysis between the detailed estimates and bids received, along with explanations on significant variations, and subsequently ensure that this information is included in the decision summary to facilitate the decision-making process.**

#### ***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"The data for each bid will be compiled in an Excel file and analyzed by the project manager so as to provide the necessary explanations in the decision summary related to the awarding of the contract."  
(Planned completion: May 2006)*

***Actions proposed by the Borough of Pierrefonds***

*"A comparison between the detailed estimate and bid price will be made in the decision file and explanations will be given for any significant variations." (Planned completion: September 2006)*

***Actions proposed by the Borough of Verdun***

*"This recommendation will be implemented as stated.*

*In addition to the comparative table, the decision summary will contain the comparative analysis between the detailed estimates and bids received. An explanation of key discrepancies will also be included to facilitate the decision-making process by the entities involved. The file will be prepared by the project manager and endorsed by the head of the engineering division." (Planned completion: May 2006)*

**Control of contingencies**

Although there are risks in construction projects of unexpected situations or changes in the work described in the bidding form, the use of the provision for contingencies should be rigorously controlled to ensure project costs are kept to a minimum.

In order to provide a framework for the management of this type of expense, the business units must have clear rules in place to avoid any problems in interpretation or potential conflict with respect to the final payment. These rules must be made known to contractors as well as the employees involved in the process.

In this respect, our audit aimed at examining the extent to which sufficient controls were applied to the provision for contingencies, specifically as concerns the prior authorization of contingency work and the approval process after it has been executed.

Specifically in reference to the Borough of Saint-Léonard, provisions for contingencies are not routinely included in every contract. When unexpected expenses are encountered, the credits necessary for their payment must be requested from the borough council. For the contracts examined, the managers we met with mentioned that they had never had to proceed in this manner. Consequently, our audit did not include examining the controls related to the management of contingencies.

### *Prior authorization*

Contingencies must be approved before work is executed by an authorized representative of the manager. This approval, which relates to the nature of the contingency work, probable cost and potential effect on the work schedule, must be accepted and confirmed in writing by the contractor.

The specifications used by all of the business units covered by the audit stipulate that contingency work must be authorized prior to execution. Specifically in the boroughs of Verdun, Pierrefonds and Saint-Léonard, these specifications even stipulate that a document confirming the contingency work must be prepared and signed by a representative of the manager and the contractor.

Our audit showed that, for all of the contingencies examined, the business units authorized the related work verbally in advance.

In our view, additional or unforeseen tasks should be covered in a written agreement, as concrete proof that the authorized representative of the manager and the contractor agree to the nature and scope of the work, the probable cost and, if applicable, the impact on the work schedule.

Although we feel that prior written approval is necessary, we realize that certain situations require contingency work to be carried out immediately. In these cases, we believe that verbal authorization from an authorized representative is sufficient. Following this, however, a written report on the exceptional circumstances involved should be produced as quickly as possible. When the work is minor in scope, we feel that verbal authorization alone is sufficient.

However, this authorization should be supported by internal rules that set out the various levels of authorization depending on the total dollar amount associated with the work. To this effect, the CSE has adopted an internal procedure to define the situations requiring change orders, responsibilities and approval limits, and the information that must be provided in these orders. As an example, this procedure stipulates the following limits:

- technical officer up to \$1,000;
- project manager up to \$2,500;
- project management engineer up to \$5,000;
- division head up to \$25,000.



To conclude, we feel that the introduction of such practices with respect to prior authorization would make it possible to better control contingencies and avoid situations of conflict with respect to the final payment.

On this subject, we determined that the lack of documentation caused problems in two cases examined in the Borough of Verdun. In one of these instances, when the borough requested the contractor to execute additional work, there were no changes expected in the work schedule as a result. However, in the end, the project did run over schedule and, because there was no written change order, the penalties charged to the contractor by the borough are now the subject of legal action. In the other case, the borough was forced to scale back the penalties charged to the contractor.

### **Recommendations**

**We recommend that the public works authorities of the boroughs of Ahuntsic-Cartierville, Pierrefonds, Verdun and Ville-Marie and the management of the Commission des services électriques produce a document addressing the prior authorization of contingency work, except in cases of work that is minor in scope and defined from the outset, that acts as concrete proof of the agreement between the business unit and the contractor. When the situation requires rapid action, a verbal agreement may be entered into by a duly authorized representative of the business unit. A written confirmation must then follow within a specified time frame.**

#### ***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"In the case of contingency work for unit-price-based contracts, contractors will have to complete a notice of change form, which will be attached to the bid. Whenever possible, this document will be approved by the project manager before the work is initiated." (Planned completion: April 2006)*

#### ***Actions proposed by the Borough of Pierrefonds***

*"Depending on the type of work involved, the on-site supervisor's daily report will contain details of the activities undertaken. A change order will be issued prior to, or a few days following, the beginning of the work." (Planned completion: September 2006)*

***Actions proposed by the Borough of Verdun***

*"The form, which is already included in the "A" set of general specifications, will be prepared by the on-site supervisor before a change in the project is made with a description of the change, the consequences on the work schedule and the financial impacts.*

*This document will have to be signed by the parties having the designated level of authority, as determined beforehand.*

*In the event the change leads to an overrun in the total cost of the contract awarded to the contractor, a decision file, along with a set of recommendations, will have to be presented to proper authorities."*

***(Planned completion: May 2006)***

***Actions proposed by the Borough of Ville-Marie***

*"Establishment of an internal procedure setting authorization limits and stipulating the information to be included on change orders." (Planned completion: November 2006)*

***Actions proposed by the Commission des services électriques***

*"A written change order will have to be sent to the contractor by the CSE." (Planned completion: April 2006)*

**We recommend that the public works authorities in the boroughs of Ahuntsic-Cartierville, Pierrefonds, Verdun and Ville-Marie adopt a specific directive outlining the various levels of prior authorization required for contingencies, based on their relative scope, so as not to delay the execution of work.**

***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"A directive will be issued to project managers." (Planned completion: April 2006)*

***Actions proposed by the Borough of Pierrefonds***

*"A document will be prepared to establish an approval procedure for contingencies according to the type of work involved." (Planned completion: December 2006)*

***Actions proposed by the Borough of Verdun***

*“The level of authorization that will be required to authorize contingencies will be that outlined in the by-law on the delegation of authority adopted by the Borough of Verdun in 2001 and revised on July 5, 2005.*

*The form describing the change will have to be signed by the authority designated in this by-law, the project manager and the on-site supervisor.” (Planned completion: May 2006)*

***Actions proposed by the Borough of Ville-Marie***

*“Establishment of an internal procedure setting authorization limits and specifying the information to be provided in change orders.” (Planned completion: November 2006)*

***Approval of contingency work following execution***

Once contingency work has been executed, the contractor must forward to the appropriate business unit a detailed statement of the elements to be covered in a subsequent invoice (e.g., hours of work, material quantities and costs, hours of machinery use). An authorized representative of the manager should be able to approve this information, once it is reconciled with daily monitoring reports, in order to justify the amounts invoiced.

In this regard, the specifications of the boroughs of Verdun, Pierrefonds and Saint-Léonard, and the internal directive of the CSE, require contractors to produce a signed statement with a detailed account of the work executed. This is then submitted to the business units for approval within days following the execution of the work. As for the specifications in effect in the boroughs of Ahuntsic-Cartierville and Ville-Marie, they do not require a detailed statement of this nature to be produced for all contingency work, but they do stipulate that the work carried out must be approved prior to payment.

During the analysis of the selected contracts, we observed that the Borough of Verdun and the CSE approved, as expected, a report on contingency work completed by the contractor within days of its execution. In the case of the Borough of Pierrefonds, the files do not always contain the detailed reports produced by the contractor and signed by a representative of the borough. In the boroughs of Ahuntsic-Cartierville and Ville-Marie, the usual practice with respect to contingency work is to approve these reports when the final payment is made. There were no observations applicable to the Borough of Saint-Léonard, since there were no contingencies incurred in the contracts we analyzed.

Whether or not the contractor issues a detailed report on contingency work, the business unit is still responsible for producing sufficiently detailed monitoring reports that can be reconciled with the detailed work reports and the amounts invoiced.

Overall, with the exception of the CSE, we ascertained that when they are called upon to approve the execution of contingency work, managers do not always possess sufficient information, either by way of a detailed report on the contingency work produced by contractors and certified by the on-site supervisor or by way of daily monitoring reports (e.g., hours worked, machine rental time). Consequently, it is sometimes difficult or even impossible to reconcile these forms and amounts invoiced by the contractor, given the inadequate description of the work involved.

### **Recommendation**

**We recommend that the public works authorities in the boroughs of Ahuntsic-Cartierville, Pierrefonds, Verdun and Ville-Marie always require contractors to produce a detailed report on all contingency work, approved by the on-site supervisor, within a few days following execution, in order to facilitate the reconciliation of this information with the amounts invoiced by the contractor.**

### ***Actions proposed by the Borough of Ahuntsic-Cartierville***

*"All of the contingencies invoiced by contractors will receive prior authorization by the head of public works. The project manager will require contractors to produce a detailed report on contingency work certified by an on-site representative of the borough (on-site supervisor)." (Planned completion: December 2006)*

### ***Actions proposed by the Borough of Pierrefonds***

*"A detailed report on contingency work will be required of the contractor whenever possible in order to compare it with the data contained in the daily on-site monitoring reports." (Planned completion: September 2006)*

***Actions proposed by the Borough of Verdun***

*"Borough specifications already require the production of a detailed report on all contingencies.*

*The borough will nevertheless require the use of a reference number for contingency work, as it appears in the general specifications, on all of the documents produced by the contractor concerning project contingencies.*

*This approach will eliminate all ambiguity in the comparison of contingency work to the amounts invoiced by the contractor." (Planned completion: May 2006)*

***Actions proposed by the Borough of Ville-Marie***

*"We will require contractors to produce a detailed report on contingency work, which will be approved by the on-site supervisor, within a few days following execution. The project engineer will be responsible for collecting these documents from supervisors or those representatives of the firm responsible for on-site supervision." (Planned completion: September 2006)*

Estimated costs, selected bids and actual costs

| Contract                                | Nature of work   | Summary estimate/ Unit of measure                          | Variation in amount of work | Detailed estimate               | Selected bid | Actual costs (amount available at the time of the audit) |
|---|--|--|-----------------------------|---------------------------------|--------------|--|
| <b>BOROUGH OF AHUNTSIC-CARTIERVILLE</b> |  |  |                             |                                 |              |  |
| No. 1                                   | Road levelling and rehabilitation, repaving and reconstruction of sidewalks (2005)         | \$840,000 (\$/m <sup>2</sup> )                             | - 36 %                      | \$1,355,832                     | \$1,348,965  | Final total not produced                                 |
| No. 2                                   | Construction of pavement, sidewalks, curbs, underground pipe foundations (2005)            | \$650,000 (not traced; file initiated by the SITE in 2003) | unavailable                 | \$674,675                       | \$550,705    | Final total not produced                                 |
| No. 3                                   | Reconstruction of sidewalks and curbs (2005)   | \$637,629 (\$/m <sup>2</sup> )                             | N/A                         | \$921,010                       | \$839,860    | Final total not produced                                 |
| No. 4                                   | Redevelopment of park playground areas (2004)  | \$600,000 (avg. cost)                                      | None                        | \$509,425                       | \$560,725    | \$559,930  |
| <b>BOROUGH OF PIERREFONDS (Note 1)</b>  |  |  |                             |                                 |              |  |
| No. 5                                   | Nanterre Street (road repair and rehabilitation of underground infrastructure facilities)  | \$870,000 (\$/l.m.)  | -11 %                       | \$870,000 (No. 5) \$803,768     | \$825,893    | \$734,842  |
| No. 6                                   | Dollard Street (road repair and rehabilitation of underground infrastructure facilities)   | \$1,470,000 (\$/l.m.)                                      | None                        | \$1,490,000 (No. 6) \$1,247,342 | \$1,338,604  | \$1,293,328  |
| No. 7                                   | D'Orléans Street (road repair and rehabilitation of underground infrastructure facilities) | \$1,020,000 (\$/l.m.)                                      | - 15 %                      | 1,040,000 (No. 7) \$893,453     | \$942,000    | \$985,290  |
| No. 8                                   | Various streets (road rehabilitation and repair, sealing of fissures and related work)     | N/A  | N/A                         | Not kept on file                | \$724,650    | \$512,663  |

Note 1: Summary and detailed estimates are prepared on a street-by-street basis rather than a contract-by-contract basis. For each of the streets, three contracts are involved. Given that our audit was limited to one of three contracts by street, we indicated the portion of detailed estimates attributable to each of the contracts we examined.

BOROUGH OF SAINT-LEONARD

| Contract | Nature of work  | Summary estimate/<br>Unit of<br>measure | Variation in<br>amount of work | Detailed estimate            | Selected bid | Actual costs<br>(amount available at the time of the audit) |
|----------|---|---|--------------------------------|------------------------------|--------------|---|
| No. 9    | Repairs to various streets (2005)                     | \$1,366,584<br>(\$/m <sup>2</sup> )     | None                           | \$1,764,354                  | \$1,788,121  | Final total not produced                                    |
| No. 10   | Repairs to various streets (2005)                     | \$1,234,334<br>(\$/m <sup>2</sup> )     | None                           | \$1,235,760                  | \$1,226,627  | \$1,143,622   |
| No. 11   | Foundation, paving, sidewalks, street lighting (2005) | \$990,000<br>(general estimate)         | None                           | \$1,052,479                  | \$993,699    | Final total not produced                                    |
| No. 12   | Sidewalk repairs (2004)                               | \$1,084,776<br>(general estimate)       | None                           | Not kept on file<br>(Note 2) | \$976,844    | \$976,783   |
| No. 13   | Repairs to Provencher Boulevard (2004)                | \$825,000<br>(general estimate)         | None                           | \$996,968                    | \$649,647    | \$604,228   |

Note 2: This gap was corrected in 2005 with the adoption of a new operational procedure.

**BOROUGH OF VERDUN**

|        |  |                                   |     |  |  |   |
|--------|--|-----------------------------------|-----|--|--|---|
| No. 14 | PRR  | \$679,784<br>(\$/m <sup>2</sup> ) | N/A | Not done   | \$647,089                              | \$641,079   |
| No. 15 | Traffic circle   | Reportedly prepared but not kept  | N/A | Reportedly prepared but not kept                   | \$2,299,556                            | \$2,075,176   |
| No. 16 | Construction of a walking path and enhancement of riverbanks | Reportedly prepared but not kept  | N/A | Reportedly prepared but not kept                   | \$608,232                              | Work not completed  |
| No. 17 | Construction of a marina chalet                              | Not produced                      | N/A | \$801,356<br>(including \$59,650 in contingencies) | \$800,811<br>(excluding contingencies) | Additional credits of \$60,000 were added to the initial contract to cover unexpected expenses<br>\$862,467 |

**BOROUGH OF VILLE-MARIE**

|        |   |                                     |                         |             |                         |   |
|--------|---|-------------------------------------|-------------------------|-------------|-------------------------|---|
| No. 18 | Reconstruction of sidewalks and curbs (2005)  | \$271,440<br>(\$/m <sup>2</sup> )   | - 11 %                  | \$434,541   | \$414,966               | Additional credits of \$180,000 were added to the initial contract to cover additional work<br>Final total not produced |
| No. 19 | Levelling and resurfacing of pavements (2005) | \$1,721,800<br>(\$/m <sup>2</sup> ) | - 38 %<br>(resurfacing) | \$1,527,279 | \$2,138,662<br>(Note 3) | Additional credits of \$100,000 were added to the initial contract to cover additional work                             |

| Contract | Nature of work   | Summary estimate/<br>Unit of measure | Variation in amount of work | Detailed estimate | Selected bid             | Actual costs<br>(amount available at the time of the audit)  |
|----------|--|--------------------------------------|-----------------------------|-------------------|--------------------------|--|
| No. 20   | Environmental rehabilitation and redevelopment of community gardens (2004) | Not found                            | unavailable                 | \$380,780         | \$1,318,964<br>\$454,792 | Final total not produced<br>\$681,059<br>\$240,000 in additional credits was added to the initial contract in order to carry out unforeseen decontamination work |

Note 3: Given that the cost of the bids received was higher than the borough's detailed estimate (by 40%), the Direction des travaux publics decided to divide up the work that was initially supposed to cover four streets. The contract awarded by the borough council was valued at \$1,318,964.

| COMMISSION DES SERVICES ÉLECTRIQUES |  |     |     |             |             |  |
|-------------------------------------|--|-----|-----|-------------|-------------|--|
| No. 21                              | Construction of underground pipes              | N/A | N/A | \$518,020   | \$607,981   | \$569,539  |
| No. 22                              | Construction of underground pipes              | N/A | N/A | \$501,465   | \$487,325   | \$468,210  |
| No. 23                              | General work to upgrade transformer vaults     | N/A | N/A | \$4,094,250 | \$3,650,663 | \$3,009,986  |
| No. 24                              | Modification and addition of underground pipes | N/A | N/A | \$1,031,505 | \$947,978   | \$163,000 in additional credits required for Hydro-Québec changes and additional work (rock) |

N/A: not applicable



# **MANAGEMENT OF OCCUPATIONAL HEALTH AND SAFETY**

## **BACKGROUND**

The Ville de Montréal is the largest employer in Québec registered with the CSST, the province's occupational health and safety commission. With close to 22,000 employees and a total payroll in the order of \$1.2 billion per year, the City pays approximately \$28 million in CSST premiums annually. Each year, almost 1,800 employment injuries are registered with the CSST, resulting in payouts of some \$9 million per accident year. Of this number, on average approximately 180 cases per year are considered to be serious, that is, involving payouts over \$10,000. It should be noted that 896 cases fell within this category from 2002 to 2006.

In Québec, the OHS area is subject to the provisions of two main acts: the *Act respecting Occupational Health and Safety* (LSST) and the *Act respecting Industrial Accidents and Occupational Diseases* (LATMP). It is also subject to federal government intervention under the *Criminal Code*. In this respect should be noted the coming into effect in March 2004 of Bill C-45 – *An Act to Amend the Criminal Code*. Its provisions were later included in Bill C-21. This act, which deals only with the criminal liability of organizations, stipulates that when legal proceedings require proof of wilful negligence, an organization would be deemed to have demonstrated such negligence when:

- a) on the one hand, one of its representatives has, in the performance of his or her duties, behaved in such a way—whether through an action or an omission—that, taken individually or collectively with that of other of the organization's representatives also acting in the performance of their duties, as to be deemed to have participated in its commission;
- b) on the other hand, a senior officer who is responsible for the area of activity within the organization that gave rise to the offence, or senior officers collectively, deviated markedly from the standard of care that, in the circumstances, it would have been reasonable to adopt in order to prevent committing the offence.

It should be mentioned that the "duties" to which the *Criminal Code* refers are, for those organizations whose operations are carried out in Québec, those defined in section 51 of the LSST. These duties therefore became the focus of our examination of due diligence in respect to occupational health and safety (OHS), and were specifically covered in our audit.

The LSST constitutes the main reference for organizations in terms of due diligence in respect to OHS. In particular, that act defines the duties of the employer, as well as the rights and obligations of workers.

For its part, the LATMP governs the “insurance” component of the plan (compensation, rehabilitation and financing of costs) and only deals with a few minor aspects of prevention, such as first aid registers and rules. This audit, however, did consider the latter elements.

The OHS-related LSST and LATMP have given rise to a series of regulations and codes. These regulations, whether in the form of standards or rules, specify procedures for the implementation of specific statutory duties in terms of OHS. Therefore, our audit only dealt with the applicable laws and main regulations of general scope.

Bill C-21, for its part, addresses breaches of the legal duty to protect the health and security of not only workers, as stipulated in the *Act respecting Occupational Health and Safety* (LSST), but also that of all individuals (the Act refers to “others”)—the general public, subcontractors, and so on—who have access to an organization’s facilities, if such breaches result in the bodily injury or death of an individual.

An examination of this act clearly illustrates that, in line with what is upheld in all occupational health and safety management systems (OHSMS), the role played by and commitment of “senior officers” constitute major components of an organization’s due diligence.

The City must ensure that it has effective management systems at work within the entire organization, see to implementing the required mechanisms for reporting to the highest relevant authorities and be able to prove, if necessary, that its senior managers (elected officials and other senior officers) demonstrate due diligence.

The basic goal of this audit, therefore, was to examine the City’s areas of weakness in respect to OHS, and to help it improve, if necessary, its system for managing due diligence. The optimum functioning of such a system would result in the following benefits for the City:

- A decrease in the number of work accidents and work-related illnesses;
- A reduction in the costs associated with accidents and other problems, by reducing the frequency and seriousness of employment injuries;
- A reduction in the risk of criminal prosecution.

## **METHODOLOGY AND SCOPE**

Before addressing the audit's findings, it is important to map out certain of its limits. Its objective was to ensure that all required prevention measures were known, documented, implemented and monitored in order to reduce work accidents (e.g., manuals for procedures, standardized work procedures, awareness campaigns, training, inspections, OHS committee, and so on). In accordance with this objective, the audit involved an examination and analysis of management processes and mechanisms in place in various areas at the time, to comply with the applicable statutory duties for due diligence in terms of OHS. In light of their numbers, the audit dealt with the activities of blue-collar workers.

The audit also took into consideration the organization's structure and the degree of autonomy granted the boroughs under the City's charter.

The following departments and boroughs were selected for audit:

- Service de la mise en valeur du territoire et du patrimoine (Direction des immeubles)
- Service des affaires corporatives (Direction du matériel roulant et des ateliers)
- Rosemont—La Petite-Patrie
- Saint-Laurent
- Verdun
- Villeray—Saint-Michel—Parc-Extension

Even though it was not subject to an audit, a review of documentation, as well as meetings and interviews, were conducted at the Service du capital humain (Direction du soutien à la gestion de la présence au travail).

### **Analysis of OHS due diligence management**

The analysis of the management of OHS due diligence consisted of examining, in a methodical and independent fashion, whether the procedures that had been defined and implemented within the organization were effective and compliant with:

- the applicable statutory or regulatory provisions in these areas;
- the due diligence-related principles and duties that have been adopted by Québec and Canadian case law;

- the management rules or principles recognized in the major management systems (benchmarks such as OSHAS 18001<sup>14</sup>, CSA Z 1000-06<sup>15</sup>, etc.) and with the good practices associated with them.

Criteria for due diligence are provided in all Canadian provincial and federal statutes related to occupational health and safety. For its part, section 219 of the *Criminal Code* stipulates that omitting to do something that is one's **duty** to do constitutes criminal negligence on the part of an organization. The duty referred to finds its source in the obligations imposed by the federal and provincial laws respecting occupational health and safety.

Examination of Canadian case law having to do with the scope of the duty for due diligence, which employers must demonstrate through the recognition and control of work-related risks, enables the identification of three duties that have become benchmark criteria for evaluating employers' due diligence: foresight, effectiveness and authority. These duties can be briefly described as follows:

- The duty of foresight:
  - Identify the dangers and risks;
  - Control those dangers and risks.
- The duty of effectiveness:
  - Have and implement an OHS management system: prevention program, defined procedures, written directives, training and information, supervision, system evaluation (indicators, controls, audits).
- The duty of authority:
  - Employer leadership in OHS (leadership duties fully assumed);
  - No tolerance of dangerous actions or conditions (rigorous monitoring, sanctions if necessary);
  - Accountability at every level.

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14 OHSAS 18001 – *The Occupational Health and Safety Assessment Series is a specification concerning the evaluation of a OHS management system issued in 1999 by the British Standards Institution (BSI). This specification was developed in order to facilitate the integration of an OHS management system with other management systems, such as those regarding quality (ISO 9001) and the environment (ISO 14001).*

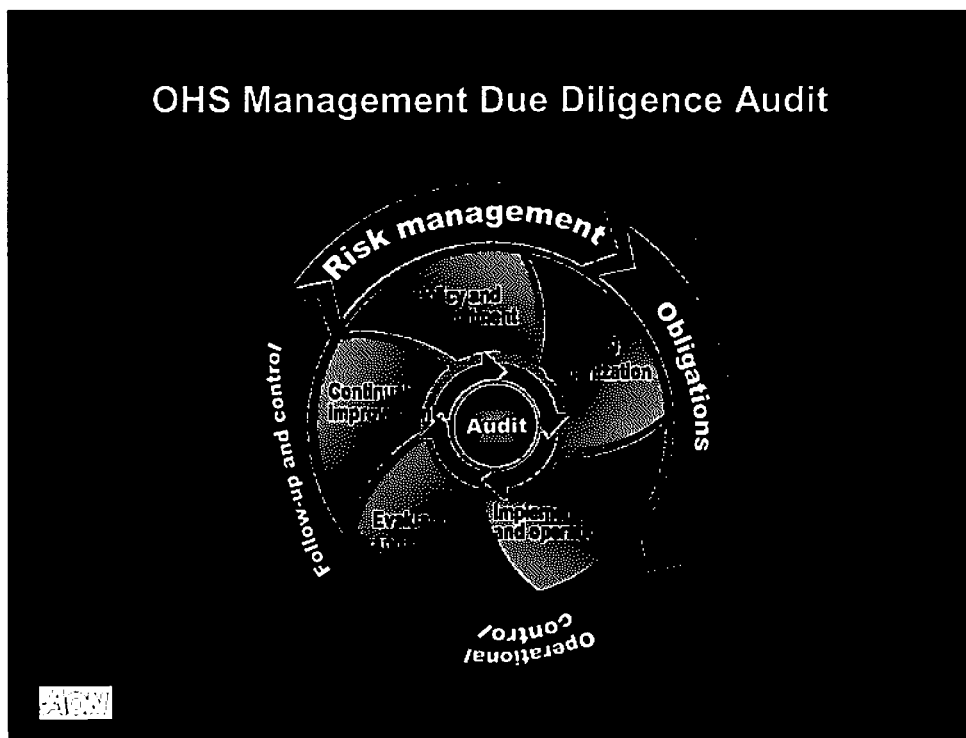
15 CSA Z 1000-06 – *A standard related to the design and implementation of OHS management system. This standard, developed in collaboration with employer, worker and regulatory bodies (such as the CSST), was issued by the Canadian Standards Association in 2006.*

We believe that the duty of effectiveness obliges organizations to have an OHS management system.

In terms of OHS due diligence, such a system implies:

- the establishment of clear OHS management policies and rules;
- the assignment of the necessary organizational resources (training, information, documentation, etc.) in support of the established management policies and rules;
- the implementation, on a continuous basis, of the applicable established rules to previously defined processes;
- the application of follow-up, reporting, evaluation and control mechanisms for procedures that are in line with the organization's continuous improvement policies and commitments.

The following diagram illustrates the approach used to audit the OHS due diligence management system.



## **OBSERVATIONS AND RECOMMENDATIONS (CITY)**

We examined the City's strengths and areas of weakness as a whole (including the targeted corporate departments) on the basis of the following six major objectives:

- Existence and application of policies, programs, procedures, rules, instructions and directives related to OHS, and their related follow-up;
- Method of identifying and evaluating the dangers and risks related to the work done and the measures implemented to control them;
- Training and information given to all staff;
- Award and content of a contract to third parties to carry out work, on those aspects related to OHS;
- Compliance with the statutory or regulatory provisions that apply in the area of OHS prevention;
- Accountability in respect to the various aspects of OHS at the different hierarchical levels.

**Existence and application of policies, programs, procedures, rules, instructions and directives related to OHS, and their related follow-up**

### **Bases of the objective**

We took into account the specific features of the Ville de Montréal as an organization, in particular that its charter gives boroughs the powers of municipalities in their field of jurisdiction. The City is a complex organization in terms of its structure and the extent and diversity of the operations that it manages. These multiple and complex operations generate a very great variety of dangers and risks in their turn.

During the last years the City has experienced a number of major changes in its structures, which have pushed it to conduct a top-to-bottom review of its management models. In the OHS area in particular, due to the autonomy of the boroughs, the more centralized system of management previously implemented by the City has necessitated changes. The Division d'expertise du Service du capital humain now acts as an advisory office, and the boroughs are free to use, or not use, its services, as well as apply or ignore the policies or programs that it suggests.

All those individuals responsible for OHS whom we met, whether within the boroughs or corporate departments, were aware that they must reinvent the OHS management model. This fact could easily lead to the risk of disparity in management practices. Such being the case, the existence of a formal OHS system, recognized by all and applied in a uniform and systematic manner, would help the organization achieve due diligence.

Such a system is important for the following reasons:

- It enables an organization to harmonize and standardize its way of doing things, and avoid improvisations and disparities in its OHSMS. The latter are often cited in case law as a breach in the duty of due diligence when accidents involving bodily injury are the result.
- Among their base requirements, all international OHS management authorities cite the obligation of having a recognized, implemented and monitored corporate OHS policy that is based on a system of clear responsibilities at every hierarchical level.
- The employer's duty to provide leadership, stressed by the case law on due diligence, requires a clear commitment to OHS on the part of management, and involves written documentation, as mentioned in our review of duties contained in the case law.

It must also be pointed out that, to the extent that such a formal system is given effect in official documents, the latter can provide important items of evidence, should that be necessary.

#### State of the situation at the Ville de Montréal

In order to gain a good understanding of the situation at the City in terms of the existence and application of policies, programs, procedures, rules, instructions and directives related to OHS and their related follow-up, and in order to identify the responsibility levels for due diligence, it is necessary to understand the highly decentralized structure of OHS management and the autonomy of boroughs.

#### *OHS decentralized structure*

Within the Direction du soutien à la gestion de la présence au travail (Service du capital humain) can be found the Division de l'expertise-conseil (DEC). This division has the mandate of providing OHS help and assistance throughout the entire organization, including the boroughs. DEC advisers are responsible for developing the various tools (policies, procedures, guides, and so on) for the OHS management system's operation in other corporate departments and boroughs, assisting them with CSST matters and conducting management audits.

This structure's major particularity lies in the fact that other corporate departments, as well as the boroughs, are not required to apply the tools developed by the DEC in their operations. Corporate departments and the boroughs enjoy practically total autonomy in this area. Each has the understanding that it can develop its own policies, procedures, processes and guides on the basis of its own priorities and requirements, and apply them as it wishes. There are therefore almost as many OHS management systems as there are corporate departments and boroughs. As a result, the systems in place are also at

many different stages of development. The DEC therefore has no control over the state of OHSMS in the departments and boroughs.

In order to somewhat mitigate this situation, the DEC has developed a type of audit for borough management systems. However, the latter are not required to submit to such an audit, but may conduct it on a voluntary basis. Although the content of such audits would benefit from a review in order to more specifically reflect the rules of due diligence, these audits do have the advantage of making managers of the boroughs that undergo them more aware about the importance of having a OHSMS.

The DEC is therefore looking for a way in which it can play an effective role within such a context. It understands that it must increasingly become a strategic centre and offer management and the boroughs operational objectives in order to help them meet their due diligence requirements.

There are mechanisms in the relevant collective agreements concerning the creation and operation of local OHS committees (LOHSC) and a general OHS co-ordinating committee (GOHSCC). The first makes its recommendations to the second. The GOHSCC approves the health program, identifies training objectives and their evaluation, issues OHS recommendations to the organization, manages complaints and plans activities for prevention agents. It prepares an annual report and an action plan, and has an operations guide. Nevertheless, these committees' roles and responsibilities must be reviewed and modified, if necessary, in respect to due diligence requirements for senior officers.

The organization has delegated many responsibilities to these committees, but senior officers remain accountable for their application and effectiveness.

The major challenge for the City in the coming years will be to manage this profound change and to implement a single OHS management system, while at the same time respecting borough powers. Otherwise, there is a risk that significant inconsistency and the squandering of energy and resources will increase the organization's areas of weakness. The existence of multiple parallel systems, developed without an overall strategic plan, could prove to be extremely costly for the organization.



In such a context, and since the City's OHSMS, set up prior to the amendments to its charter, is undergoing a profound change, an analysis of due diligence involves a very high level of complexity. On the one hand, it must be ensured that corporate departments and the boroughs have a OHSMS that corresponds to legal and legislative requirements, and that the City's and boroughs' administrators and senior managers have sufficient leadership, control and follow-up to be able to comply with their own responsibilities and duties in terms of due diligence.

On the other hand, as it is understood by those we interviewed, the boroughs' autonomy in respect to OHS has seen to the creation at the present time of an enormous amount of confusion and wasted energy and, as a result, areas of weakness throughout the entire organization.

All the organization's various components, in particular the boroughs, which manage multiple OHS risks, would do well to quickly adhere to an overall corporate policy and arrange a general action plan in order to equip themselves with an effective management system that would comply with their statutory obligations and duties for due diligence, while at the same time respect their reciprocal powers in terms of operations.

#### Summary of strengths

- The Division de l'expertise-conseil, which has OHS experts who can guide the City in the upgrading of its due diligence policies;
- Well-structured and relatively functional OHS committees;
- A mechanism of voluntary audits;
- Accessibility to administrative guidelines using a computer application (GDD);
- Communication tools (Info SST) related to OHS-related prevention issued by the Service du capital humain for use by managers and employees;
- Multiple projects to develop policies, guides and other instruments prepared by the DEC and to encourage serious thought on how to implement a consistent and efficient OHSMS;
- OHS advisers in the boroughs.

#### Summary of weaknesses

- Absence of an overall OHS policy that applies to all City services and boroughs and includes:
  - Statements concerning integrated OHS management policies and strategies;
  - Rules of accountability up to the highest authority.

- Absence of an overall (three-year or five-year) action plan for the City to implement an effective OHSMS throughout the organization. Such a plan should, above all, contain the following elements:
  - Action priorities chosen;
  - Implementation calendar;
  - Those responsible for implementation;
  - Resources;
  - Costs and benefits;
  - Follow-up, assessment of measures taken and accountability.
- Absence of a specific plan or overall procedure for OHS communications;
- Lack of training and coaching of OHS advisers in certain boroughs.

### **General recommendations**

**We recommend that the Direction générale:**

- a) mandate a unit to co-ordinate an overall action plan for the entire City in keeping with the current audit's recommendations;**
- b) in collaboration with the business units, mount an awareness program for all the organization's senior officers (elected officials and managers) on their duties in respect to due diligence;**
- c) adopt an overall OHS policy that applies to all departments and boroughs, and get them onboard, while respecting the boroughs' powers. Such a policy should include, in particular: stated directions and strategies for implementation of a consistent and effective OHSMS; rules of accountability up to highest body.**
- d) Immediately form a working group, co-ordinated by the Direction du soutien à la gestion de la présence au travail and made up of municipal department and borough representatives, to analyse in depth the OHS roles and responsibilities of the various bodies, and assess the accountability mechanisms needed to comply with due diligence duties;**
- e) in collaboration with corporate departments and boroughs, draft a joint action plan to implement and integrate a consistent and efficient OHSMS into operations;**

- f) in collaboration with corporate departments and boroughs, draft a system-wide communications plan to support the corporate OHS policy and OHSMS implementation strategy.

***Actions proposed by the Service du capital humain***

*"See the general action plan proposed at the end of the current audit mission."*

**Method of identifying and evaluating the dangers and risks related with the work done and the measures implemented to control them.**

**Bases for the objective**

All OHS management systems focus on identifying dangers and controlling specific risks to the organization. Unidentified and uncontrolled risks can result in accidents causing bodily injury and render the organization legally vulnerable in respect to its duties of due diligence.

OHS risk management is, therefore, at the heart of the due diligence required of organizations.

Section 1 of the *Act respecting occupational health and safety* defines its purpose as being "*the elimination, at the source, of dangers to the health, safety and physical well-being of workers.*"

For its part, section 217.7 of Bill C-21 states that it is incumbent on any person directing work or a task or able to do so to take the desired measures to prevent bodily harm to another person.

That bill's ultimate objective is clear: to take the desired measures to ensure "*the elimination, at the source, of dangers.*" However, two specific points need to be made from the start. Firstly, all dangers cannot be eliminated at the source (e.g., the sun is itself a danger and sun exposure carries risks for outdoor workers in the summer.) Secondly, taking all possible measures to eliminate dangers and overcome risks can represent investments of time, money and human resources that an organization may not be able to make, at least in the short or medium term.

These practical considerations underscore the necessity of a risk management process. Such a process should, on the one hand, enable an organization to gauge the effectiveness of its reactions to serious problems brought to its attention and, on the other hand, to prioritize its actions based on the means at its disposal and the risk level of the situations requiring corrective action. This is the very

essence of “due” in the expression “due diligence.” The following specifics will help situate this point properly within the framework of our audit.

### *Notion of danger and risk*

Firstly, it is essential that an organization’s staff share the same understanding of danger and risk. This is all the more important in an environment as complex as that of the City.

A danger is a potential source of risks. For example, electricity is a danger and thus a source of risks (burns, electrocution, and others). A danger is also any situation that entails factors capable of causing an accident. We use the term dangerous situation for work (e.g., in closed spaces or at heights) that carries a risk of bodily harm to the individual. Finally, work-related property or environmental damage can also be a potential source of bodily injury (e.g. broken or unprotected machinery can be an accident risk for the operator.)

Therefore, danger refers to the “condition,” while risk refers to the “extent.” Risk thus equates with the notion of exposure (working from heights constitutes a danger, but if no one in the company does this kind of work, there is no risk.) It is clear, then, that to achieve the end goal stated above, one has to remove the danger whenever possible or, failing this, mitigate the risks in various ways (reduce exposure, provide protection, draft standards of dealing with danger, and the like).

### *Risk assessment*

If we cannot remove the danger, we can mitigate the risks with prevention measures (group protection equipment, individual protection equipment, work methods and procedures, and others.) Accordingly, risk constitutes the extent of the consequences of a danger befalling an individual. A certain number of parameters are used to assess risk. The international benchmarks recommend using a minimum of two parameters, i.e., the **potential seriousness of any bodily injury that might be caused and the probability that such harm might occur.** This kind of framework, which is often sufficient for small organizations, becomes quickly outdated in large organizations, especially if they are complex. Additional parameters are, therefore, applied in cases when finer classification is required: for example,

the presence of risk mitigation measures, degree of exposure (number of persons exposed, frequency of exposure, or both), degree of regulatory compliance, and the like.

Risk assessment involves first identifying the existence of these factors and locating that risk within a minimal and maximal occurrence probability threshold. This enables an organization to set an acceptable level for each risk. If the risk is judged acceptable, no immediate action will be needed. If it is judged unacceptable, it will become the focus of priority action.

The organization must also set its risk tolerance threshold. In other words, it must define a threshold above which risk is unacceptable and which, once reached, requires vigorous and prompt reaction. This is the essence of the notion of due diligence. Generally, an organization will define how to react, at what level of priority and in what maximum delay only after a risk assessment has been done and the level of risk established. Thus a reasoned approach to mitigating risks requires an organization do a risk assessment before prioritizing any actions to be taken.

The risk prevention measures then adopted will factor in technical, organizational (prevention program, prevention protocols, record keeping, procedures) and human (training, communication) aspects.

#### State of the situation at the City

Regarding the identification of dangers and risks, the City has no system in place to ensure reasonable control of this responsibility throughout the organization.

Nevertheless, activities are carried out in the departments and boroughs at various hierarchical levels to draw senior officers' attention to dangerous conditions or situations that exist. Worthy of mention, in particular, are the various field inspections, OHS committee activities and prevention representatives, DEC communications, accident investigations and analyses, and visits by CSST inspectors.

Accident investigations and analyses are governed by a formal procedure.

The OHS committees ensure follow-up of corrective measures.

There is a mechanism for dealing with complaints about air quality in the workplace.

There is also a workplace inspection guide that includes a checklist.

As will, there are several prevention action plans that deal with specific topics (isolated work, bolting and locking up, city waste and refuse collection, insect bites, trenches and excavations.)

But there is no logbook identifying jobs and their dangers and risks.

#### Summary of strengths

- Various information mechanisms on dangerous conditions and situations;
- Accident investigation and analysis procedures and forms;
- Mechanism to deal with air quality complaints;
- Workplace inspection guide;
- Communication tool about certain risks: Info SST;
- Voluntary audits.

#### Summary of weaknesses

- Absence of workplace inspection standards
- Absence of a system-wide method of identifying and assessing dangers and risks, controlling them and following up;
- Controls and follow-ups for corrective measures: responsibilities delegated to OHS committees;
- Absence of a system to assess the effectiveness of prevention measures proposed to departments and boroughs.

#### **General recommendations**

**We recommend that the Direction générale, in collaboration with the business units:**

- a) adopt a general procedure to systemize workplace inspections in the organization;**
- b) adopt a system to identify and assess dangers and risks, as well as a system to provide control and follow-up. Such a system should include, at minimum:**
  - **estimation of the potential seriousness;**
  - **probability of occurrence;**
  - **regulatory compliance.**

**It should enable:**

- **definition of the force and rapidity of the actions required;**
- **prioritization of corrective actions;**

- evaluation of the effectiveness of measures taken;
  - accountability to senior management.
- c) clearly define and implement mechanisms to enable:
- identification of potentially dangerous situations linked to unsafe behaviour (failure to respect policies, procedures, safety rules, safe work methods, the wearing of personal protective equipment [PPE], and the like);
  - support of managers in exercising their managerial duties (duties of workers);
  - management of breaches of safety rules that is systematic, uniform, suitable and fair.

***Actions proposed by the Service du capital humain***

*"See the general action plan proposed at the end of the current audit mission."*

**Training and information given to all staff**

**Bases of the objective**

One of the major elements of the duty of effectiveness (performance), required by law in order to demonstrate due diligence on the part of an organization, is having coaching, training and systematic supervision of employees and managers.

In the case of OHS, any training program must ensure that each employee, including managers, is reasonably knowledgeable about the laws, rules and processes that apply to his or her job functions.

The organization must therefore identify and analyse employee and management needs, especially, but not exclusively, when laws, regulations and applicable standards are changed or when the organization of work changes or there are movements in staff. A training plan must be prepared and updated as necessary, acquired knowledge must be monitored, and a training log kept, in order to demonstrate that employees and managers received the necessary training, according to their responsibilities.

The statutory duties of organizations and employees in respect to OHS are outlined in the LSST. It is important that employees and managers be thoroughly aware of these provisions. On the other hand,

occupational health and safety regulations are regularly changed. For example, consider work in confined spaces or from heights, the safety of stationary machinery, forklifts, and the like. Many serious accidents occur in these areas annually. Consequently, employees need to be trained; if not, organizations become vulnerable when a serious accident results in bodily injury.

Finally, management supervision is a key element of due diligence. Managers must, therefore, be well trained in the organization's obligations and on their management duties in order to be able to exercise full leadership in OHS matters, policies and directions within their organization.

#### State of the situation at the City

Given the fact that the City underwent structural changes in the past few years and does not yet have a consistent and effective OHSMS, it is understandable that the City does not have an overall OHS training plan. It should also be noted that, under the City's new organizational model, employee training is the responsibility of the departments and boroughs

In all the departments and boroughs audited, there is a verified lack of management training, especially regarding due diligence duties, OHS legal requirements, OHS management duties, and implementation of an OHSMS. Such training would enable the organization to reassure its managers about the scope and true extent of due diligence (in particular, the "due" part) and avoid creating unnecessarily alarmist and counterproductive undercurrents because of misunderstanding the statutory framework that applies to OHS.

The challenge for the organization will be to train its managers properly on these crucial elements and within a reasonable timeframe, and at the same time prepare a training plan that should accompany the various elements of a future consistent and effective OHSMS.

#### Summary of strengths

- Existence of a list of OHS training courses for staff;
- Network of external trainers for the boroughs.



### Summary of weaknesses

- Absence of a structured training program for managers that corresponds to their due diligence duties;
- Absence of a systematic follow-up mechanism for training based on legal and regulatory requirements (SIMDUT, rescue, closed spaces, and the like).

### **General recommendations**

**We recommend that the Direction générale, in collaboration with business units:**

- a) **identify OHS training needs based on priorities stemming from due diligence duties and the recommendations of this audit, and integrate them into the organization's (departments and boroughs) training plans, in particular:**

**For managers at all levels of the organization:**

- **C-21 and due diligence**
- **Statutory duties of employers and employees**
- **OHS management duties**
- **Roles and responsibilities of senior officers (once the organization has identified them)**
- **System of danger identification and risk assessment (once it is adopted)**

**For employees:**

- **C-21 and workers' OHS obligations**
- **Corporate policy (once it is adopted)**
- **Application of safety rules (once the procedure is adopted)**

- b) **adopt and put in place a mechanism for reporting and following up on the training needed in order to meet legal and regulatory requirements (SIMDUT, rescue, closed spaces, and the like).**

### ***Actions proposed by the Service du capital humain***

*"See the general action plan proposed at the end of the current audit mission."*

## **Award and content of a contract to third parties to carry out work on the aspects related to OHS**

### **Bases of the objective**

The duty of due diligence requires that organizations revise the way they manage subcontractors (contractual documents, policies and procedures for orientation, supervision and control), since the latter are made agents of the organization under Bill C-21.

As agents of the organization, third parties who do work for the organization may, in the event of an accident on its premises that causes bodily injury to a member of its staff or person working for the third party or any other individual with access to the premises (e.g., the public), make the organization legally responsible for their negligence (action or omission).

Senior officers of the organization (including elected officials, senior management and all managers who are responsible for a major area of activity linked to subcontractors' mandates), therefore, have the duty to ensure that the management system and rules, which the organization has given itself to control any risk of injury to its employees or others as a result of the activities of its contractors, are properly applied at all hierarchical levels. They also have the duty to take the proper measures to be able to prove, at any time, that all delegated hierarchical responsibilities are subject to follow-up and that those responsible are in a position to unequivocally render account of such follow-ups.

The City and its boroughs award numerous contracts annually to subcontractors for a variety of work on projects with different levels of risk.

In the course of our audit, therefore, we had to analyse management systems and practices in order to assess whether the City and its boroughs were, at all times, able to prove due diligence in awarding contracts to third parties for completion of work that could entail dangers or risk to the health, safety or physical integrity of persons having access to the organization's facilities.

### **State of the situation at the City**

Our analysis of public tender specifications for contracts awarded to subcontractors, as well as the interviews we conducted with the managers responsible for these files, clearly showed that the process had not yet been revised since the adoption of Bill C-21. The City should review these specifications and contracts in order to specify its own OHS responsibilities and those of its subcontractors.

Boroughs and departments are responsible for planning and control to ensure that any work or activity is carried out in accordance with contracts or agreements, that staff are trained and informed about procedures and that they make certain that these procedures are applied and monitored.

The City or a borough should be authorized contractually to prevent the start of any work or activity, or to halt it in progress, when such work or activity presents a risk to the health and safety of individuals. They should also be authorized to stop the resumption of work as long as the identified risks are present.

#### Summary of strengths

- The desire of the managers interviewed to comply as quickly as possible with their duty of due diligence in regards to this activity.

#### Summary of weaknesses

- Absence of any legal OHS framework in subcontractors' specifications and contracts.

#### **General recommendations**

**We recommend that the Direction générale, in collaboration with the business units:**

- a) revise the calls for tenders and specifications used to award third-party contracts to ensure that those OHS aspects are applied that could entail the City's or boroughs' liability;**
- b) train managers in the new revised rules ;**
- c) put in place a mechanism to control the application of the adopted rules;**
- d) introduce a mechanism to inform senior management of breaches of rules by subcontractors and the corrective measures taken.**

#### ***Actions proposed by the Service du capital humain***

***"See the general action plan proposed at the end of the current audit mission."***

## **Compliance with the statutory or regulatory provisions that apply in the area of OHS prevention**

### **Bases of the objective**

Regarding statutory duties, the notion of due diligence rests on three fundamental elements:

- knowledge of the duties that apply;
- respect and application of these duties;
- proof of application.

Knowledge of statutory or regulatory obligations or provisions supposes that these have been identified, listed, updated and disseminated to the concerned individuals and stakeholders.

We should also mention that identification, listing and updating of statutory and other obligations is part of the OHS benchmark requirements.

Lack of knowledge or respect for statutory or regulatory provisions or obligations that apply to an organization places the latter at risk, both of an accident occurring causing bodily harm and of the inability to prove due diligence in the event of legal action.

### **State of the situation at the City**

We concluded that the level of knowledge of OHS statutory obligations varied considerably across the organization. Specialized OHS resources were obviously well aware of these obligations but, as a general rule, managers were less knowledgeable (there was, however, a major difference in OHS knowledge with those managers directly concerned with prevention mechanisms, such as the CSS, being more familiar with the statutory and regulatory provisions that applied to their activities than other managers.) This can be partly attributed to the fact that managers received little specific training on their general OHS obligations. Specialized resources make it their duty to adequately respond to requests in this area, but the process is not systematic.

There are various mechanisms to draw the attention of the City to non-compliance: workplace inspections, notice of dangerous conditions, and the like. Nonetheless, these mechanisms do not necessarily make specific reference to the statutory and regulatory demands that apply and, collectively, these mechanisms do not constitute a system for verifying statutory compliance in the classic sense.

As to regulatory oversight, it is reasonably assured by DEC advisers. For example, the City is represented on various external prevention committees. Nonetheless, the oversight process is not organized in a formal way, so that, here again, the City is highly dependent on the knowledge and expertise of current staff, in particular those at the DEC. In addition, the vast majority of managers we interviewed are not very familiar with this process, nor with the responsibilities involved in oversight. Were staff to move, the City would be very vulnerable.

#### Summary of strengths

- OHS expertise and knowledge of the DEC;
- Participation in various external prevention advisory committees.

#### Summary of weaknesses

- Managers' lack of training in the statutory obligations under section 51 of the LSST;
- Absence of a systematic process for auditing compliance with statutory and regulatory requirements;
- Absence of information from senior management on its level of compliance with statutory and regulatory requirements.

#### **General recommendations**

**We recommend that the Direction générale, in collaboration with business units:**

- a) **incorporate, in their action plan, the implementation of an auditing process for statutory and regulatory compliance, thus enabling them to:**
  - **finalize, where necessary, the identification of statutory and regulatory provisions that apply to the organization;**
  - **develop a mid-to-long term action plan to update compliance with these provisions, which will be prioritized according to identified levels of risk;**
  - **periodically report to senior management on the action plan's progress and the organization's level of compliance;**

- b) formally describe and disseminate, especially for the purposes of due diligence, the statutory, regulatory and, possibly, normative oversight process by which the organization:
- stays abreast of possible changes to OHS acts, regulations and case law;
  - informs the potentially concerned bodies and stakeholders.

***Actions proposed by the Service du capital humain***

*“See the general action plan proposed at the end of the current audit mission.”*

**Accountability in respect to the previously mentioned aspects of OHS at the different hierarchical levels**

To be able to fulfil its leadership duties, senior management must be kept informed of a number of crucial OHS considerations, especially those relating to the organization’s compliance with statutory and regulatory obligations, the status of risk management (for risks deemed unacceptable under the criteria adopted by the organization, the progress and effectiveness of corrective measures, etc.) and the overall operation status of its prevention system.

These vital aspects must be thoroughly examined and measured as precisely as possible, and the resulting information relayed to the various management levels, including senior management, ideally via performance indicators.

Accountability is particularly critical in a complex organization with numerous responsibilities delegated to various hierarchical levels. Senior managers cannot content themselves with the fact that they have adopted the required policies when attempting to prove due diligence in the case of an accident that causes bodily harm. They must also demonstrate that they have striven to ensure that these policies are actually implemented (duty of effectiveness).

In a complex, multiple-level structure, the delegation of powers is commonplace. The top manager (Directeur général) must therefore be accountable to the organization’s directors (elected officials) for the powers that they have delegated to him. The Directeur général in turn must delegate to the managers reporting to him, and they to the individuals reporting to them, and so forth down through the management chain.

To demonstrate due diligence, the managers who delegate powers need to monitor their execution, request and obtain the necessary reports and fulfil their own reporting obligations to their superiors.

Elected officials therefore have a role to play in terms of due diligence in OHS matters. Consequently, the organization must define the elected officials' OHS-related responsibilities and implement the necessary measures to ensure that they are regularly kept informed of matters pertaining to their compliance with statutory obligations.

Considering the powers of the boroughs, borough councils may be required to ensure that all management levels act with due diligence in terms of risk management. Because they adopt policies and programs and delegate responsibilities, councils should receive the required information on the status of OHS matters, as well as all relevant reports that allow them, and senior managers, to demonstrate due diligence in this regard.

#### State of the situation at the City

In terms of accountability from an OHS perspective, we ascertained that the current structure, especially the autonomy of the boroughs with respect to OHS, has created some areas of uncertainty for all of the managers with whom we met.

Given the absence of a precise definition of OHS roles and responsibilities at the various hierarchical levels, it is not easy to determine who is accountable to whom.

There is therefore a pressing need within the City and the boroughs to clarify the responsibilities at each level, from the councils all the way down through the chain of individuals called upon to manage accident risks in their operations and to clearly specify who is accountable to whom and how to proceed in OHS matters.

#### Summary of strengths

- Willingness of the managers we met with to upgrade the organization's due diligence practices.

### Summary of weaknesses

- Lack of clarification, between the City and the boroughs, of respective OHS roles and responsibilities at all the various hierarchical levels of the organization;
- Absence of a formal reporting process for delegated OHS powers, in accordance with the various hierarchical levels and using proactive management indicators.

### **General recommendations**

**We recommend that the Direction générale, in conjunction with the business units:**

- a) clarify the OHS roles and responsibilities of the City and the boroughs, as well as the roles and responsibilities at all the various hierarchical levels of the organization;**
- b) develop and adopt a formal reporting process for all delegated OHS powers, in accordance with the respective jurisdictions and hierarchical levels;**
- c) identify and implement a set of proactive management indicators for senior management focussing primarily on:**
  - the application of OHS policy;
  - the exercise of OHS roles and responsibilities;
  - the prevention management system;
  - the efficiency and effectiveness of prevention activities and risk management mechanisms;
  - the level of statutory and regulatory compliance.
- d) integrate, as appropriate, these indicators into existing management dashboards used by senior management;**
- e) proceed with the regular measurement of these indicators, notably via internal audits.**

### ***Actions proposed by the Service du capital humain***

*“See the general action plan proposed at the end of the current audit mission.”*



## **OBSERVATIONS AND RECOMMENDATIONS (BOROUGH)**

Based on our observations, we were able to identify the **strengths and values** that should favour the effective management of due diligence in OHS matters:

- the effective support and strong expertise within the Direction du soutien à la gestion du capital humain pertaining to OHS matters;
- a willingness to improve the effectiveness of OHS prevention management on the part of the borough executives with whom we met;
- the employee training program, which integrates aspects of OHS into the various sessions offered;
- the development in 2004 and 2005 of formal action plans confirming the ability of the borough of Rosemont–La Petite-Patrie to adopt this proactive approach to OHS prevention management;
- a commitment to OHS on the part of the Comité de direction of the borough of Villeray–Saint-Michel–Parc-Extension in its policy on the integrated management of occupational health and safety;
- value-added OHS projects currently under development (reviewed during the OHS management system audit carried out by the Division prévention of the Direction du soutien à la gestion du capital humain in the borough of Villeray–Saint-Michel–Parc-Extension);
- the HR/OHS co-ordinator position, which offers a “local” service in terms of OHS-related co-ordination and support in the borough of Villeray–Saint-Michel–Parc-Extension;
- the development in 2006 of an initial prevention program using specific action plans as proposed by the CSST that attest to the organizational capacities of the borough of Verdun in terms of adopting this proactive OHS prevention management mechanism;
- a strong sense of belonging within the organization and pride in offering a high level of performance in the delivery of services to the community in the borough of Saint-Laurent.

Observations made during the audit also revealed a number of **weaknesses in the OHS management system** currently in place in the boroughs, in particular:

- the absence of a formal, integrated OHS prevention management system;
- the absence of clear management rules with respect to many existing OHS processes and mechanisms;
- the insufficient integration of OHS into management processes (e.g., purchasing, manager training, inspections, operations, etc.);

- the insufficient management of OHS-related aspects (calls for tenders, contracts, follow-up) by subcontractors, or as they are henceforth known, “agents” of the organization, which represents risks for the City, the boroughs and managers in terms of the expected OHS due diligence;
- the undefined roles and responsibilities of managers for several processes specific to OHS management;
- the absence of an OHS training program for managers, supervisors and team leaders who are legally responsible for exercising due diligence in OHS matters;
- the absence of a formal process to identify and analyse OHS risks and legal compliance;
- the absence of evidence of OHS-related commitments and accomplishments by senior officers, managers and supervisors;
- a widespread perception that OHS is the sole responsibility of the Direction des services administratifs and the health and safety committees;
- the absence of control mechanisms and proactive performance indicators in terms of OHS prevention;
- the absence of accountability mechanisms at the various hierarchical levels with respect to prevention management in support of the expected OHS due diligence.

As a result, the following recommendations are intended, as part of a general action plan, to help develop and gradually implement an occupational health and safety management system (OHSMS) that, integrated into other management systems currently in place or under development, will enable the boroughs in question to improve their performance and comply with their statutory duties in respect to OHS.

### **Recommendations**

**We recommend that the management of the boroughs in question:**

- a) **implement a recognized occupational health and safety management system (OHSMS), applicable to all of the sectors of the borough;**
- b) **adopt and ensure the dissemination of a general occupational health and safety policy in the boroughs (except in the borough of Villeray–Saint-Michel–Parc-Extension);**
- c) **develop and disseminate a general action plan with respect to the implementation and integration of the selected OHSMS;**

- d) develop specific action plans for the administrative units with respect to the development, implementation and gradual integration of OHSMS processes identified as priorities;
- e) define and execute a communication plan and a training plan to support the adopted policy (réf. b) and the OHSMS integration strategy in the boroughs;
- f) define criteria and performance indicators with respect to each of the OHSMS processes to establish the foundations of a performance assessment and accountability system to support OHS prevention management;
- g) implement a management review process in the boroughs' management committees to monitor the progress of the general action plan with respect to the implementation and integration of the selected OHSMS;
- h) designate an OHSMS agent whose key responsibilities would be to co-ordinate the general action plan (réf. c) and specific action plans (réf. d) to support the development, implementation and maintenance of the selected OHSMS in the boroughs, in connection with the general strategy of the Ville de Montréal in this field;
- i) develop, approve, implement and monitor an administrative framework for the integration of OHS considerations into the management of agents, contractors and subcontractors;
- j) periodically issue reports on the findings of OHSMS analyses and audits to the entities designated by the borough councils and the Direction générale of the Ville de Montréal, based on the policies adopted by these bodies.

***Actions proposed by the Service du capital humain***

*"We share your deep-seated conviction that the health and safety of our employees in the workplace and the safety of the various users of our facilities must be a constant priority for the organization. The importance of respecting our statutory duties, reducing the frequency of workplace accidents and, consequently, cutting the corresponding costs are vital issues for us.*

*We are aware that, in keeping with our commitment to continuous improvement, efforts of this nature must be ongoing. Our focus remains on providing an ever safer and healthier workplace for our employees and on pursuing the application of management principles that favour the integration of prevention practices into the day-the-day management of municipal operations. That being said, as you mentioned in your report, the City's administration is shared between the city council and the borough councils. This situation requires us to first clarify the levels of responsibilities before we can define a precise action plan specifying the detailed responsibilities of the various stakeholders.*

*We are therefore committed to immediately setting up a working group composed of borough managers and the heads of corporate departments to address the issue. The working group will be called on to define the occupational health and safety roles and responsibilities at the various decision levels of the organization. Based on the findings of this group, we will submit guidelines to the appropriate entities on the allocation of roles and responsibilities by **November 30** at the latest.*

*Once the decision on the aforementioned guidelines is made, the City and its boroughs will be able to develop specific action plans covering all of your recommendations, complete with timeframes and lead contacts. These actions plans will focus on the following:*

- 1. Adoption of occupational health and safety policies by the City and its boroughs;*
- 2. Formalization of the inventory and evaluation of occupational health and safety hazards and risks, as well as an appropriate control and follow-up mechanism;*
- 3. Formalization of occupational health and safety training for managers and employees, as well as an appropriate control and follow-up mechanism;*
- 4. Implementation and execution of action plans approved by the appropriate authorities and designed to promote increased compliance with statutory and regulatory requirements, in accordance with established priorities;*
- 5. Improvement of the existing management dashboard through the integration of proactive indicators into the current set of reactive indicators;*
- 6. Formalization of reporting processes to the appropriate authorities, based on the selected approach to allocating roles and responsibilities;*
- 7. Implementation of other measures likely to help the City and its boroughs ensure the continuous improvement of its occupational health and safety practices.*

*As regards the reasons for the allocation of powers described above, our colleagues in the boroughs whose units have been audited by you in this respect agree with our approach. This note therefore also serves as their response to your recommendations.*

*Lastly, rest assured that this need for the prior clarification of our roles and responsibilities does not in any way diminish the daily efforts deployed by the organization in terms of preventing workplace accidents and improving our management in this regard."*

## **MANAGEMENT OF THE CLEANLINESS OF PUBLIC STREETS**

### **BACKGROUND**

In 2005, the Ville de Montréal (the City) estimated that the funds spent by the 19 boroughs on their regular street maintenance programs amounted to \$56 million. These activities primarily include mechanical street sweeping and flushing, sidewalk cleaning, emptying garbage receptacles and removing graffiti and posters. In support of these activities, by-laws on cleanliness have been adopted and inspectors have been assigned to their enforcement.

In February 2006, the City's administration publicly unveiled an action plan for a cleaner, more beautiful Montréal. An initial \$10-million investment for 2006 was to be added to the \$56 million already earmarked for cleanliness-related activities. Originally, the plan stipulated that this initial amount would be increased annually by \$2.5 million until it reached the \$20-million mark in 2010, which translates into an additional \$75 million for the years 2006 through 2010.

On December 13, 2006, the Comité exécutif approved an institutional cleanliness and maintenance program for 2007 to 2010. Although the additional \$2.5 million was not allocated to the cleanliness program in 2007 due to budget cuts, \$10 million is still earmarked for this in the 2007 budget. In this respect, the mayor and chair of the Comité exécutif have clearly stated that cleanliness remains one of the top priorities for the City.

The Unité propreté et entretien Montréal (UPEM) of the Service des infrastructures, transport et environnement (SITE) was responsible for overseeing the action plan of Operation Clean Montréal 2006, in close partnership with the boroughs. This is due to the fact that the execution of cleanliness-related activities falls under the jurisdiction of the boroughs as far as local streets are concerned, as opposed to arterial thoroughfares, for which the responsibility is subdelegated by the Conseil municipal. As regards the new cleanliness program, the UPEM will be responsible for its application, once again in close partnership with the boroughs.

## **METHODOLOGY AND SCOPE**

The purpose of our audit was to examine the controls exercised over the use of the additional \$10 million for supplementary and standard clean-up operations.

More specifically, we examined the establishment of objectives and indicators, work plans, mechanisms for monitoring action plans and expenditures, and the development of management reports.

Our audit focussed primarily on the clean-up work carried out in the summer of 2006 by the following business units: the boroughs of Ville-Marie, Plateau-Mont-Royal, Côte-des-Neiges–Notre-Dame-de-Grâce and Saint-Laurent as well as the UPEM of the SITE.

## **OBSERVATIONS AND RECOMMENDATIONS**

In early 2005, a working group composed of representatives from various corporate departments, seven boroughs and other partners (Société de transport de Montréal, Office municipal d'habitation de Montréal and Canada Post Corporation) was mandated to identify problems associated with cleanliness and potholes, and to propose potential solutions. On March 29, 2005, the group presented a report to the City's Comité de direction describing the various cleanliness-related problems and putting forward recommendations to counter or at least mitigate them, as regards:

- individual behaviour: unauthorized drop-offs of bulky waste, various materials and other items (on public streets and lanes, and in parks), the poor maintenance of public streets, graffiti, fly-posting, etc.);
- organization of tasks: delays in picking up bulky waste items, overflowing street-side garbage receptacles, recycling (paper being blown away from uncovered bins), unavailability of clean-up equipment to ensure adequate service, etc.;
- by-laws and inspections: lack of consistency, overly lenient by-laws, lack of rigour in their application, slow prosecution of offenders, etc.

As mentioned earlier, a corporate action plan on cleanliness was unveiled to the media in February 2006. This plan comprised two objectives:

- Undertake immediate action to address the most obvious cleanliness-related problems in strategic target areas, i.e., the boroughs of Ville-Marie, Plateau-Mont-Royal, Côte-des-Neiges–Notre-Dame-de-Grâce and Sud-Ouest, prioritizing the downtown core, as defined in the agglomeration decree. The strategic areas of downtown Montréal are Vieux-Montréal, Chinatown, the busiest commercial thoroughfares and tourist sites.

- Develop, in conjunction with the boroughs, a “cleanliness program” for Montréal. This clean-up program should be based on the following elements:
  - the recommendations proposed by the working group on cleanliness in its report dated March 29, 2005;
  - the preparation of an integrated corporate communication plan for each borough;
  - the implementation of clean-up squads;
  - the organization of major clean-up drives;
  - the broadening of graffiti removal activities;
  - the enhancement of the cleanliness initiatives of the boroughs;
  - the purchase of equipment adapted to the needs of the boroughs.

In order to respond to the first objective of undertaking immediate action in anticipation of the development of a program, Operation Clean Montréal 2006 was set up using the \$10 million in allocated resources.

As for the second goal, i.e., the development of the “Montréal cleanliness program,” the Commission sur les services aux citoyens held a public consultation in May 2006 to initiate its establishment. Following this consultation, in June 2006, the Commission submitted to the Conseil municipal a report containing its recommendations for the development of a “cleanliness program” focussing on three key areas: public awareness, task organization and by-laws. Incidentally, this report reiterates a number of elements brought up by the working group in its March 29, 2005, report.

This program was submitted to the Comité exécutif and approved on December 13, 2006. A report was also filed with the Commission to keep it informed of the progress made with respect to its recommendations formulated in June 2006.

#### **Operation Clean Montréal 2006—additional activities**

The main goal of Operation Clean Montréal 2006 is to make the city cleaner and more attractive. The allocated \$10 million was divided among the corresponding business units in the following manner (see table below):

**Breakdown of Additional Amounts—\$10 million**

| Administrative units |  | \$3 million      | \$7 million      | \$10 million      |
|----------------------|--|------------------|------------------|-------------------|
| Boroughs             | Ahuntsic-Cartierville                    | 197,200          |                  | 197,200           |
|                      | Anjou                                    | 84,300           |                  | 84,300            |
|                      | Côte-des-Neiges–Notre-Dame-de-Grâce      | 232,400          | 800,000          | 1,032,400         |
|                      | Lachine                                  | 96,800           |                  | 96,800            |
|                      | LaSalle                                  | 133,800          |                  | 133,800           |
|                      | L'Île-Bizard–Sainte-Geneviève            | 35,900           |                  | 35,900            |
|                      | Mercier–Hochelaga-Maisonneuve            | 222,400          |                  | 222,400           |
|                      | Montréal-Nord                            | 123,900          |                  | 123,900           |
|                      | Outremont                                | 54,800           |                  | 54,800            |
|                      | Pierrefonds–Roxboro                      | 100,800          |                  | 100,800           |
|                      | Plateau-Mont-Royal                       | 190,900          | 1,100,000        | 1,290,900         |
|                      | Rivière-des-Prairies–Pointe-aux-Trembles | 201,500          |                  | 201,500           |
|                      | Rosemont–La-Petite-Patrie                | 198,400          |                  | 198,400           |
|                      | Saint-Laurent                            | 237,500          |                  | 237,500           |
|                      | Saint-Léonard                            | 139,100          |                  | 139,100           |
|                      | Sud-Ouest                                | 175,400          | 830,000          | 1,005,400         |
|                      | Verdun                                   | 117,500          |                  | 117,500           |
|                      | Ville-Marie                              | 240,500          | 3,195,000        | 3,435,500         |
|                      | Villeray–Saint-Michel–Parc-Extension     | 216,900          |                  | 216,900           |
| Subtotal—Boroughs    |  | 3,000,000        | 5,925,000        | 8,925,000         |
| Department           | SITE                                     |                  | 1,075,000        | 1,075,000         |
| <b>TOTAL</b>         |  | <b>3,000,000</b> | <b>7,000,000</b> | <b>10,000,000</b> |

- \$3 million was granted to the 19 City boroughs when the 2006 budget was approved in order to carry out cleanliness-related activities;
- \$5.925 million was allocated to cleanliness-related activities in the four targeted downtown boroughs, namely:
  - most of the Borough of Ville-Marie (\$3.195 million);
  - a limited part of the Borough of Plateau-Mont-Royal (\$1.1 million);
  - a limited part of the Borough of Côte-des-Neiges–Notre-Dame-de-Grâce (\$0.8 million);
  - a limited part of the Borough of Sud-Ouest (\$0.83 million).

The main initiatives proposed in this plan were the following: the enhancement of cleanliness-related activities (\$2.4 million), the creation of clean-up squads (\$1 million), the graffiti removal program (\$0.9 million), the distribution of modified recycling bins (\$0.5 million) and the planting of trees and installation of flower boxes (\$0.5 million).



- \$1.075 million was given to the SITE for the management and support of the program (\$0.65 million), institutional communications (\$0.3 million) and major clean-up drives and special events (\$0.125 million). The UPEM of the SITE is responsible for managing the program.

#### Development and execution of action plans under Operation Clean Montréal 2006

##### *Development of the action plan*

In February 2006, in anticipation of the development of the “Montréal cleanliness program,” the UPEM produced a plan containing the basic guidelines of the City administration in terms of cleanliness. These guidelines include the enhancement of cleanliness-related activities in the downtown sector, the setup of clean-up squads and the participation of residents in major clean-up drives.

This plan focusses exclusively on actions to be taken by the four downtown boroughs and the SITE (major clean-up drives, communications plan and surveys). In terms of investments, these initiatives represent \$7 million of the \$10 million allocated to the entire operation.

In order to produce this plan, the UPEM obtained information from the concerned boroughs (Ville-Marie, Plateau-Mont-Royal, Côte-des-Neiges–Notre-Dame-de-Grâce and Sud-Ouest) and subsequently ensured that the boroughs’ action plans were in line with the priorities of the City administration.

However, as concerns the \$3 million initially granted under Operation Clean Montréal 2006, no guidelines (e.g., the type of cleanliness-related activities to be promoted) were given to the 19 boroughs. The only condition was that the allocated amounts had to be spent on cleanliness. Accordingly, at the beginning of the year, the UPEM asked the 19 boroughs to indicate what they intended to do with the allotted funds. The UPEM received replies from 18 out of the 19 boroughs. In almost every case, the proposed activities had a direct link to cleanliness (e.g., additional clean-up crews, procurement of extra garbage receptacles). Another \$3 million was allocated to the boroughs under the same conditions in the 2007 budget.

## **Recommendation**

In order to help achieve the best possible results vis-à-vis the established objectives, we recommend that the UPEM propose to the administration a set of guidelines for the funds remitted to the 19 boroughs.

### ***Actions proposed by the UPEM of the SITE***

*“As regards the preparation of the action plans that the boroughs are required to submit to the UPEM, the administrative guideline stipulates that:*

- *the expanded clean-up operations respect the orientations specified in the cleanliness program adopted by the Comité exécutif in December 2006; (Planned completion: February 16, 2007)*
- *the structure of the action plans reflect the three budgetary instalments totalling \$10.375 million and the corresponding documentation prepared by the boroughs respect this structure.” (Planned completion: March 5, 2007)*

### ***Monitoring of action plans***

#### **Follow-up by the UPEM**

In order to provide the administration with a status report on the various action plans under way as a result of the allotted amounts, the UPEM must obtain the relevant details from the 19 boroughs. This information is essential for determining to what extent the proposed initiatives have been implemented and for assessing the effectiveness of the strategies used to achieve the objectives.

An examination of the documents requested and received by the UPEM led us to believe that the information submitted is insufficient to establish the status of the various plans and actions undertaken by the boroughs.

As far as the downtown boroughs are concerned, apart from some data received from time to time (e.g., number of garbage receptacles installed or trees planted), the only details requested from the UPEM were reports on expenditures and information on graffiti removal. Consequently, the UPEM does not have sufficient information on the activities carried out with respect to each of the efforts stipulated in the action plans for these boroughs (\$5.9 million).

As regards the 15 other boroughs, the UPEM asked them to submit a list of the additional activities carried out under Operation Clean Montréal 2006, accompanied by information on expenditures, by November 1, 2006. As of December 6, 2006, a third of the boroughs had not yet complied with this request.

### **Recommendation**

In order to improve follow-up on the action plan and thereby facilitate the evaluation of the strategies employed to achieve objectives, we recommend that the UPEM ensure it possesses all the information required to rigorously track the progress of action plans and all of the funds allocated under Operation Clean Montréal 2006.

### ***Actions proposed by the UPEM of the SITE***

*“Four documents will be used for this follow-up:*

- 1) a fact sheet, for each borough, with a detailed breakdown of the human and material resources used under the regular budget allocated to cleanliness;*
- 2) the boroughs’ action plans, describing the use of the additional budgets for clean-up operations (\$10.375 million);*
- 3) a second fact sheet, for each borough, summarizing the goals outlined in the action plans;*
- 4) the service agreement, specifying the boroughs’ commitment to the full execution of the activities outlined in the cleanliness program action plans. (Planned completion: mid-April 2007)*

*Follow-up every two months with the boroughs in order to keep track of the progress made in the initiatives outlined in their action plans.” (Planned completion: June, August and October 2007)*

### **Follow-up by the boroughs**

Considering that the follow-up by the UPEM appeared to us to be insufficient, we set out to determine whether the four selected boroughs had put the appropriate controls into place with respect to these action plans.

Overall, our audit confirmed that the proposed actions had been carried out as planned by the four boroughs. We nevertheless ascertained that, in two cases, improvements needed to be made, as follows:

- Borough of Ville-Marie

This borough received \$240,500 of the \$3 million allotted to all of the boroughs as well as \$3.2 million of the \$7 million earmarked specifically for cleanliness-related activities in the downtown core. However, the action plan submitted by the borough to the UPEM was limited to the latter amount.

We determined that the efforts outlined in the action plan with respect to additional cleanliness-related activities using funds specified in the budget are supported by certain documents (e.g., agreements on graffiti removal or public awareness initiatives, purchase orders for goods and equipment rentals, and requests for journal entries for the wages of 26 blue-collar workers).

More specifically, as pertains to the 26 blue-collar workers hired on a temporary basis (\$0.8 million) under Operation Clean Montréal 2006, the information obtained from the individuals we met indicated that the wages allocated to the cleanliness program represented planned hours rather than hours spent actually carrying out cleanliness-related operations.

As for the agreements signed with various organizations, the managers in charge reported that they undertook a range of initiatives to ensure that the corresponding operations were carried out. However, our audit revealed that many of these efforts were not documented. In addition, for some agreements, the expected status reports or supporting documents for the allocated amounts were not obtained. Together, the 15 agreements signed by the borough for the additional cleanliness-related operations (e.g., graffiti removal, public awareness) represent roughly \$975,000.

### **Recommendations**

**We recommend that the Direction des travaux publics of the Borough of Ville-Marie track the wages disbursed and compare them with the figures provided in Operation Clean Montréal 2006 in order to ensure that the costs are being attributed appropriately.**

Furthermore, in order to ensure that the activities entrusted to non-profit organizations are executed as planned and to gather relevant information on the efforts made, the administration of the Borough of Ville-Marie should ensure that:

- the controls exercised by the borough are documented;
- the required supporting documents or reports specified in agreements pertaining to the execution of the work are obtained for subsequent analysis.

***Actions proposed by the borough of Ville-Marie***

*"In 2007, the costs of additional personnel assigned to the 2007 cleanliness program will be recorded in the books (in statistical account). (Planned completion: April 2007)*

*Information reports and appropriate supporting documents will be required from the non-profit organizations, according to a model developed for the cleanliness campaign." (Planned completion: April 2007)*

- Borough of Côte-des-Neiges–Notre-Dame-de-Grâce

This borough was awarded \$232,400 of the \$3 million allocated to all of the boroughs and \$0.8 million of the \$7 million earmarked specifically for cleanliness-related activities in the downtown core. The action plan submitted by the borough to the UPEM addressed the use of both amounts, which together come to roughly \$1 million.

Our audit revealed that the activities specified in the action plan were executed as planned. However, the wages of five blue-collar workers (\$140,000) hired on a temporary basis for the summer were posted as expenses for Operation Clean Montréal budgeted rather than actual cost.

Furthermore, we do not know to what extent the cleanliness-related activities were limited in the part of the borough considered to be the downtown core, although 77% of the amount received is supposed to go to this sector. The "downtown" part of Côte-des-Neiges–Notre-Dame-de-Grâce is proportionally much smaller than the "non-downtown" part.

Accordingly, we feel that the action plan and the reports produced with regard to its execution should contain information pertaining to the proportion of planned or executed activities for the "downtown" part of the borough. We believe that this is necessary in order to ensure that the resources invested in the downtown core are not diluted over an area larger than that proposed by the municipal administration.

## Recommendations

We recommend that the Direction des travaux publics of the Borough of Côte-des-Neiges–Notre-Dame-de-Grâce present the UPEM with action plans and progress reports on their execution. Such documents should clearly show the proportion of activities carried out in the downtown part of the borough, so that it can be determined to what extent the administration's guidelines have been respected.

We also recommend that the Direction des travaux publics of the Borough of Côte-des-Neiges–Notre-Dame-de-Grâce track the wages actually disbursed compared to those outlined in Operation Clean Montréal 2006 in order to ensure that the appropriate costs are attributed to this operation.

### *Actions proposed by the borough of Côte-des-Neiges–Notre-Dame-de-Grâce*

*"From now on, the plan will distinguish between the proportions represented by the downtown sector, the areas bordering it and the other sectors. (Planned completion: May 2007)*

*MBS codes (0900) have been created in order to track the actual labour costs of blue-collar workers." (Planned completion: completed)*

### Objectives and indicators for Operation Clean Montréal 2006

As part of Operation Clean Montréal 2006, objectives must be set in order to establish what directly measurable results are expected from the additional \$10-million investment, over and above the \$56 million already allocated to cleanliness-related activities. Subsequently, indicators must be developed and data compiled to determine to what extent these objectives have been met (e.g., 15% increase in public satisfaction with cleanliness-related operations).

After analyzing the various documents available, we came to the conclusion that a number of general objectives had been established. However, the majority of these objectives were not specified in measurable terms. Some examples of these include:

- increase the level of cleanliness in the borough, reduce visual pollution and ultimately give the city a well-deserved facelift;
- dramatically increase cleanliness in Montréal, especially downtown;
- improve cleanliness in and around bus shelters;

- increase the frequency of street and sidewalk cleaning and waste removal operations.

These documents also enabled us to ascertain that five indicators have been established and that data has been compiled on each. The indicators address changes over time in:

- public perception of cleanliness, determined using surveys performed by specialized polling firms (for the city as a whole)—these surveys indicate that the proportion of residents who are somewhat or very satisfied with the cleanliness of Montréal was 40% in April, 52% in May, 53% in August and 62% in November 2006;
- the score for the visual appearance of public thoroughfares, as established by the staff of the UPEM for the four downtown boroughs only (1: very dirty, 2: dirty, 3: clean, 4: very clean)—based on the observations made, the average score in the four boroughs was 2.6 in July, 3.1 in August and 3.03 in September 2006;
- the number of cleanliness-related warnings and fines in all of the 19 boroughs—the 2005 report indicates that 3,384 warnings were handed out while 2,950 were issued between January and September 2006;
- the number of square metres of graffiti removed from private property—reports indicate that the number of square metres of graffiti removed was 12,157 m<sup>2</sup> in 2005 while this figure had risen to 60,000 m<sup>2</sup> by early November 2006;
- the number of cleanliness-related complaints received in the 19 boroughs—in this respect, improvements will have to be made in the data compiled. This report contains all the various queries by residents categorized by borough rather than cleanliness-related complaints only. Consequently, these statistics contain requests for information and requests for a particular service as well as actual resident complaints. In addition, the current information is incomplete since it is derived from a new system (GDC) that is being implemented gradually in the boroughs, starting in the spring of 2005, and ongoing in 2006.

As cleanliness objectives have been established in general terms only, these indicators do not make it possible to determine to what extent they have been achieved. However, our examination showed that there have been certain improvements with respect to the results obtained concerning cleanliness indicators (public perception and appearance scores). Nevertheless, in order to determine whether the improvements made are sufficient, given the additional \$10 million invested in cleanliness, we feel it is necessary for the boroughs to justify the performance of their cleanliness-related activities (e.g., street sweeping, sidewalk cleaning and emptying public garbage receptacles).

## Recommendations

In order to improve the evaluation of the results obtained through the funds invested under Operation Clean Montréal 2006, the UPEM should propose to the administration measurable objectives for the "Montréal cleanliness program."

Moreover, the UPEM should also ensure, as the new GDC system is being developed, that data on cleanliness-related complaints be isolated for the purpose of tallying information specifically related to the complaint indicator.

### *Actions proposed by the UPEM of the SITE*

*"Five objectives for 2007:*

- 1) Add 1,000 street-side waste receptacles;*
- 2) Reduce the number of complaints filed by 10%;*
- 3) Increase the number of citations and notices of violation issued by 50%;*
- 4) Double the number of fines collected;*
- 5) Increase labour by 20% or equipment. (Planned completion: February 2007)*

*Eleven categories of complaints have been identified in the GDC. It will be necessary to have the Direction des communications et relations avec les citoyens prepare a report for the UPEM, weekly or monthly or as required, that allows a connection to be made, whenever possible, between this indicator (complaints) and the execution of the activities described in the boroughs' actions plans." (Planned completion: mid-April 2007)*

### UPEM management reports for Operation Clean Montréal 2006

Management reports are required in order to evaluate Operation Clean Montréal 2006. These reports must include the results obtained as compared to objectives, as well as the extent to which action plans have been executed. This information is essential to determining if the expected level of service has been achieved, following the injection of additional funds (\$10 million); evaluating the strategies used; and subsequently, as appropriate, making the necessary changes to improve the outcomes.

The UPEM presented its first progress report on Operation Clean Montréal 2006 during a September 2006 press conference. This report featured various elements such as the breakdown of the budget between the boroughs and the SITE, a summary of the action plans of the four downtown boroughs, a list of the additional human resources and materials anticipated and the composition of the clean-up



squads. Results included visual assessments for July and August 2006 as well as the comparative data on graffiti removal in the four downtown boroughs.

In addition, the UPEM produces a report twice monthly for the mayor's representative in charge of cleanliness. This report indicates the extent to which actions have been carried out in relation to:

- public awareness (e.g., surveys, clean-up squads, communication campaigns);
- the improvement of clean-up operations (e.g., emptying of public garbage receptacles, cleanliness of public streets, cleanliness of metro stations, mesh covers on recycling bins);
- the development of a cleanliness program.

This report does not, however, contain any information on results as they pertain to the five established indicators.

Moreover, given the lack of information obtained by the UPEM during the follow-up of the action plan, it is more challenging to present a complete and updated overview of the current situation, specifically as regards the improvement of clean-up operations. Also, a representative of the UPEM mentioned to us that the progress report on Operation Clean Montréal 2006, in certain cases, contained information on anticipated activities rather than efforts that had actually been carried out (e.g., 52 teams of employees to empty street-side garbage bins, 13 employees assigned to street sweeping).

### **Recommendations**

In order to make it possible to deliver an evaluation of Operation Clean Montréal 2006 and the strategies used, the UPEM should provide the steering committee called for in the 2007–2010 cleanliness and maintenance program, a report with:

- complete data on the execution of the action plans for the 19 boroughs (institutional communications, major clean-up drives and special events);
- the results obtained pertaining to the five established indicators to evaluate the extent to which the objectives have been achieved;
- proposals as to the changes to be made to strategies to be implemented as well as any resources allocated as a result.

***Actions proposed by the UPEM of the SITE***

***“An annual report will be produced that will include the three elements identified in the auditor’s report.”  
(Planned completion: November 2007)***

**Accountability structure**

Under the provisions of the charter of the Ville de Montréal, activities related to local streets, including those associated with road cleanliness, constitute a borough responsibility. Consequently, borough administrations are bound to report on matters related to the management of these activities to their respective borough councils.

With regard to activities related to arterial roadways, they were subdelegated by the Conseil municipal to the City boroughs in December 2005. Under the by-law responsible for this subdelegation, a report on the status of the delegated activities exercised during the previous year must be provided to the Comité technique sur l’entretien du réseau artériel by February 15 of the following year. This committee must be created pursuant to the agglomeration council by-law on the delegation of certain powers.

However, the Operation Clean Montréal 2006 and the 2007–2010 cleanliness and maintenance program, which are under the responsibility of the UPEM, apply to both arterial roadways and local streets. To obtain the best possible results from the investments granted to each of the boroughs, we feel it is essential that the strategies used be coordinated to ensure the objectives set out for the entire City are kept in focus.

Accordingly, although the UPEM has been responsible for overseeing Operation Clean Montréal 2006, the accountability structure between the boroughs and the UPEM has not been clearly defined. This situation has made the coordination of tasks and the analysis of the results obtained by the UPEM more difficult.

The 2007–2010 cleanliness and maintenance program approved in December 2006 specifies that service agreements will have to be concluded and contain the following elements:

- the commitment of the boroughs to the full execution of the cleanliness-related activities outlined in their core budgets;
- accountability in relation to the additional financed activities contained in the borough action plans approved by the UPEM;
- the non-renewal of annual additional budgets for boroughs that fail to respect their commitments.

In our opinion, the list and the content of the documents to be produced, including the action plans and reports on the results obtained, as well as the production schedule for these documents, should be an integral part of these agreements.

Finally, we believe that these agreements should improve the coordination of cleanliness-related activities and facilitate the evaluation of the results. However, in order to avoid making the process cumbersome from an administrative point of view, the required documents should be as succinct as possible and reflect the relative size of the funds allocated to the boroughs.

### **Recommendation**

**In order to improve the coordination and evaluation of the results obtained under the 2007–2010 cleanliness and maintenance program, the Direction générale of the Ville de Montréal should, as anticipated, conclude agreements with the boroughs as soon as possible. These agreements should cover:**

- **the roles and responsibilities of the various stakeholders;**
- **a list and a description of the documents to be produced (e.g., action plans and reports on the outcomes), the scope of which should reflect the relative size of the allocated funds;**
- **a schedule indicating the deadlines for producing these documents.**

**Finally, the UPEM should ensure compliance with the provisions in these agreements.**

### ***Actions proposed by the Direction générale***

*“The resolution adopted by the Comité exécutif on December 13, 2006 (CE062173) mandates the Unité de la propreté et de l’entretien of the SITE to implement, execute and monitor the 2007–2010 cleanliness program.*

*Consequently, the manager of the UPEM will conclude partnership agreements with the boroughs in order to improve co-ordination and evaluation of the results.” (Planned completion: May 31, 2007)*

### ***Actions proposed by the UPEM of the SITE***

*“Means of verification:*

- *follow-up every two months;*
- *adherence to the provisions in the service agreements;*

- *issuing of reports to inform the Comité exécutif of any violation of the terms of these agreements, if necessary.” (Planned completion: November 2007)*

### **Performance of regular clean-up activities in the boroughs—\$56 million**

In the current context, wherein the City is investing an additional \$10 million in cleanliness-related activities, it is important that the boroughs evaluate their performance vis-à-vis the execution of these activities. It is also essential that activities be adequately planned and monitored in order to help ensure their successful execution. We feel that this evaluation is necessary to reduce the risk of needlessly investing resources in activities for which there are no proven results.

#### **Objectives, indicators and management framework**

In order to evaluate the performance of cleanliness-related activities, measurable objectives must be defined and indicators must make it possible to determine the extent to which they have been achieved, so that the situation can be reflected in the corresponding management reports.

In more specific terms, objectives and indicators must make it possible not only to evaluate the extent to which the planned activities have been executed (e.g., percentage of the planned route covered by mechanical street sweepers), but also to determine their real impact on cleanliness (e.g., desired improvement in the visual appearance score).

Generally speaking, our audit revealed that, for three of the four boroughs visited, certain objectives and indicators are established and reports produced. However, most of these objectives are not stated in measurable or realistic terms (e.g., 100% of the mechanical street sweeper route completed), and the indicators and reports do not cover all cleanliness-related operations. Furthermore, the majority of these objectives focus on the execution of activities (e.g., number of garbage receptacles installed) rather than the resulting outcomes (e.g., increase in the percentage of resident satisfaction).

Consequently, in each of the three boroughs (Ville-Marie, Plateau-Mont-Royal and Côte-des-Neiges–Notre-Dame-de-Grâce), some of the elements are in place, but improvements must be made so that a formal evaluation of the performance of all activities can be carried out and documented. In the case of the fourth borough (Saint-Laurent), no formal elements are in place for a performance evaluation.

## **Recommendations**

In order to formally evaluate the performance of cleanliness-related activities, the Directions des travaux publics from the boroughs of Ville-Marie and Plateau-Mont-Royal should ensure that, for all the cleanliness-related activities:

- measurable objectives, along with indicators that make it possible to determine the extent to which they have been attained, are established. These objectives should address not only the execution of activities, but also the desired outcomes (e.g., target appearance score);
- reports containing data on the extent to which these objectives have been attained are transmitted to them so they in turn can report on the matter to the borough administration.

### ***Actions proposed by the borough of Ville-Marie***

*“Measurable objectives will be established, and a model indicator will be developed and implemented to evaluate cleanliness activities in Ville-Marie.*

*Subsequently, periodic reports with an update on the results achieved will be prepared and submitted to the borough administration.” (Planned completion: June 2007)*

### ***Actions proposed by the borough of Plateau-Mont-Royal***

*“Plateau-Mont-Royal is working on a list of the most visited public areas. Visits will be documented with photographs. These photographs will be evaluated using a grid that will measure the degree of cleanliness according to various criteria (unauthorized posters, condition of waste receptacles, general condition of public roads, graffiti, etc.). The evaluation grid will help guide our efforts and make any necessary adjustments to our clean-up plan.*

*Measurable objectives will be established and evaluation indicators for cleanliness activities will be developed and implemented.*

*Following this, regular reports on the results achieved will be prepared and submitted to the administration.” (Planned completion: May 2007)*

In order to improve the evaluation of the performance of cleanliness-related activities, the Direction des travaux publics of the Borough of Côte-des-Neiges–Notre-Dame-de-Grâce should ensure that objectives are specified in more realistic terms with respect to the desired degree of achievement for cleanliness-related activities.

***Actions proposed by the borough of Côte-des-Neiges–Notre-Dame-de-Grâce***

*"The objectives have already been readjusted to be more realistic and are now as follows:*

- *maximize respect for the schedules for mechanical street sweeping and the various waste pick-ups;*
- *add 12 individuals to the blue-collar team for the clean-up operation;*
- *get the clean-up operation started quickly this year, as soon as the season begins, by leasing five cleaning machines;*
- *award the graffiti removal contract earlier in the year (March);*
- *improve inspectors' schedules in order to achieve a better balance between time spent on site and time spent in the office;*
- *purchase 100 covered waste receptacles and 100 blue waste receptacles for public events, in order to cut down on the amount of litter in parks;*
- *build Lexan directional signs to speed up street cleaning." (Planned completion: completed)*

In order to formally evaluate the performance of cleanliness-related activities, the Direction des travaux publics of the Borough of Saint-Laurent should:

- **set measurable objectives, along with indicators that make it possible to determine to what extent they are attained, for each of the cleanliness-related activities. These objectives should address not only the execution of activities but also the expected cleanliness-related outcomes;**
- **obtain reports containing data on the degree of achievement of these objectives so that this information can in turn be reported to the borough administration.**

***Actions proposed by the borough of Saint-Laurent***

*"Establish and measure objectives (frequency, length, etc.) in respect to the main clean-up operations on public roads. (Planned completion: May 2007)*

*Develop and implement new reports to track operations on a daily basis. (Planned completion: June 2007)*

*Develop and implement a progress report.” (Planned completion: July 2007)*

#### Planning and monitoring of tasks

Once the objectives are set, cleanliness-related operations must be planned and adequately supervised to ensure that they are carried out at the lowest cost and in the anticipated manner.

Accordingly, these planning efforts must include appropriate methods and a balanced workload for each of the work shifts. In addition, on-site control visits must be carried out systematically and documented. This documentation must be sufficient to evaluate and modify the quality of the control exercised in order to improve the effectiveness of operations. For example, the date and time at which foremen supervise an operation, their assessment of the work carried out and their observations on the employees' compliance with work schedules should be covered in an annotation.

For three of the four boroughs (Ville-Marie, Plateau-Mont-Royal and Côte-des-Neiges–Notre-Dame-de-Grâce), most of the cleanliness-related activities are carried out along a designated route and at a specific frequency. These routes are reviewed based on elements such as modifications in parking schedules or particular objectives in certain sectors (e.g., clean-up of streets and sidewalks before store openings).

As for the supervision of work, it is performed primarily by foremen who visit the sites and examine the documents produced by blue-collar workers, such as progress reports on the route covered. At the end of the day, the foremen enter their observations on the day's activities in a logbook or report (e.g., types of activities carried out, equipment used, key statistics). However, we observed that the foremen do not note the results of their control visits in their logbooks or reports.

Also from a control standpoint, the foremen monitor complaints received in order to evaluate whether or not the complaints are grounded and to make the necessary adjustments.

Finally, at the end of 2006, certain actions were undertaken in order to improve the planning and supervision of tasks:

- In the Borough of Ville-Marie, efforts have been put into place to provide more support to foremen in the supervision of their employees. In this regard, management training was offered to them, measures to better support them in disciplinary matters were adopted and an action plan on the specific steps to take to improve the effectiveness of operations was developed;

- In the Borough of Plateau-Mont-Royal, one of the initiatives in the 2006–2007 action plan of the Direction des travaux publics consisted of ensuring strict supervision of manual employees to achieve better productivity. As a follow-up to this action, a number of meetings were held between the administration, managers and foremen in order to take steps to improve the supervisory performance of certain foremen. Among the topics discussed were the improvement of content of the logbooks maintained by the foremen;
- In the Borough of Côte-des-Neiges–Notre-Dame-de-Grâce, measures to provide better support to foremen called upon to take disciplinary action were also implemented. Further, the borough plans to offer more management courses to its foremen in 2007.

### **Recommendations**

**In order to help managers evaluate the quality of the controls exercised by foremen and thereby promote the increased effectiveness of operations, the Directions des travaux publics of the boroughs of Ville-Marie, Plateau-Mont-Royal and Côte-des-Neiges–Notre-Dame-de-Grâce should ensure that the results of these controls are documented.**

#### ***Actions proposed by the borough of Ville-Marie***

***“Implementation and production of management reports and submission to the UPEM.” (Planned completion: June 2007)***

#### ***Actions proposed by the borough of Plateau-Mont-Royal***

***“All cleanliness activities will be monitored by the foremen and recorded in the logbook daily. (Foreman’s observations).” (Planned completion: May 2007)***

#### ***Actions proposed by the borough of Côte-des-Neiges–Notre-Dame-de-Grâce***

***“Procedures have been put into place to improve documentation for the controls used. A weekly monitoring report is produced, indicating:***

- *the location;*
- *the type of machinery;*



- *the number of machines;*
- *the number of employees;*
- *the number of hours worked;*
- *the date;*
- *the check performed by the foreman;*
- *the percentage of work completed or kilometres covered." (Planned completion: completed)*

Finally, our examination of the documents and interviews in the Borough of Saint-Laurent led us to believe that it is currently difficult to ensure that cleanliness-related operations are carried out as cost-effectively as possible. For some cleaning operations, routes and frequencies are not available to specify the workload to be carried out during a shift. In the more specific case of mechanical street sweeping, operators have a great deal of latitude because there are no routes, frequencies or minimum number of kilometres set per shift.

As far as the supervision of work is concerned, it is provided by foremen during their control visits. However, the results of these visits are not documented. In fact, unlike the other boroughs covered by this audit, there are no daily operational reports filed, except for one report on spring clean-up activities consisting of a daily report by the foreman of the names of the streets that have been cleaned.

Finally, also from a monitoring perspective, foremen keep a record of complaints received in order to assess their merits and make any necessary changes.

### **Recommendations**

**In order to improve the performance of cleanliness-related activities, the Direction des travaux publics of the Borough of Saint-Laurent should review its approach to planning cleanliness-related operations in order to ensure that a sufficient workload is set in advance for each shift and thereby achieve its predetermined cleanliness objectives.**

**In addition, the Direction des travaux publics of the Borough of Saint-Laurent should ensure that the results of foremen's control visits are documented to ensure that the manager in charge can assess the quality, and therefore maximize the efficiency, of the operations.**

### ***Actions proposed by the borough of Saint-Laurent***

*"Review the planning of clean-up operations to ensure that the workload has been properly allocated.*

*Redistribute the new routes for work according to work shift. (Planned completion: May 2007)*

*Develop and implement a progress report." (Planned completion: July 2007)*

### **Tracking of expenditures**

As part of Operation Clean Montréal 2006 and the 2007–2010 cleanliness and maintenance program, the municipal administration decided to invest additional, significant amounts in improving the quality of service of cleanliness-related operations.

Consequently, we feel it is important to ensure that, at the very least, the budgets allocated by the boroughs to regular clean-up activities were fully used, in order to avoid having the new investments used for nothing more than maintaining the status quo. Moreover, we believe that, in this respect, the UPEM should be sent essential information related to regular clean-up activities.

- Boroughs of Ville-Marie, Plateau-Mont-Royal and Côte-des-Neiges–Notre-Dame-de-Grâce

Our work led us to ascertain that, for these three boroughs, cleanliness-related expenditures fall under various budget categories. Under municipal roads, for example, we see street cleaning and mechanical sweeping expenditures; under domestic waste, there are expenditures for the collection and transportation of domestic waste (e.g., emptying of street-side garbage receptacles); and under parks and play areas, there are expenditures for park clean-ups.

Given that the budgetary activity of municipal roadways incorporated the subactivity of cleaning and sweeping of public streets, which in turn encompassed several cleanliness-related operations, we compared the 2004 and 2005 budget and expenditures for both this activity and subactivity. We consequently ascertained that there is almost no difference between the budget and expenditures for the activity of municipal roadways, but for the subactivity of street cleaning and sweeping, the variations were significant (between 16% and 33% of the budget).

To explain this situation, borough employees indicated that the budget is tracked by activity and not subactivity. Consequently, they could not provide specific explanations for the gaps. In their opinion, it is possible that the budgets are overstated or include amounts for other subactivities, or that expenditures are not being properly accounted for.

For 2006, we did not carry out this comparison, given that final data was not available.

#### **Recommendation**

In order to ensure that the amounts allocated for regular clean-up operations are fully used, the boroughs of Ville-Marie, Plateau-Mont-Royal and Côte-des-Neiges–Notre-Dame-de-Grâce should keep track of expenditures for cleaning subactivities and submit the results to the UPEM.

#### ***Actions proposed by the borough of Ville-Marie***

*"Define which activities should be considered as cleanliness activities. Create a statistical account.*

*Issue regular reports comparing actual and budgeted costs." (Planned completion: April 2007)*

#### ***Actions proposed by the borough of Plateau-Mont-Royal***

*"For 2006, we changed the budgetary allocation for street sweeping and clean-up operations, as well as for the regular pick-up of bulky waste items, so that it was representative of actual expenditures." (Planned completion: completed)*

#### ***Actions proposed by the borough of Côte-des-Neiges–Notre-Dame-de-Grâce***

*"Actual expenditures will be tracked and a monthly report submitted to the UPEM." (Planned completion: June 2007)*

- Borough of Saint-Laurent

Based on the information obtained from the borough, the expenditures for cleanliness-related activities (e.g., street and sidewalk cleaning, emptying of street-side garbage bins, cleaning of bus shelters) are not separately accounted for in the "streets and roadways" budget of the Direction des travaux publics. All activity related to this is monitored under the same budget. However, the Direction des travaux publics uses a system that allows it to track the hours allocated to individual clean-up activities.

Consequently, as we could not ensure that the expenditures related to the budgets set for clean-up activities had been fully spent, we at least checked that the number of hours devoted to cleanliness-related activities had been stable for 2004, 2005 and 2006 (as at November 3, 2006). This enabled us to ensure that the attention devoted to the matter had not waned in recent years.

In this respect, our work showed that the time devoted to cleanliness-related activities increased by nearly 10% between 2004 and 2005. For 2006, although not complete at the time of the audit, we expect the result to be comparable to 2005.

Finally, as of December 6, 2006, the borough's Direction des travaux publics had not responded to the request for information made by the UPEM on October 23, 2006, the deadline for which was November 1, 2006. The UPEM had asked for a report on the actual expenditures for regular activities and those related to Operation Clean Montréal 2006, along with a list of the activities carried out using the funds granted, i.e., \$237,500.

### **Recommendation**

**In order to allow the UPEM to rigorously monitor Operation Clean Montréal 2006 and keep tabs on the cleanliness-related efforts initiated by the borough in future decisions made as part of the program, the Direction des travaux publics of the Borough of Saint-Laurent should provide all information requested to the UPEM as quickly as possible.**

### ***Actions proposed by the borough of Saint-Laurent***

***"Prepare all of the requested information and submit it to the UPEM.» (Planned completion: April 2007)***

## **MONTHLY CSST REPORTS AUDIT PROCESS AND TEMPORARY ASSIGNMENTS**

### **BACKGROUND**

The Commission de la santé et de la sécurité du travail (CSST) is the agency mandated by the Québec government to administer the occupational health and safety plan. This agency provides businesses established in Québec with a compulsory-insurance service that protects them against the risk of incurring a major financial burden in the event of a workplace accident or work-related illness, and guarantees income to the affected employees.

To finance the services offered, the CSST determines the employers' contribution based on the professional risks associated with the organization's activities and the historical cost of workplace accidents and work-related illnesses occurring in the organization (past performance).

According to the underwriting criteria set out by the CSST, the Ville de Montréal is governed by the historical workplace accident costs financing plan. The purpose of this plan is to apply, over four consecutive years, the costs of work-related injuries to the employer, the organization where the accident occurred, rather than spread the costs to all employers operating in the same industry.

These costs, carried forward by the CSST to an employer's file, are not reclaimed to the employer but are used to calculate the contributions that will be required during the four years following the incident. Furthermore, to determine the contribution to be paid, the CSST multiplies the costs carried over to an employer's file by loading costs, which increase rapidly based on the type of claim and the length of time the injured employee is off work. As a guide, the combined loading costs applicable for 2006 varied between 2.49 and 4.55.

For the years 2005–2006, actuaries estimated that the costs used to determine the contribution of the Ville de Montréal would generate \$26 million and \$29.2 million, respectively.

## **METHODOLOGY AND SCOPE**

Our audit examined the processes for auditing monthly statements issued by the CSST for the City's various business units, in order to assess the measures taken by these units to ensure that they only assumed the fees that were applicable to them. Furthermore, we also looked at the kind of mechanisms introduced, such as temporary assignments, to encourage the speedy reintegration of employees who had suffered work-related injuries.

Our audit dealt primarily with the Direction du soutien à la gestion de la présence au travail, which reports to the Service du capital humain, and the boroughs of LaSalle, Mercier-Hochelaga-Maisonneuve, Rivière-des-Prairies-Pointe-aux-Trembles and Saint-Léonard. Although we focused on 2006 data, we also looked at some 2005 data for comparison purposes.

## **OBSERVATIONS AND RECOMMENDATIONS**

For legal purposes and in applying the CSST's historic plan, the Ville de Montréal is considered to be one and the same legal entity. Accordingly, the Direction du soutien à la gestion de la présence au travail, which reports to the Service du capital humain, is the business unit designated to interface with the CSST.

This direction mainly manages various aspects related to contribution setting by the CSST (e.g., annual return of insurable earnings, choice of insurable limit per injury, estimated cost assessment and setting of financial year-end provisions). It also receives contribution notices sent by the CSST for all the City's business units (one invoice) and assigns costs owed by each (boroughs, corporate departments and agencies).

Although billing is consolidated, the CSST differentiates the City's various business units by assigning them a number corresponding to their experience record. This mechanism enables it to assign to each unit the injury-related costs incurred in that unit, and to produce related monthly statements.

Operationally, following implementation of the City's new organizational model and the coming into force of Bill 33 in 2003, various measures were taken to transfer, to the boroughs of the former Ville de Montréal, responsibility for certain human resources activities, in particular the management of health and workplace safety files (e.g., medical follow-up, auditing of account statements justifying allocated costs, cost-sharing request), that had been, up to that time, assumed by the Service du capital humain and were decentralized to these boroughs in spring 2005.

Employees of the Service du capital humain manage the CSST files of corporate services, while the boroughs of the former suburbs manage their own CSST files, as they did prior to the municipal merger.

### **Strategic directions for managing workplace accidents**

Since 2004, managing workplace accidents has been a strategic priority of the City administration, on the one hand, to safeguard human resources and, on the other hand, to reduce costs generated by this type of accident. To involve the entire city apparatus in achieving this priority, in 2004 the Directeur général set a corporate goal of decreasing accidents in the workplace by 10%.

In order to realize the expected savings, the goal was carried over to 2005 and 2006. The aim of this corporate target was to reduce by 5% the number of work-related injury files paid out by the CSST, compared to the number of work-related accidents paid out the year before.

These goals can only be achieved if concrete actions are stepped up in the management of workplace health and safety. In a memo dated August 2004, the Directeur général asked business units to limit workplace accidents by implementing specific preventive measures, tightening supervision of operations and reducing time off the job due to workplace accidents, especially by increasing the use of temporary assignments.

In our opinion, in order for each business unit to take tangible actions to reduce costs, the units must be fully responsible for the budgets they manage. In a memo dated August 2004, the Directeur général also endorsed the principle of full accountability for all business units.

Applying this principle means that, whenever workplace accident costs are less than the budget forecast, the business unit keeps the freed-up surplus. Inversely, if there is a budget deficit, the business unit must free up the sum required to cover the shortfall. This principle encourages ownership to improve workplace health and safety performance.

At the time our audit report was produced, the situation described below, in terms of applying the principle of financial accountability to the City's various business units, prevailed.

Firstly, the boroughs derived from the former suburban cities had always been financially responsible for managing their workplace accidents.

Secondly, although the management of workplace health and safety files was decentralized in spring 2005, the boroughs derived from the former Ville de Montréal were not responsible for the files that year, since any surpluses or deficits incurred were accounted for as part of the City's overall surplus. However, during 2006, the Service du capital humain took steps, along with the Service des finances and the boroughs of the former Ville de Montréal, to put the boroughs fully in charge of managing these files. Thus, an accountability committee for workplace health and safety costs of the boroughs of the former Ville de Montréal was put in place. This committee was mandated to design a financial accountability project, as well as the procedures for applying it.

Within the framework of this mandate, the Service du capital humain produced a document describing the financial tracking process for workplace accidents in the context of accountability of boroughs of the former Ville de Montréal. In December 2006, managers from the administrative services of nine boroughs of the former Ville de Montréal approved the application of this process. We note, however, that the Directeur général has yet to approve the decision summary aimed at adopting procedures for making boroughs of the former Ville de Montréal financially accountable for the costs incurred by their workplace accidents (as of January 1, 2006).

Lastly, corporate services were not accountable in 2006. Consequently, the Service des finances consolidated cost overruns and surpluses incurred for the corporate departments in the City's general account.

### **Recommendations**

**To reach the corporate target and to make business units fully accountable for managing workplace health and safety files, we recommend that the Directeur général:**

- **formalize, as quickly as possible, his August 2004 position by approving a decision summary defining the procedures for applying the principle of accountability to boroughs of the former Ville de Montréal;**



- assign to the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, the mandate to develop a financial accountability project for the corporate services.

***Actions proposed by the Direction générale***

- 1) "Have adopted the decision summary to be submitted to us by the Service du capital humain before April 30, 2007, to make the boroughs of the former Ville de Montréal financially accountable for workplace accidents that involve them." (Planned completion: completed)
- 2) "Draw up a financial accountability project of CSST costs to corporate departments." (Planned completion: April 2007)

**Measures contributing to reducing workplace health and safety costs**

There are several measures employers can take to minimize workplace health and safety costs, namely:

- appropriate preventive measures to reduce the number and severity of accidents;
- measures to ensure accurate and fair management of workplace accidents files, both medically and administratively (e.g., request for a second medical opinion, cost-sharing request, procedures for contesting decisions rendered by the CSST);
- mechanisms that should be introduced for auditing monthly statements sent by the CSST to ensure that only those costs imputable to the claims made are charged;
- efforts to encourage the prompt return to work of an injured employee by offering a temporary assignment or light duties.

Although these measures are closely related for the most part, our audit focused on examining the CSST monthly statement audit process and the mechanisms to encourage the prompt return to work of injured employees through a temporary assignment.

### Audit process of CSST monthly statements

Every month, the CSST produces statements for the City's various business units, which detail the costs charged to the experience record of the business units for each claim they receive.

These costs assumed by the CSST and charged to the business units' file include, among other things, income replacement indemnities (IRI), bodily injury benefits (e.g., loss of hearing), death benefits, rehabilitation or medical assistance costs (e.g., doctor's appointments, hospital fees, medications).

Auditing statements makes it possible to substantiate and corroborate the costs charged and, if applicable, to ask the CSST to correct any errors that may have slipped by (request for change in allocation). For example, the audit would consist of ensuring that the employees appearing on the statements truly belong to the business unit; that the sums paid as income replacement indemnities and the allocation periods are correct; that the allocation percentages comply with CSST decisions; that the errors detected in previous statements are corrected; and so on.

### *Recommendation from RASOP*

On November 22, when our audit was almost complete, the mayor's office and the Comité exécutif made public, in an internal communiqué, the results of the review of activities, services, operations and programs (RASOP) conducted in May 2006. The goal of this exercise was to refocus the City on its fundamental mission, increase efficiency in service delivery and achieve financial flexibility on a recurring basis.

This communiqué reported the decision of the Comité exécutif to implement, starting with the 2007 budget, almost 80 recommendations coming out of the operations review process. Among the recommendations retained, particular mention was made of pooling follow-up of CSST billing.

However, after consulting the managers responsible for this recommendation and obtaining further explanations, it was confirmed to us that the Service du capital humain had recommended centralizing, within its unit, the auditing of monthly statements issued by the CSST for all boroughs of the former Ville de Montréal and the former suburbs.

Given the decision by the city administration to implement the RASOP recommendation to pool follow-up of CSST billing, we feel it will be necessary to inform the boroughs of the effects of this decision since, at the time of this audit, they were unaware of them. Furthermore, since the boroughs are responsible for managing workplace health and safety files, procedures must be agreed upon for the transfer of responsibility (e.g., administrative agreements), coupled with mechanisms of accountability.

#### **Recommendations**

To formalize pooling of follow-up of CSST billing as advocated in the RASOP, we recommend that the Direction générale, as soon as possible, inform all boroughs of the impact of the decision and of the procedures to be agreed upon to transfer responsibilities.

#### ***Actions proposed by the Direction générale***

*"We will implement the plan proposed to us by the Service du capital humain before April 30, to pool the follow-up of CSST billing." (Planned completion: June 2007)*

We also recommend that the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, take the necessary steps to put in place mechanisms of accountability, in order to inform, on the one hand, business units (boroughs and corporate services) of savings realized through auditing of monthly statements and, on the other hand, the Direction générale of the overall savings generated.

#### ***Actions proposed by the Direction générale***

*"Each month, the Division de l'évaluation de la performance will send the boroughs a schedule detailing the savings realized through auditing of monthly statements in their experience record. A schedule that allows tracking of the overall savings generated for all the business units will be sent, upon request, to the Direction générale." (Planned completion: March 2007)*

*Note: A schedule detailing the savings realized is already available and was completed by the Division de l'évaluation de la performance, as part of the auditing of the corporate departments' monthly statements. (Planned completion: already in place)*

*Observations from examining the auditing of monthly statements*

We are aware that the recommendation to pool follow-up of CSST billing, retained by the city administration as part of the RASOP, makes implementing recommendations to improve the auditing process for monthly statements in each business unit, inappropriate.

However, in the event that implementation of this recommendation is delayed, we feel we should point out to the business units visited the observations stemming from our review and for which we believe transitional corrective measures should be introduced.

We concluded from our audit that the business units visited had integrated periodic auditing of issued monthly statements into the management of their CSST files. An examination of the processes in place showed that those responsible have the tools and training needed to diligently perform their duties. Furthermore, the errors detected were quickly brought to the attention of the CSST, and follow-up was done to see that the requested corrective measures had been applied. In examining the process, however, we observed the following facts.

**Control of costs charged by the CSST—Borough of Rivière-des-Prairies–Pointe-aux-Trembles**

During our visit, we were informed that, since 2006, three agents de personnel share the management of CSST files. Only one of the three agents, however, is assigned to audit monthly statements. This agent mentioned that the work focused on medical or other administrative costs and did not take into account sums charged as income replacement indemnities (IRI). Although the other agents claim to consult on-screen information on the CSST site to ensure that decisions rendered following challenges are correctly applied, no one reviewed the sums subsequently charged to the monthly statements issued.

In our opinion, this way of operating is not conducive to effectively auditing monthly statements and is open to the risk that imputation errors will not be detected in time. In the end, we believe that a critical examination of all costs appearing on monthly statements issued by the CSST must be done periodically to ensure tighter control.

#### **Recommendation**

In the event that implementation of the recommendation on pooling follow-up of CSST billing is delayed, we recommend that the Direction des services administratifs of the Borough of Rivière-des-Prairies–Pointe-aux-Trembles review its way of dealing with the scope of audits performed, so that all costs appearing on CSST monthly statements are subjected to critical examination, in order to tighten the control of sums charged to the CSST.

#### ***Actions proposed by the Borough of Rivière-des-Prairies–Pointe-aux-Trembles***

*“The organization of this task has been changed. Instead of assigning this work to one personnel agent, three personnel agents will audit the invoices related to their respective files.*

*The follow-up report on workplace accidents was improved to include the stage of the challenge and is available on a common site, thus enabling each personnel agent to update the progress of their file. A list of elements to audit OSH costs was given to them.*

*The head of the Human Resources division will periodically perform a control of the invoice audits of the three personnel agents.” (Completion: completed in December 2006)*

#### **Follow-up report on CSST files—Borough of LaSalle**

The decisions rendered by the CSST on whether or not to compensate an employee who has suffered a work-related injury may constitute grounds for a challenge against the CSST or the Commission des lésions professionnelles (CLP). It is essential that the individuals assigned to audit monthly statements be advised of the stage of the challenge of files. In fact, following the challenge, assurances must be made, among other things, at the time of the cost audit so that the amounts carried to the file reflect the decision rendered.

We concluded that, in order to follow the progress of every work-related injury file, the majority of business units visited had created their own "in-house" follow-up reports. Although each unit has personalized this tool to meet its needs, the reports always include, among others: name of the injured employee, date of the incident, description of the incident, nature of the injury, planned date of return, comments, and the stage of the file challenge (e.g., request for an administrative review (RAR), Commission des lésions professionnelles (CLP)).

In spite of the fact that the individuals we met at the borough know their CSST files well, we concluded that the internal management reports used for follow-up contain no information that would quickly allow someone to determine the stage of the file challenges awaiting a decision. In our opinion, documenting all information related to a file facilitates the auditing of monthly statements from the CSST once received. Ultimately, this way of operating could also facilitate the transfer of knowledge when there is a change of staff assigned to follow up on files.

#### **Recommendation**

**In the event that implementation of the recommendation on pooling follow-up of CSST billing is delayed, we recommend that the Direction des services administratifs of the Borough of LaSalle improve how internal reports used to follow up CSST files are presented, by incorporating information about the stage of the file challenge awaiting a decision, in order to optimize the auditing of monthly statements and to facilitate the transfer of knowledge.**

#### ***Actions proposed by the Borough of LaSalle***

***"Change and update the internal report to be able to follow up contested files. (Planned completion: April 1, 2007)***

***Update information in Sigma RH to be able to follow up contested files without doubling the work. (Planned completion: September 1, 2007)***

#### **Guide for auditing work-related injury costs—Service du capital humain**

Beginning with knowledge and experience acquired over the years, the staff of the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, developed a guide entitled *Guide de vérification du coût des lésions professionnelles*. This work highlights the main elements that need special attention during the auditing of monthly statements to ensure the legitimacy of costs charged. According to information obtained, only the boroughs of the former Ville de Montréal were

given a copy of this document during the transfer of responsibilities in 2005. Nonetheless, during our visits we observed that these boroughs did not always have the latest version.

In a context where the City's business units must collectively contribute to reducing the cost of contributions payable to the CSST, we believe that communication mechanisms must be established so that those in charge can, as required, refer to the latest guides or other work tools that have been developed.

#### **Recommendation**

**In the case where implementation of the recommendation on pooling follow-up of CSST billing is delayed, we recommend that the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, take the necessary steps to ensure that updated guides, or other developed work tools, are systematically issued and made available to all the City's business units, in order to reduce costs built into CSST contributions.**

#### ***Actions proposed by the Direction du soutien à la gestion de la présence au travail***

*"The Division de l'évaluation de la performance prepared a guide entitled "Guide de vérification du coût des lésions professionnelles" and a procedure on which the Comité de validation des encadrements administratifs was consulted in February 2007. (Planned completion: March 2007)*

*When the administrative framework is adopted, it will be forwarded to the departments and boroughs by the Division de l'évaluation de la performance." (Planned completion: March 2007)*

#### **Compiling detected errors**

After auditing the costs charged on the monthly statements issued, the CSST must be alerted to any errors detected. The correction of these errors must then be checked during the examination of subsequent statements.

In past years, to facilitate follow-up of credits requested for each injury file and to compile the cost implications of credits issued by the CSST, the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, used follow-up reports created from Excel files for each of the business units for which it performed a monthly audit (boroughs of the former Ville de Montréal and corporate services). This seems to be a good management practice, on the one hand, to facilitate

follow-up of any errors detected and to assess annually the cost implications of the efforts incurred to reduce invoicing costs by the CSST and, on the other hand, to be in a position to recognize these costs.

For the year 2006, the Service du capital humain compiled overall cost implications of errors detected through audits of statements issued on behalf of corporate services, for which it is still responsible.

In the four boroughs visited, we found that only the Borough of Mercier–Hochelaga-Maisonneuve compiles errors detected through audits of monthly statements. In fact, this borough still uses Excel files supplied by the Service du capital humain during the decentralization of responsibilities in 2005.

As for the three other boroughs, we concluded that no report is currently prepared to show yearly the implications of savings generated by detecting imputation errors through audits of monthly statements issued by the CSST.

We believe that such a report would make it possible to show how conducting a critical examination of monthly statements contributes to achieving the corporate goal of reducing workplace health and safety costs.

### **Recommendation**

**In the case where implementation of the recommendation on pooling follow-up to CSST billing, we recommend that the Direction des services administratifs of the boroughs of LaSalle, Rivière-des-Prairies–Pointe-aux-Trembles and Saint-Léonard prepare a report to present to the directeur d'arrondissement, showing the cost implications of savings generated by the detection of errors through the auditing of monthly statements issued by CSST.**

### ***Actions proposed by the Borough of LaSalle***

***“Design an Excel table that will enable us to keep a register of requests for corrections following errors detected during the auditing of monthly statements.” (Planned completion: April 1, 2007)***



***Actions proposed by the Borough of Rivières-des-Prairies–Pointe-aux-Trembles***

*“Beginning in January, personnel agents will complete an Excel table on the detection of errors and an annual report will be sent, from now on, to the borough director, as recommended by the auditor.”  
(Planned completion: January 2007)*

***Actions proposed by the Borough of Saint-Léonard***

*“A report showing the monetary impact of savings generated by the detection of errors following the auditing of monthly statements issued by the CSST will be prepared. This report will contain data from the December 2006 statement and subsequent months thereafter.” (Planned completion: April 2007)*

**To be accountable, we also recommend that the Borough of Mercier–Hochelaga-Maisonneuve submit the report to the directeur d'arrondissement, showing the cost implications of savings generated by the detection of errors through the auditing of monthly statements issued by CSST.**

***Actions proposed by the Borough of Mercier–Hochelaga-Maisonneuve***

*“On a quarterly basis, supply the borough director with a “Vérification financière des dossiers CSST” report that shows the savings generated by the detection of errors following the auditing of monthly statements issued by the CSST.” (Planned completion: March 31, 2007)*

**Temporary assignments**

One way to reduce the cost of workplace accidents is to temporarily assign the injured employee a task. To that end, the *Act respecting industrial accidents and occupational diseases* makes provisions for the injured employee's prompt return to work, even if they have not fully recovered. The employer can thus temporarily assign work to this individual until they are able to return to their normal duties or perform a suitable job. It should be stated, however, that the employer may only exercise this right to assign temporary work, with a physician's approval.

Once the worker is reintegrated on the job, the employer must inform the CSST, so that the income replacement indemnities cease. As a result, the employer assumes only the employee's salary during the period of the temporary assignment instead of having costs, including loading costs, entered into his experience record.

To achieve good results and keep the sums charged to the experience record to a minimum, certain management principles must be applied. Firstly, the organization's management must state its intent by issuing clear direction on optimizing temporary assignments, and disseminate procedures for applying these assignments to its employees. It is then advisable to draw up an inventory of jobs and assess the requirements of each to establish beforehand the tasks that can be part of a temporary assignment.

Lastly, to assess how the results obtained contributed to reaching the goals set out in this priority file, the imputable business units should report back to management.

#### *Directions on temporary assignments*

As previously mentioned, in a memo dated August 2004, the City's Directeur général informed borough managers, assistant general managers, senior managers and borough mayors that one way of reducing costs was through temporary assignments. He also mentioned that the fixed goals to achieve the corporate target would be reflected in performance contracts.

In our opinion, the dissemination of these directions enabled managers to know the Directeur général's position and motivated them to take the necessary steps regarding temporary assignments.

#### *Task inventory*

In terms of assessing the needs of various positions on the job inventory and identifying tasks that could be included in a temporary assignment, we concluded that Human Resources managers in the boroughs of Mercier–Hochelaga–Maisonneuve, Rivière-des-Prairies–Pointe-aux-Trembles and Saint-Léonard completed the exercise in collaboration with the affected managers. Having compiled a list of pre-identified tasks, the three boroughs are now in a position to suggest to the attending physician, at the first visit, if required, light duties that can be performed on a temporary basis by the injured worker.

In the case of the Borough of LaSalle, we noted that there is currently no inventory of tasks that can be included in a temporary assignment. Instead, during the initial visit with the attending physician, the borough asks the physician to complete the *Évaluation des limitations fonctionnelles* form. Based on the

physical limitations indicated by the physician, the borough, with the employee's manager, determines which light duties the injured employee can perform on a temporary basis. The managers we met from this borough felt that this way of operating did not result in any delays between the manager's approval and that of the attending physician. We believe, nonetheless, that there would be advantages to be gained for the borough in optimizing the allocation of resources, were it to draw up an inventory of tasks that could be included in a temporary assignment.

Lastly, in the case of corporate services, it is the absence follow-up section of the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, that is responsible for following up on workplace accident files. It is this same administrative unit that, together with the managers in charge of various corporate services, takes the necessary steps to temporarily assign injured employees,

According to the information obtained from the manager in charge, few corporate services have drawn up, together with their managers, an inventory of tasks that can be included in a temporary assignment. We believe that this way of operating is likely to result in delays that do not encourage, where applicable, a prompt start to the reintegration process for the injured employee through a temporary assignment.

### **Recommendation**

**We recommend that the Direction des services administratifs of the Borough of LaSalle, as well as the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, draw up, together with the managers involved, a list of light duties that can be included in temporary assignments, in order to speed up the employee's reintegration and optimize resource allocation.**

### ***Actions proposed by the Borough of LaSalle***

*"Identify, to the managers of each department, light duties that could be part of a temporary assignment. (Planned completion: July 1, 2007)*

*Draft a temporary assignment procedure." (Planned completion: September 1, 2007)*

***Actions proposed by the Direction du soutien à la gestion de la présence au travail***

*“Meet with each of the corporate departments and offer them support in drawing up a list of light duties that could be part of temporary assignments. The Service de police and Service de sécurité incendie de Montréal are exempted, since temporary assignments are performed systematically. The Service du capital humain, Service des communications, Service des finances and Bureau du vérificateur général are also exempted since workplace accidents are the exception for them.” (Planned completion: November 2007)*

***Accountability***

In order to take account of the achievement of corporate cost reduction goals, business units are required to produce management reports showing the efforts taken in assigning temporary work.

At the time of our audit, although efforts were made in 2006 and 2005 to implement temporary assignment measures, no report was produced by the business units to periodically take account of related savings. The Borough of LaSalle, however, has informed us that it plans to periodically produce, for the directrice des services administratifs, a report showing the amount of savings attributable to temporary assignments.

The statistics that we collected from information entered in the online application INFO-RH showed that temporary assignments make it possible both for the audited boroughs and the corporate services to realize significant savings. Obviously, the amount of savings depends of the number of temporary assignments and the speed with which they are filled, as well as their duration.

In conclusion, we believe that the periodic production of management reports would show how business units have contributed to reaching goals. Furthermore, analyzing these reports would identify problem situations and guide decision-making, so that appropriate corrective measures could then be applied.

## **Recommendations**

**We recommend that the administrative service directors of the boroughs of Mercier–Hochelaga-Maisonneuve, Rivière-des-Prairies–Pointe-aux-Trembles and Saint-Léonard, as well as the Direction du soutien à la gestion de la présence au travail, under the Service du capital humain, produce management reports on the status of savings realized through temporary assignment efforts, and provide an accounting to the departments concerned.**

### ***Actions proposed by the Borough of Mercier–Hochelaga-Maisonneuve***

*“On a quarterly basis, supply the borough director with the report on the list of temporary assignments and their allocated costs, which shows the savings generated by temporary assignments in the borough.” (Planned completion: March 31, 2007)*

### ***Actions proposed by the Borough of Rivière-des-Prairies–Pointe-aux-Trembles***

*“We will prepare a report on the savings on OSH premiums realized by temporary assignments and send this report to the borough’s departments to encourage them to continue their efforts by accepting employees on temporary assignment.” (Planned completion: March 2007)*

### ***Actions proposed by the Borough of Saint-Léonard***

*“Using the HR info system, we will generate a management report that states the savings realized as a result of efforts to implement temporary assignments. The ongoing data in this report will cover accidents that occurred in 2005 onward.” (Planned completion: April 2007)*

### ***Actions proposed by the Direction du soutien à la gestion de la présence au travail***

*“A report is available in the HR info system. All boroughs and corporate services have been informed of the report’s existence and can produce it at any time.” (Planned completion: completed)*

**We also recommend that the Direction des services administratifs of the Borough of LaSalle follow up on efforts to produce management reports showing the results achieved in reaching corporate goals to reduce workplace health and safety costs.**

***Actions proposed by the Borough of LaSalle***

***"We have created management reports that enable us to follow up OSH cost reductions. (Planned completion: November 1, 2006)***

***Send a first report to each unit. (Planned completion: March 31, 2007)***

***Send out reports on a monthly basis." (Planned completion: ongoing)***

# **REHABILITATION OF WATER INFRASTRUCTURE SYSTEMS**

## **CONTEXT**

In 2002, as part of the Sommet de Montréal, the city administration publicly announced its intention to undertake a major overhaul of the Island-wide water infrastructure systems.

In keeping with this commitment, the administration commissioned a series of studies from external specialist firms (technical analysis of the status of the infrastructure systems, analysis of the financial situation, structure and strategy, and organizational analysis of public water management) in order to:

- produce a technical overview of all of the City's infrastructure systems related to the production and distribution of potable water and the treatment of wastewater, as well as an estimate of future capital expenditures over a 20-year period;
- prepare a financial overview of public water management, as well as investment scenarios over a 20-year horizon;
- propose the most appropriate organizational model and effective management practices to support water management.

Overall, the findings of these studies indicated the following:

- over a 20-year horizon, Island-wide investment requirements, including the deficit associated with the replacement of distribution systems, will amount to \$4 billion for all water infrastructure systems;
- a series of recommendations on:
  - the development of a master action plan for water supply and sewer systems;
  - the development of a water supply master plan;
  - the continuation of studies and the execution of the major projects required to ensure compliance with the new regulation on potable water quality, overflow control and wastewater disinfection;
  - the deployment in all boroughs of a structured standard maintenance program;
  - the acquisition of the tools necessary to establish a report on water consumption patterns and the preparation of a water conservation plan;
  - the implementation of standardized computer management tools on an Island-wide basis.

- a financial plan that suggests that the City earmark over the next 20 years an extra \$200 million annually toward the rehabilitation of water infrastructure facilities.
- in terms of organization and management practices, the implementation of:
  - an organizational model structured around three types of main units and one support unit, namely:
    - production unit – supply;
    - interception unit – treatment;
    - local unit;
    - support services and advisory unit.
  - best water management practices that stand to generate a potential for operational improvement by 2022.

In keeping with the findings and recommendations of these external firms, the Service des infrastructures, du transport et de l'environnement (SITE) carried out the following:

#### **In 2003**

- undertook steps to create a water fund designed to serve as a foundation for a financial framework that, over the long term, would stabilize the financial resources necessary for resolving the various issues related to water management;
- prepared a projected financing package amounting to \$4 billion over the next 20 years, including:
  - \$3 billion from the City through proceeds from water taxes and rates (special water tax, general property tax and user rates);
  - \$1 billion from government subsidies.
- proposed an organizational structure for water management. This entity would be associated with the SITE and comprise the following divisions:
  - Direction du développement de la gestion de l'eau;
  - Direction du plan directeur et des technologies de l'eau;
  - Direction de la gestion stratégique des réseaux d'eau;
  - Direction de la production d'eau potable;
  - Direction de l'épuration des eaux usées
- proposed a new special tax related to water services.



#### **In 2004**

- launched calls for tenders for three key projects: action plan (AP), potable water production plant upgrades (PWPPU) and the installation of water meters in industrial, commercial and institutional establishments (ICI);
- set up a project management division.

#### **In 2005**

- launched the execution, over a 20-year horizon, of a number of major projects related to the new approach to water management, including:
  - the upgrade of potable water production facilities—roughly \$260 million over 10 years;
  - the implementation of an action plan for water supply and sewer systems, as well as the related inspection work, requiring an investment of \$1.3 billion over 10 years;
  - the installation and operation of water meters in industrial, commercial and institutional establishments, a five-year project requiring roughly \$60 million;
  - the optimization of intercepting sewers and the launch of pre-project studies for the building of retention structures designed to reduce the incidence of untreated wastewater overflows;
  - the ongoing development of a wastewater disinfection process;
  - the setting up of five strategic water management units to support the boroughs and reconstituted municipalities in their day-to-day operations and ensure the implementation of the master infrastructure rehabilitation plan;
  - the implementation of a new organizational structure for water management.

In 2006, the creation of 16 related municipalities and the agglomeration council, the partitioning of the territory of the Ville de Montréal, the sharing out of local and centralized fields of jurisdiction and various legislative changes (*Charter of the Ville de Montréal, Cities and Towns Act*, bills 111 and 134) had a considerable impact on water management in terms of:

- the division of responsibility among the agglomeration, the central municipality (Montréal) and the reconstituted municipalities. The agglomeration is responsible for potable water production, the main sewer and water supply systems and wastewater treatment, while the related municipalities are in charge of the activities related to the water supply and sewer systems that are the more local in nature;
- the distribution of revenues and expenditures among the related municipalities and the agglomeration;

- the creation of financial reserves and the introduction of a new special tax to finance water management operations.

This is the context within which the audit was conducted.

## **METHODOLOGY AND SCOPE**

The audit involved examining the activities related to the management of the infrastructure rehabilitation program with respect to water facilities. It focussed mainly on ensuring that the relevant actions had been carried out in order to execute this program.

More specifically, we examined the investment plan and the financial strategy underpinning it, the establishment of financial reserves for water management purposes, the organizational structure for water management, the three key projects, the operational priorities, strategic planning and the accountability measures in place.

Our work focussed primarily on the years 2004, 2005 and 2006 and on the activities of the Service des infrastructures, du transport et de l'environnement (SITE), mainly in respect to the following divisions:

- Direction du développement de la gestion de l'eau;
- Direction du plan directeur et des technologies de l'eau;
- Direction de la gestion stratégique des réseaux d'eau;
- Direction de la production d'eau potable;
- Direction de l'épuration des eaux usées;
- Direction du bureau de projets.

## **OBSERVATIONS AND RECOMMENDATIONS**

In 2002, the Ville de Montréal undertook two studies related to water management within its territory. The first was intended to establish a technical overview of the condition of its water infrastructure systems and the budgets required to meet all of its operational needs. The second was designed to provide a historical financial overview of water management as well as financial projections for the next 20 years.

The main conclusions of these studies can be summarized as follows:

- The reliability of the infrastructure systems has diminished and some facilities require upgrades to meet current standards or to ensure adequate service to the public;

- The deficit in terms of operations, replacement and major rehabilitation, which has built up over a number of years, resulted in 33% of the City's water and sewer pipes reaching the end of their useful life in 2002, and will mean that an additional 34% of them will follow suit by 2020;
- The condition and capacity of the City's potable water production plants are sufficient to respond to current needs. However, some require additional investment to ensure compliance with the new water regulation, equip them with an emergency supply system or increase their capacity;
- The condition and capacity of the water treatment plant are sufficient to respond to current needs and existing discharge standards;
- For all of the infrastructure systems, over a 20-year horizon, investment requirements, including the funds needed to address the rehabilitation deficit, amount to roughly \$3.2 billion, excluding taxes and financing costs, as follows:
  - Water supply system: \$1,950 million
  - Sewer system: \$330 million
  - Production facilities and water reservoirs: \$335 million
  - Treatment facilities and interceptors: \$580 million
- The studies suggest that the City should earmark an extra \$200 million a year for the next 20 years for the rehabilitation of its water infrastructure systems.

Concurrently, in 2003, the Ville de Montréal asked a consulting firm to conduct an organizational analysis of the public management of its water facilities. The firm made a number of recommendations as to the best practices to be adopted and proposed a model organizational structure, which the SITE used to design its water management organizational structure.

#### **Investment plan and financial strategy**

Confronted with the urgency of the situation and the risks of inaction, including an increase in the number of breakdowns and leaks, the higher costs associated with delayed response and the new potable water quality regulation, the Ville de Montréal made the decision to gradually implement a comprehensive action plan to:

- rehabilitate or replace 3,000 kilometres of water supply and sewer lines (out of a total 5,000 kilometres);
- upgrade potable water production plants;
- eliminate untreated wastewater overflows by building retention structures;
- develop a wastewater disinfection process;
- install water meters in industrial, commercial and institutional establishments.

The cost required to execute this action plan over a 20-year horizon has been estimated at \$4 billion, \$3 billion of which will come from the City by way of taxation revenues and \$1 billion of which will be provided through government subsidies.

In concrete terms, this action plan will require additional investments of \$200 million a year for the next 20 years. The strategy chosen to arrive at this objective involves:

- introducing a special water tax, which would be increased gradually until it reaches the required annual level of \$200 million as of 2013; and
- compensating during the first 10 years (2003–2013) for the shortfall between the revenues generated by the special water tax and the expenditures of \$200 million a year, through an expected \$1 billion in government subsidies over those 10 years.

In order to ascertain to what extent the action plan had been implemented, we examined the investments made since 2002 and those planned for 2006–2008.

**Actual and Estimated Investments<sup>16</sup>**  
((\$000))

|  | Annual average 1992–2001 | 2002          | 2003          | 2004          | 2005          | 2006  | 2007          | 2008          |
|--|--------------------------|---------------|---------------|---------------|---------------|---|---------------|---------------|
|  | Actual (note 1)          |               |               |               |               | Three-year capital works budget (PTI) (notes 1 and 2) |               |               |
| Potable water production   | 2,470                    | 5,352         | 21,636        | 21,985        | 15,775        | 44,316  | 47,093        | 47,194        |
| Wastewater treatment   | 1,030                    | 15,677        | 41,115        | 13,148        | 16,922        | 27,143  | 12,702        | 12,005        |
| Water supply and sewer systems   | 12,500                   | 44,555        | 34,698        | 41,409        | 52,620        | 55,152  | 21,718        | 21,718        |
| <b>Total investments</b>   | <b>16,000</b>            | <b>65,584</b> | <b>97,449</b> | <b>76,542</b> | <b>85,317</b> | <b>126,611</b>  | <b>81,513</b> | <b>80,917</b> |
| Investment requirements pegged to financial capacity, according to PWC (adjusted by the SITE for 2004 and 2005 – see note 3) |                          |               | 98,925        | 196,403       | 273,019       | 209,391   | 183,905       | 215,822       |
| Variation between required and actual investments  |                          |               | (1,476)       | (119,861)     | (187,702)     | (82,780)  | (102,392)     | (134,905)     |

Notes:

1. The 2002–2008 data is taken from the balance sheet and PTI (three-year capital works budget) prepared by the administration of the SITE. The amounts allocated to work on water and sewer mains are respectively included in "potable water production" and "wastewater treatment."
2. For 2006–2008, the investments required for the reconstituted municipalities to rehabilitate their local water and sewer systems are not included in the amounts shown.
3. For 2004 and 2005, the original amounts established by the consortium and a consulting firm were \$225,312 and \$243,510, respectively.

<sup>16</sup> Source: Direction du développement de la gestion de l'eau

Although this table illustrates the investment requirements established for the Ville de Montréal and the reconstituted municipalities, an examination of the capital expenditures made between 2002 and 2005 and those estimated for upcoming years lead us to make the following observations:

- The level of investment in water infrastructure systems began to grow in 2002, from an annual average investment of \$16 million between 1992 and 2001 to \$65.6 million in 2002, an increase of 310%. Following this, the level rose, compared to 2002, by 49% in 2003, 17% in 2004 and 30% in 2005.
- The Ville de Montréal already has a cumulative deficit of more than \$309.1 million, or 54% of what was supposed to have been invested according to the original plan proposed by the consortium and the consulting firm.
  - \$1.5 million in 2003;
  - \$119.9 million in 2004;
  - \$187.7 million in 2005.

For 2006, if the level of expenditures remains unchanged, there will be a shortfall of approximately \$82.7 million (excluding the PTI expenditures of the reconstituted municipalities), bringing the cumulative deficit to \$391.8 million.

We should also point out that investments made in 2004 and 2005 fell short of PTI projections. In fact, the actual expenditures under this program during these two years indicate that, compared to the estimates in the modified budget, there was a variance of \$19.9 million in 2004 and \$28.0 million in 2005.

We are nevertheless aware of how difficult it was for the City, in such a short lapse of time, to achieve the targeted \$200 million of additional investment as of 2003. Various factors, such as the implementation of management and planning tools (better knowledge of the level of deterioration of the infrastructure systems), the setting up of the organizational structure, the staffing of positions, the allocation of financial resources and the smaller-than-expected subsidies all contributed to delaying the implementation of the investment plan as originally developed.

In its action plan financing strategy, the City anticipated minimizing the need to incur debt, introducing a special tax and obtaining government subsidies. These subsidies, which represent a total of \$1 billion, were intended to make up for the difference between the proceeds of the special tax and the \$200 million in annual investments required between 2003 and 2013, the latter being the year when the investment plan was expected to become self-financing.

We examined the subsidies received in respect to the action plan from 2003 to 2005, as well as those anticipated for 2006. For the subsequent years, we used the subsidy projections available at the time of the audit.

**Net Cost of Actual and Estimated Investments<sup>17</sup>**  
**(\$000)**

|                               | Annual average<br>1992-2001 | 2002   | 2003   | 2004   | 2005   | 2006    |
|-------------------------------|-----------------------------|--------|--------|--------|--------|---------|
|                               | Actual                      |        |        | PTI    |        |         |
| Total investments             | 16,000                      | 65,584 | 97,449 | 76,542 | 85,317 | 126,611 |
| Subsidies                     |                             |        |        |        |        |         |
| Federal                       | 4,125                       | 3,757  | 7,798  | 1,749  | 14,318 | 4,568   |
| Provincial                    | 4,125                       | 12,799 | 34,648 | 13,595 | 18,919 | 7,335   |
| SOFIL                         |                             |        |        |        |        | 60,800  |
| Total subsidies               | 8,250                       | 16,556 | 42,446 | 15,344 | 33,237 | 72,703  |
| Cash payments                 |                             | 6,641  | 4,674  | 6,204  | 6,124  | -       |
| Financial reserves            |                             | -      | -      | -      | 9,483  | 6,309   |
| Debt financing of investments | 7,750                       | 42,387 | 50,329 | 54,994 | 36,473 | 47,599  |

Note: The amount of the subsidies between 1992 and 2001 was estimated on the basis of the overall budget for the three-partner program to rebuild urban infrastructure (PTRI) and is an approximate figure. Data from 2002 to 2006 were provided by the Service des finances.

Between 2003 and 2005, the Ville de Montréal used subsidies available under the Infrastructures Québec (IQ) program, the Canada-Québec Infrastructure Works Program (CQIWP) and the Québec-Municipalité (QM) program. Together, they totalled \$91.02 million: \$42.44 million in 2003, \$15.34 million in 2004, and \$33.24 million in 2005. These programs will end in 2006.

For 2006 and subsequent years, the Ville de Montréal plans to take advantage of new programs, such as the gas tax, administered by the Société de financement des infrastructures locales (SOFIL), for a confirmed amount of \$250 million over five years (for 2006, the Ville de Montréal submitted a list of projects totalling \$191 million), the Strategic Investment Fund (SIF) for an amount of \$118 million (reserved exclusively for upgrades to the Atwater and DesBaillets plants) and the Fonds d'investissement rural (FIRM) for approximately \$45 million to \$50 million (at the time of the audit, the City was about to finalize the projects to be submitted).

Together, the subsidies used since 2003 (\$91.02 million) and those confirmed in 2006 (\$418 million) total approximately \$509 million, leaving a shortfall of \$491 million.

Moreover, the legislative provisions that existed at the time that the Ville de Montréal introduced the special water tax in 2004 have been modified since the 2005 adoption of Bill 134 (*Act to again amend various legislative provisions concerning municipal affairs*). These new provisions have changed the rules by according local municipalities greater flexibility in terms of funding certain expenditures, whereas for the agglomeration, certain restrictions remain (section 133 of Bill 134). Accordingly, local municipalities are now allowed to finance all of the expenditures related to water supply services, rather than only capital expenditures.

These new provisions for local municipalities are compatible with the points of view of all of the managers we met with at the SITE and the Service des finances, who contend that all of the operating and capital expenditures related to water management (the "Water Fund") are currently funded by general taxes, the special water tax (for the Ville de Montréal portion), rates and subsidies, and that this fund serves to finance operating expenses (e.g., energy and chlorine costs), capital expenditures (e.g., replacement of sewer or water mains) and debt expenses.

In our opinion, given the current context of budget cutbacks, inflation and potentially higher project costs, the fact that the amounts intended for the "Water Fund" might, at the local or possibly even the agglomeration level, serve to finance both operating and capital expenditures, could affect, or even jeopardize, the level of anticipated investment with respect to water infrastructure systems.

The following considerations also need to be taken into account:

- a cumulative investment deficit (\$391.8 million) which, if the shortfall is not addressed, will have a considerable impact on the plan approved by the city administration, in terms of the established 20-year target and the amounts of future investments. This situation will eventually force the Ville de Montréal to review its financing strategy;
- a considerable gap (\$491 million) in terms of the anticipated subsidies required to fund the \$200 million in annual investments, which may cause a delay in achieving the 2013 target for the self-financing of the investment plan. This would force the Ville de Montréal either to incur debt, which would result in a significant increase in the water tax to address the shortfall, or to review its priorities or postpone certain projects.

Although the information we obtained indicates that the Service des finances does not intend to impose the budgetary constraints facing the Ville de Montréal on water management, those responsible for water management must nevertheless re-evaluate their overall investment and financing strategies for water-related expenditures in order to achieve the objectives set for water infrastructure rehabilitation. Reviewing the overall financing strategy is even more important when one considers that a significant percentage of the City's sewer and water supply systems have already, or are about to, come to the end of their useful life.

### **Recommendations**

In order to ensure that the required level of investment is achieved within the established time frame and counter fluctuations in the available budgets that could jeopardize the established strategy, the Direction du développement de la gestion de l'eau should take the necessary steps to:

- **periodically update its investment plan and financing strategy;**
- **continue to actively seek out subsidies;**
- **establish an overall, up-to-date water management plan that takes into account the optimization of all operating and capital expenditures required to ensure effective water management.**

### ***Actions proposed by the Direction du développement de la gestion de l'eau***

***"The investment plan, financing plan and pro forma budget will be reviewed by the end of February 2007." (Planned completion: March 2007)***

According to our analysis, budget documents and certain press releases issued by the Ville de Montréal concerning the water management project imply that the new water tax will be used to rehabilitate the water supply system infrastructure.

However, we have ascertained that the Direction du développement de la gestion de l'eau instead intends to use these amounts to finance all of the City's water-related expenses, as permitted by the new legislative provisions to this effect at the local level. With regard to the agglomeration, the same approach will be used in cases where the legislative provisions allow it.

In our opinion, the rhetoric and communications surrounding the use of the special water tax are confusing and should be adjusted to reflect the new approach.



## **Recommendation**

**To ensure transparency, we recommend that the city administration be clearer in its press releases and other communications as to its approach to the use of the special water tax.**

### ***Actions proposed by the Direction générale***

***"A joint Finances/SITE committee is working to prepare an action plan addressing the use of the special tax." (Planned completion: March 2007)***

### **Creation of financial reserves**

In order to finance the investment plan, the Ville de Montréal introduced a special water tax in 2004 that is supposed to gradually increase until 2013, at which time the ceiling of \$200 million would be reached. Since its implementation, the tax has generated a total of roughly \$67.5 million: \$25 million in 2004 and \$42.5 million in 2005. As at December 31, 2005, there was an available balance of \$14.3 million posted in the financial statements of the Ville de Montréal.

Following the creation of the 16 related municipalities and the agglomeration, and pursuant to section 569.7 of the *Cities and Towns Act*, plans were made to create two financial reserves—one under the jurisdiction of the agglomeration and the other under the jurisdiction of the Ville de Montréal—requiring the adoption by the various councils of a resolution to this effect. At the time of the audit, only the latter reserve had been created.

Given that it has been impossible to introduce a special water tax throughout the agglomeration, the Ville de Montréal maintained a special water tax in its boroughs in order to finance its investment plan and introduced a rate structure for the reconstituted municipalities, primarily for water supply services.

In order to normalize the situation with respect to the levying of a tax for all water-related expenditures throughout the agglomeration and the City (taxes supporting expenditures not financed through water supply revenues), steps have been taken with the Ministère des Affaires municipales et des Régions (MAMR) to amend section 133 of Bill 134. However, the tax situation in 2007 is expected to be the same as in 2006. The city administration is pursuing efforts with the MAMR to obtain legislative changes concerning a tax specific to water management, at both the agglomeration and local (Ville de Montréal) levels.

For 2006, the Service des finances established for the boroughs and the agglomeration (primarily at the SITE) coding mechanisms in the SIMON integrated management system (Finances et Approvisionnement). These mechanisms will make it possible to record expenditures related to water management separately. The boroughs have also been instructed to use this new coding system to account for their water management expenses.

Based on the information obtained, the Service des finances has not verified that these instructions are being applied. In our opinion, the Service des finances will have to take steps to ensure that these instructions are being followed and respected and also validate the financial information posted to the SIMON system.

It is also important to point out that other instructions will have to be issued to ensure a clear distinction exists between operating expenditures and water-related capital expenditures. For example, these instructions could specify under what circumstances wages should be capitalized, depending on the nature of the work being performed.

#### **Recommendations**

**The Service des finances should ensure that the instructions required to ensure the separate accounting of expenditures related to water management are put into application in order to be able to ensure rigorous follow-up.**

**We also recommend that the Service des finances, along with the Direction du développement de la gestion de l'eau, issue the instructions necessary to provide a framework for the operating and capital expenditures included in the "Water Fund," so that the operations are accounted for properly.**

#### ***Actions proposed by the Finances/SITE Joint Working Committee***

*"The joint Finances/SITE committee will establish the framework necessary to ensure the proper accounting of financial activities related to the Water Fund."*

*In addition, a project will be set up in the coming weeks to determine and implement, throughout all of the boroughs, a resource management software program to ensure the accurate accounting of all maintenance and capital costs related to water infrastructures and facilities.*

*Also, we are working on a matrix that will make it possible to produce budget and project status reports. These reports will be used in particular to track subsidy programs.” (Planned completion: February 2007)*

### **Organizational structure**

As we pointed out earlier, in 2003, the city administration hired an external firm to establish a more appropriate organizational model for water management in order to respond to the needs of the population, while taking into account the dynamic of the new city and its boroughs. In July 2003, the firm proposed an organizational structure that included a supply unit, a treatment unit and a unit to provide support and oversee the allocation of water management responsibilities among the boroughs and the central municipality.

This proposal was presented to the Comité directeur de la gestion de l'eau, which, after analysis, presented it to the Comité exécutif. The Comité exécutif approved it in November 2003.

In January 2006, the structure of the SITE comprised the following divisions:

- Direction de l'administration et du soutien technique;
- Direction de l'ingénierie de voirie;
- Direction de l'environnement;
- Direction du transport – planification et grands projets;
- Direction du bureau de projet SITE;
- Direction du développement de la gestion de l'eau.

Four other divisions were also created under the Direction du développement de la gestion de l'eau:

- Direction du plan directeur et des technologies de l'eau;
- Direction de la gestion stratégique des réseaux d'eau;
- Direction de la production de l'eau potable;
- Direction de l'épuration des eaux usées.

Subsequently, in order to ensure an innovative and effective approach to water management, plans were made to combine, within a new Service de l'eau, the administrative units responsible for water management within the territory of the Ville de Montréal that currently report to the SITE.

The managers of the Direction du développement de la gestion de l'eau who we met indicated that the structure outlined in the 2006 budget was transitional, awaiting the creation of the Service de l'eau, which was supposed to occur in 2006. This new structure is expected to become operational in 2007. The new Service de l'eau will bring together all water management resources under a single entity and thus improve the decision-making process. The creation of the Service de l'eau would, indeed, enable its head to present water management-related files directly to the Direction générale and the city administration, thereby eliminating the need to go through another division.

Until the Service de l'eau is up and running, the Direction du développement de la gestion de l'eau oversees water management. The Direction du développement de la gestion de l'eau has already developed a new proposed structure for the Service de l'eau. The implementation of this structure necessitated the creation of approximately 56 positions in 2005 and will require the creation of an estimated 40 additional permanent positions in 2006.

The managers of the Direction du développement de la gestion de l'eau are gradually putting this new structure into place and recruiting the required personnel. However, they indicated to us that they were experiencing some recruitment difficulties, given the shortage of specialized resources in this field.

#### **Recommendation**

**We recommend that the city administration rapidly render a decision on the proposed changes to the structure of the SITE, so that the structure can become operational as of January 2007.**

#### ***Actions proposed by the Direction générale***

*"The administration has recognized that water management is a priority and has exempted the division from the current hiring freeze. Consequently, the new structure can be implemented as soon as the 2007 budget is adopted." (Planned completion: January 2007)*

#### **Auditor's Note**

**The new Service de l'eau was not created in January 2007; consequently, the head of the Direction du développement de la gestion de l'eau is still reporting to the assistant general manager of the SITE.**

## **Launch of three major projects**

In 2004, in keeping with the efforts made to improve water management throughout the territory of the Ville de Montréal, the city administration authorized the launch of a call for tenders for the professional services required to implement three main projects, namely:

- the implementation of a water supply and sewer system action plan to obtain comprehensive information on the infrastructure systems, establish priorities and specify investment requirements on an Island-wide basis (AP);
- the upgrade of the potable water production plants (PWPPU);
- the introduction of water meter-based user rates in the industrial, commercial and institutional (ICI) sector.

The necessity of prioritizing the launch of these three major projects was emphasized in various studies on the state of water infrastructure systems and financing conducted in 2002. In addition to the reported lack of investment, the studies stressed that information on the inventory and status of the systems varied considerably from one borough to the next, and that it was very important to take swift action to ensure reliable, quality service to the public and prevent the increase in costs that would result from inaction.

### **Action plan (AP) project**

In order to develop an integrated action plan for water supply and sewer systems throughout the territory of the Island of Montréal, a \$30.7-million professional services contract (with a term of up to 10 years) was granted in 2005. The work involved in this engineering mandate began early that same year. It is important to reiterate that the Ville de Montréal anticipates earmarking \$1.3 billion over 10 years toward the rehabilitation of its water supply and sewer systems.

The Ville de Montréal therefore plans to enable all stakeholders to obtain adequate information on these systems in order to determine operational priorities and subsequently establish the investments required to develop an action plan. Overall, this action plan must comprise the following elements:

- A georeferenced inventory of all the components of the systems;
- A database of all of the operations and inspections executed;
- A diagnosis of each of the sections;
- A needs assessment grid;
- A maintenance, rehabilitation and replacement program to be carried out in order of priority and taking into account the life cycle of the facilities.

Based on the information obtained from the managers we met and following consultation of a project status report dated March 31, 2006, we determined that the new Ville de Montréal does not currently possess a comprehensive, accurate diagnosis of the condition of Island-wide water supply and sewer systems, which constitutes the basic information required to establish an integrated action plan. Each municipal system on the Island has, in the past, been managed separately. Previous studies and existing knowledge and databases must, first and foremost, be assessed in order to be able to determine the subsequent activities to be undertaken. The AP project team, which has been operational since early 2005, is preparing to compile the data that will enable it to establish this diagnosis. Some boroughs and reconstituted municipalities have better information about their systems and are further ahead in establishing such a diagnosis and developing an action plan. However, in others, both knowledge and documentation are limited.

Based on the time frame proposed by the AP project team, the inspection of critical sections will begin only near the end of 2006, which means that a comprehensive diagnosis cannot begin until approximately the second quarter of 2007 and would be ongoing through until the end of 2008. In the meantime, ad hoc inspections are nevertheless being performed to take into account road-related work being carried out under the road repair program (RRP). As of March 31, 2006, the anticipated completion date for the first comprehensive action plan had been set for the second quarter of 2009

The AP team is currently working on compiling and analysing the available historical data (e.g., system plans and inventories, field surveys, information in certain databases, schematics from operational reports, system work orders or sheets, etc.), building a database for the entire territory using a shared computer platform and developing the strategic plan for the inspections to be conducted.

The work related to the shared database represents the foundation for establishing a diagnosis of the systems and, ultimately, developing an action plan. It is therefore critical to provide for mechanisms that will ensure the continuous updating of the compiled data.

Accordingly, the mandate granted under this project includes the issuance of recommendations on the acquisition and implementation of the necessary equipment, systems and resources to ensure the effective management and treatment of the corresponding data.

Based on the information gathered from the main stakeholders, the AP team immediately undertook steps to recover, via an interface, the information stored in various asset management systems (e.g., Aquadata) used by certain boroughs and reconstituted municipalities. The situation is more worrisome, however, in those boroughs and reconstituted municipalities that do not have a computerized system in place to manage their infrastructure. No formal mechanisms have yet been implemented to recover

historical data on sewer and water supply system operations once the AP team has compiled the existing data (e.g., pipe breaks, repairs to fire hydrants). The managers we met indicated that potential solutions are currently being studied to better structure the information recovery process. One notable possibility involves the temporary use of an application that already exists at the Ville de Montréal, namely the work request management (GDT) application. In addition, the use of a standard data entry form could be introduced.

Meanwhile, we conclude that there is a risk in that the shared database that the AP team is in the midst of building, both for the primary and secondary systems, may not be up to date when it comes time to diagnose the condition of the infrastructure systems and develop the action plan. It should be remembered that this action plan will not be available for another three years.

### **Recommendation**

**In order to develop an up-to-date database on the condition of the infrastructure systems, establish an accurate diagnosis and ensure the sustainability of the action plan, we recommend that the Direction du développement de la gestion de l'eau strive to recover, on a continuous basis, the data related to all operations conducted on the water supply and sewer systems of the boroughs and the reconstituted municipalities.**

### ***Actions proposed by the Direction du développement de la gestion de l'eau***

*"The managers responsible for the strategic management of water facilities and those responsible for the AP project are putting transitional measures in place to recover essential operational data.*

*Moreover, a project to assess specialized commercial software programs available on the market and analyse the GDT system being set up at the Ville de Montréal will be launched early in the year to respond to this need within the next six months." (Planned completion: July 2007)*

### **Potable water production plant upgrade (PWPPU) project**

The PWPPU project is also part of the City's major rehabilitation initiative to ensure effective water management. It involves the upgrade of facilities and treatment processes in the seven potable water production plants on the Island (Atwater, DesBaillets, Lachine, Pointe-Claire, Dorval, Pierrefonds and Sainte-Anne-de-Bellevue) in order to comply with the new regulation on potable water quality. A \$23.5 million professional services contract to this effect was granted in 2004. The work for this

engineering and architecture mandate began in 2005 and will continue for 10 years. During this same period, the Ville de Montréal plans to invest \$260 million in upgrades to its potable water plants.

The PWPPU project will cover the following:

- Bringing the potable water production plants up to standard;
- Replacing obsolete facilities and infrastructure;
- Improving existing processes.

Based on the information obtained from the managers we met and following the analysis of the project status report as of April 26, 2006, we ascertained that work is ongoing to establish an accurate diagnosis with respect to each of the plants in order to determine the technical and architectural modifications necessary to ensure that they meet the new potable water quality standards of the Ministère du Développement durable, de l'Environnement et des Parcs. More precisely, the managers responsible for the project confirmed that the diagnosis is nearly established for the Lachine, Pointe-Claire, Dorval, Pierrefonds and Sainte-Anne-de-Bellevue plants. As for the Atwater and DesBaillets plants, according to the information we obtained, the diagnosis should be complete by the end of 2006 or, at the latest, early 2007.

#### Project to implement water meters in industrial, commercial and institutional establishments (ICI project)

The studies commissioned in 2002 showed that the per capita consumption of potable water in the Ville de Montréal in 1999 was exceptionally high, almost twice as high as that in other major Canadian cities. These studies concluded that, in order to better control this consumption, it was necessary to assess the consumption patterns of various types of users. For industrial, commercial and institutional establishments, consumption needs to be assessed using meters, whereas in the residential sector, estimates can be made using a series of hypotheses.

A \$7.42 million professional services contract was granted in 2005 to carry out this project, which is expected to wrap up around 2009. Following this, the Ville de Montréal plans to earmark some \$60 million toward the installation of over 23,000 new water meters throughout the territory of the Ville de Montréal and the reconstituted municipalities. This figure will be over and above the 11,100 meters that are already in place.

The execution of the ICI project will make it possible to establish consumption profiles, help locate leaks that occur in the system, and establish an overview of potable water consumption, as well as an adequate and fair rate schedule.



Currently, the department is about to commence a pilot project to install 300 meters. Once this project is complete, the next steps will be to perform a preliminary market analysis, examine the execution scenarios, implement the selected scenarios and develop an overview of water consumption patterns.

#### Progress and tracking of key projects (AP, PWPPU, ICI)

Overall, we have the following observations to make in respect to the three projects:

- they are being adequately tracked. Monthly status reports are being produced and presented to the various management and project oversight committees;
- the project status reports focus primarily on actual costs as compared to the budget, achievements, key issues and the monitoring of relative performance indicators with respect to costs (CP or cost performance index) and deadlines (SPI or schedule performance index). The latest available status reports indicate that these performance indicators are close to their targets.

#### **Operational priorities for the water supply and sewer systems**

As we mentioned earlier, the new Ville de Montréal does not currently have an accurate, Island-wide overview of the condition of its water supply and sewer systems. The work that will lead to the establishment of a precise diagnosis and the development of a comprehensive, integrated action plan for the whole of the Island are currently under way as part of the AP project.

When the action plan is ready, it may be possible to focus more specifically on what, where, when and how investments should be made. Information collected on the systems will make it possible to gain insight into respective project priorities and make better-informed decisions.

Without an accurate diagnosis of the condition of water supply and sewer systems, we have observed that managers have established selection criteria to guide local water and sewer main project planning. The selected projects are chosen based on the following criteria:

- The infrastructures involved are unsafe, are causing considerable problems to users or are contributing to system overflows;
- The project involves local mains as part of an undertaking associated with the arterial RRP or local RRP;

- The project is associated with the problem of inlets made with materials including lead.

Although these criteria are more general than those that would result from a more in-depth knowledge of the condition of the systems, we have ascertained that they are nevertheless based on the criteria advocated by the Ministère des Affaires municipales et des Régions (MAMR) in its action plan development guide.

**Given that the Ville de Montréal has undertaken the necessary steps to develop an action plan, this approach seems to us to be acceptable for the moment, as long as it is monitored closely and no significant delays in the established time frame occur.**

***Actions proposed by the Direction du développement de la gestion de l'eau***

*"The managers of the Direction de la gestion stratégique des réseaux d'eau and the managers in charge of the AP project will determine a strategy to compile information on water supply and sewer operations that will make it possible to establish a diagnosis.*

*Simultaneously, a preliminary zoom camera inspection program covering the territory in its entirety will be conducted to establish a basic diagnosis of the sewer system.*

*Following this, complementary inspections will be carried out on sections where potential problems have been identified.*

*For the water supply system, a systematic fire hydrant inspection program will make it possible to establish a basic diagnosis.*

*Subsequently, a decision-support system will be identified and implemented by the end of 2007."  
(Planned completion: January 2008)*

**Overall planning**

**Strategic planning**

In order to ensure that all key water management issues are taken into consideration, it is necessary to develop the appropriate business plan. The establishment of such a plan will make it possible, among other things, to promote the convergence of the various efforts and mobilize the stakeholders concerned so as to achieve shared objectives.

To develop this plan, the Direction du développement de la gestion de l'eau must set an objective with respect to the condition in which it wishes to maintain its infrastructure systems, based on the results of the assessment of the obsolescence and functionality of the facilities, determine its priorities and establish a realistic time frame for the rehabilitation work. This plan must also take into consideration specific factors in play at the moment of its design, including the need to take urgent action in specific cases and the City's ability to pay.

Accordingly, the Direction du développement de la gestion de l'eau submitted its guidelines to its divisions in order to prepare a plan for each of the sectors according to their respective responsibilities. In May 2006, these divisions submitted their plans to the Direction du développement de la gestion de l'eau. The plans address the mission, vision, issues, orientations and actions that the divisions intend to pursue. These plans should be approved by the Direction du développement de la gestion de l'eau around mid-June 2006.

Subsequently, the Direction du développement de la gestion de l'eau will consolidate the sectoral plans into a strategic, comprehensive water management plan at the end of summer 2006 and will submit this plan to the city administration.

This strategic plan will make it possible to take into consideration and specifically state the key issues and risks inherent in water management, particularly as regards the rehabilitation of water infrastructure systems.

Finally, the appropriate master action plans will have to be developed, for example, those addressing potable water supply and the maintenance of local main systems. The master plan for the maintenance of local main systems should, among other things, contain the list of equipment to be maintained, the type of maintenance work to be carried out and maintenance schedules.

#### **Recommendation**

**We recommend that the Direction du développement de la gestion de l'eau continue the development of its strategic plan, and include in it all of the components that will promote, among other things, the achievement of its investment plan, updated in compliance with the policies of the city administration. The divisions concerned will subsequently have to develop the necessary master plans, within the established time frame.**

### ***Actions proposed by the Direction du développement de la gestion de l'eau***

*"Each division has developed a strategic plan. The head of the Direction du développement de la gestion de l'eau must review and finalize all of the strategic plans, which will be completed by early January 2007." (Planned completion: January 2007)*

### **Objectives and performance indicators**

Objectives and indicators must be defined in order to guide the planning of the activities and assess the results of the actions that are carried out in order to be able to make the appropriate modifications.

We have found various water management objectives in different documents, including sectoral plans and reports on themes and issues prepared as an overview of the expectations indicated in February 2006 by city councillors. Moreover, managers have mentioned other objectives, such as those related to the execution of the AP, PWPPU and ICI projects and the three-year capital works budget (PTI). Finally, other objectives have been, or are about to be, put forward in the management dashboards of certain divisions.

However, of the many documents we found containing objectives or related statements, we did not find any that clearly listed all of the goals that the Direction du développement de la gestion de l'eau seeks to achieve.

We also observed that the objectives identified in sectoral plans or reports on themes and issues are stated in general terms, which makes it more difficult to determine how successfully they have been achieved. We believe that it would be advantageous to review these objectives to include measurable parameters or clarify them by providing sub-objectives. Such details would make it easier to track their achievement.

For example, the following general objectives should be clarified:

- "Proceed with upgrades to potable water plants and main systems while ensuring reliable production and distribution";
- "Maintain asset integrity";
- "Review our maintenance practices for critical systems and equipment";
- "Pursue the optimization of processes in order to contain increases in variable costs."

According to the Direction du développement de la gestion de l'eau, efforts are already underway in order to develop measurable sub-objectives.

We also observed that objectives are stated in some divisions' management dashboards. These dashboards are tools that categorize results in terms of minimal, satisfactory and excellent performance. They are developed by the Direction de l'épuration des eaux usées and, since April 2006, by the Direction de la production de l'eau potable. However, the latter plans to review its performance measurement systems in order to improve its forecasts. This should be completed by the end of 2006 at the latest.

The Direction de la gestion stratégique des réseaux d'eau does not prepare similar dashboard reports. To do so, it would first have to implement the systems necessary to compile reliable information on relevant factors (e.g., pipe breaks, repair times, pipe pressure levels, etc.).

It is also noteworthy that the Direction de la gestion de l'eau is currently working on implementing a water management benchmarking system. This system will make it possible to identify the best management indicators and practices, as well as draw comparisons with those of other major Canadian cities, thereby zeroing in better on potential operational improvements. This project is expected to be completed in 2008.

#### **Recommendation**

**We recommend that the Direction du développement de la gestion de l'eau pursue its efforts to formalize its objectives, state them in measurable terms and establish the most appropriate performance indicators, in order to assess how successfully these objectives have been achieved.**

#### ***Actions proposed by the Direction du développement de la gestion de l'eau***

*"The finalization of strategic plans by the end of December 2006 will enable us to establish the objectives for each of the divisions, which will then establish the objectives for each sector. The results and schedules will be presented using tables encompassing targets from each division.*

*In addition, water management is an active component of the performance indicator program implemented by the Ministère des Affaires municipales in order to enable us to benchmark our results and target becoming more effective." (Planned completion: February 2007)*

## **Accountability**

Systematic, permanent accountability mechanisms must be in place to allow managers to accurately assess to what extent water infrastructure rehabilitation efforts are being effective. Accordingly, management reports must be produced periodically and include relevant information on the assessment of results achieved over a given period.

Accountability at the Direction du développement de la gestion de l'eau is ensured primarily through weekly meetings, attended by the managers concerned, as well as certain management reports.

During these weekly meetings, each of the divisions provides an update on ongoing projects, activities and problems encountered.

Management reports produced and submitted to the Direction du développement de la gestion de l'eau take many forms.

- **Semi-monthly reports on themes and issues**

These reports are produced every two weeks by the concerned Directions and are examined by the Direction du développement de la gestion de l'eau before final submission to the Bureau du maire. They provide updates on the expectations indicated by city councillors in February 2006 and present information on objectives, deliverables, actions undertaken and schedules by theme.

- **Management dashboard reports (monthly)**

For many years, the Direction de l'épuration des eaux usées has been preparing a monthly report in the form of a management dashboard that provides information on various parameters related to wastewater treatment. As this report fulfilled expectations, the head of wastewater management asked the two other divisions to adopt this format as well. In April 2006, the Direction de la production de l'eau potable submitted its first dashboard report. The Direction de la gestion stratégique des réseaux d'eau is not yet producing dashboard reports, but it has prepared a progress report on its activities, in which we found information on the number of metres of replaced and rehabilitated mains, the number of metres inspected and maintenance expenses.

- Report on the AP, PWPPU and ICI projects  
The Direction du développement de la gestion de l'eau also receives reports on the status of the AP, PWPPU and ICI projects from the Direction du bureau de projet.
- Financial reports  
Reports are produced regularly on budget expenditures and the PTI.
- Quarterly and annual reports  
The Direction de la production de l'eau potable anticipated submitting a first quarterly report on its activities from January to March 2006 in mid-June 2006. Moreover, reports on potable water quality are issued regularly by the city laboratory (Atwater and DesBaillets plants) or accredited laboratories (other plants) and submitted to the Gouvernement du Québec and the Direction de la production de l'eau potable. As for the Direction de la station d'épuration des eaux, it has been preparing an annual review of its activities for several years now.

The Direction du développement de la gestion de l'eau's accountability in respect to the management of the SITE is accomplished in large part through management meetings.

As we observed, there are several sources of information on operations. Each of these sources contains specific information on a particular subject. However, there are no periodic reports that present a summary of these results in the form of a water management overview. Such an overview would make it possible to gain an overall perspective of the situation and therefore more effectively assess the activities carried out, better plan the steps to be taken to achieve established objectives and ensure optimal co-ordination among the various stakeholders.

An overview of this nature could cover such factors as:

- Government subsidies received and forthcoming, and their uses;
- Comparison of project plans and actual activities;
- Progress made on major projects (AP/PWPPU/ICI) and their execution costs;
- Extent to which established objectives are being met;
- Workflow of regular operations;
- Corrective measures to be featured.

Moreover, in May 2004, the Comité exécutif asked the SITE to submit quarterly reports on the status of water management-related operations and main achievements. In May 2005, the SITE submitted to the Comité exécutif a report on the investments, main achievements and new projects carried out in 2004.

The Comité exécutif received this report at a meeting held on May 18, 2005. Between that date and our audit, no other reports had been submitted to the Comité exécutif.

## **Recommendations**

**We recommend that the Direction du développement de la gestion de l'eau pursue the efforts undertaken so that each of its divisions develop a report on the execution of their operations, using the management dashboard format, to provide access to the information relevant to decision making.**

**We also recommend that the Direction du développement de la gestion de l'eau produce a periodic report on water management to the Service des infrastructures, transport et de l'environnement and that the latter submit this report to the city administration to indicate to what extent the operations carried out are helping to meet the established objectives and investment plan pertaining to water infrastructure system rehabilitation.**

### ***Actions proposed by the Direction du développement de la gestion de l'eau***

***"The Direction de la production de l'eau potable, the Direction de la station d'épuration des eaux usées and the Direction de la gestion stratégique des réseaux d'eau have developed management dashboards that are updated monthly and make it possible to ensure the thorough monitoring of operations, thereby facilitating decision-making. (Planned completion: July 2006)***

***In addition, briefs on specific issues are submitted every two weeks to the city administration, keeping it informed on the status of key projects and issues: ICI, IP, Lead, Direction de la production d'eau potable, Direction de la station d'épuration des eaux usées, Direction de la gestion stratégique des réseaux d'eau.***

***The management dashboards, briefs on specific issues, and monitoring of operating and capital expenditures make it possible to verify to what extent objectives and the investment plan are being achieved. (Planned completion: ongoing)***

***A rendering of account will be made at the end of the fiscal year." (Planned completion: March 2007)***



## **ACCESS TO INFORMATION**

We were able to consult all files, documents and records pertaining to the accounts and operations of the Ville de Montréal, as well as all paramunicipal corporations and municipal organizations. We were able to obtain the information, reports and explanations deemed necessary from all civil servants and employees.

This report contains comments received from municipal departments, paramunicipal corporations and municipal organizations before March 31, 2007 for the quasi-majority of observations and comments emanating from the audit.

## APPENDIX

|  |   |
|--|---|
| Article 107 of the <i>Cities and Towns Act</i>                           | 3 |
| List of audit reports issued (statements or other financial information) | 8 |
| Employees of the General Auditor Office                                  | 9 |

### VALUE FOR MONEY AUDITS FLOW CHART

|                                |    |
|--------------------------------|----|
| - Planning                     | 11 |
| - Auditing and report          | 12 |
| - Annual report and follow-ups | 13 |

### GENERAL AUDITOR'S OFFICE REPORT ON EXPENSE ACCOUNTS

|                              |  |
|------------------------------|--|
| Auditors' Report             |  |
| Schedule of expense accounts |  |

## **ARTICLE 107 OF THE CITIES AND TOWNS ACT**

### **IV.1. — Chief auditor**

- Chief auditor.** 107.1. The council of every municipality having 100,000 inhabitants or more shall have an officer called the chief auditor.  
2001, c. 25, s. 15.
- Term.** 107.2. The chief auditor shall, by a resolution approved by a two-thirds majority of the votes of the members of the council, be appointed for a term of seven years. The term may not be renewed.  
2001, c. 25, s. 15.
- Ineligibility.** 107.3. In no case may the following persons act as chief auditor:  
1) a member of the council of the municipality and, where applicable, of a borough council ;  
2) the associate of a member mentioned in subparagraph 1 ;  
3) a person who, personally or through an associate, has any direct or indirect interest in a contract with the municipality or a legal person referred to in paragraph 2 of section 107.7.
- Disclosure of interest.** The chief auditor shall disclose in every report produced any situation that could cause a conflict between the chief auditor's personal interest and duties of office.  
2001, c. 25, s. 15.
- Inability or vacancy.** 107.4. If the chief auditor is unable to act, or if the office of chief auditor is vacant, the council shall,  
1) not later than at the sitting following the inability to act or the vacancy, designate a person qualified to replace the chief auditor, for a period of not more than 180 days ;  
2) not later than at the sitting following the inability or the vacancy, or not later than at the sitting following the expiry of the period fixed under paragraph 1, appoint a new chief auditor in accordance with section 107.2.  
2001, c. 25, s. 15.
- Expenses.** 107.5. The budget of the municipality shall include an appropriation to provide for payment of a sum to the chief auditor to cover the expenses relating to the exercise of the chief auditor's duties.
- Amount of appropriation.** Subject to the third paragraph, the appropriation must be equal to or greater than the product obtained by multiplying the total of the other appropriations provided for in the budget for operating expenses by  
1) 0.17 % where the total of those appropriations is less than \$100,000,000 ;  
2) 0.16 % where the total of those appropriations is at least \$100,000,000 and less than \$200,000,000 ;  
3) 0.15 % where the total of those appropriations is at least \$200,000,000 and less than \$400,000,000 ;  
4) 0.14 % where the total of those appropriations is at least \$400,000,000 and less than \$600,000,000 ;  
5) 0.13 % where the total of those appropriations is at least \$600,000,000 and less than \$800,000,000 ;

- 6) 0.12 % where the total of those appropriations is at least \$800,000,000 and less than \$1,000,000,000 ;
- 7) 0.11 % where the total of those appropriations is at least \$1,000,000,000.

|                            |  |
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| Exception.                 | Where the budget of the municipality provides for appropriations for operating expenses related to the operation of a system of production, transmission or distribution of electric power, 50 % only of those appropriations shall be taken into account in establishing the total of the appropriations referred to in the second paragraph.<br>2001, c. 25, s. 15; 2001, c. 68, s. 5.   |
| Duties.                    | 107.6. The chief auditor is responsible for the application of the municipality's policies and standards relating to the management of the human, material and financial resources assigned to auditing.<br>2001, c. 25, s. 15.  |
| Duties.                    | 107.7. The chief auditor shall audit the accounts and affairs <ol style="list-style-type: none"><li>1) of the municipality ;</li><li>2) of every legal person in respect of which the municipality or a mandatary of the municipality holds more than 50 % of the outstanding shares or voting shares or appoints more than 50 % of the members of the board of directors.</li></ol> 2001, c. 25, s. 15.   |
| Audit.                     | 107.8. The audit of the affairs and accounts of the municipality and of any legal person referred to in paragraph 2 of section 107.7 comprises, to the extent considered appropriate by the chief auditor, financial auditing, auditing for compliance of their operations with the Acts, regulations, policies and directives, and auditing for value-for-money.  |
| Audit.                     | The audit must not call into question the merits of the policies and objectives of the municipality or legal persons referred to in paragraph 2 of section 107.7.  |
| Documents and information. | The chief auditor in the performance of his duties is authorized <ol style="list-style-type: none"><li>1) to examine any document concerning the affairs and accounts relating to the objects of the audit ;</li><li>2) to require from any employee of the municipality or any legal person referred to in paragraph 2 of section 107.7 all information, reports and explanations the chief auditor considers necessary.</li></ol> 2001, c. 25, s. 15; 2001, c. 68, s. 6. |
| Audit.                     | 107.9. Any legal person receiving an annual subsidy from the municipality of at least \$100,000 is required to have its financial statements audited.  |
| Copy.                      | The auditor of a legal person not referred to in paragraph 2 of section 107.7 that receives an annual subsidy from the municipality of at least \$100,000 shall transmit to the chief auditor a copy of <ol style="list-style-type: none"><li>1) the annual financial statements of the legal person ;</li><li>2) the auditor's report on the statements ;</li></ol>   |

|                            |   |
|----------------------------|---|
|                            | 3) any other report summarizing the auditor's findings and recommendations to the board of directors or the officers of the legal person.   |
| Documents and information. | That auditor shall also, on the request of the chief auditor,<br>1) place at the disposal of the chief auditor any document relating to the auditor's audit and its results ;<br>2) provide all information and explanations the chief auditor considers necessary concerning the auditor's audit and its results.  |
| Additional audit.          | Where the chief auditor considers that the information, explanations and documents provided by an auditor under the second paragraph are insufficient, the chief auditor may conduct such additional audit as he considers necessary.<br>2001, c. 25, s. 15.  |
| Audit.                     | 107.10. The chief auditor may conduct an audit of the accounts or documents of any person having received financial assistance from the municipality or from a legal person referred to in paragraph 2 of section 107.7, as regards the use made of such assistance.  |
| Accounts and documents.    | The municipality and the person having received the financial assistance are required to furnish to or place at the disposal of the chief auditor any accounts and documents that the chief auditor considers relevant to the performance of the chief auditor's duties.  |
| Information.               | The chief auditor is authorized to require from any officer or employee of the municipality or from any person having received financial assistance any information, reports and explanations the chief auditor considers necessary to the performance of the chief auditor's duties.<br>2001, c. 25, s. 15.  |
| Audit.                     | 107.11. The chief auditor may conduct an audit of the pension plan or pension fund of a pension committee of a municipality or a legal person referred to in paragraph 2 of section 107.7 where the committee requests the chief auditor to do so with the approval of the council.<br>2001, c. 25, s. 15.  |
| Duties.                    | 107.12. The chief auditor shall, every time the council so requests, investigate and report on any matter within the competence of the chief auditor. In no case, however, may the investigation take precedence over the primary responsibilities of the chief auditor.<br>2001, c. 25, s. 15.   |
| Report.                    | 107.13. Not later than 31 August each year, the chief auditor shall transmit to the council a report presenting the results of the audit for the fiscal year ending on the previous 31 December and indicate any fact or irregularity the chief auditor considers expedient to mention, in particular in relation to<br>1) control of revenue including assessment and collection ;<br>2) control of expenditure, including authorization, and compliance with appropriations ;<br>3) control of assets and liabilities including related authorizations ;<br>4) accounting for operations and related statements ;<br>5) control and safeguard of property owned or administered ; |

6) acquisition and utilization of resources without sufficient regard to economy or efficiency ;

7) implementation of satisfactory procedures to measure and report effectiveness in cases where it is reasonable to do so.

Report. The chief auditor may also, at any time, transmit to the council a report of the findings and recommendations that, in the opinion of the chief auditor, warrant being brought to the attention of the council before the filing of the annual report.  
2001, c. 25, s. 15.

Report. 107.14. The chief auditor shall report to the council on the audit of the financial statements of the municipality and the statement fixing the aggregate taxation rate.

Report. In the report, which shall be transmitted to the treasurer not later than 31 March, the chief auditor shall state, in particular, whether  
1) the financial statements faithfully represent the municipality's financial position on 31 December and the results of its operations for the fiscal year ending on that date ;  
2) the aggregate taxation rate has been fixed in accordance with the regulations made under section 262 of the Act respecting municipal taxation (chapter F-2.1).  
2001, c. 25, s. 15.

Report. 107.15. The chief auditor shall report to the boards of directors of the legal persons referred to in paragraph 2 of section 107.7 on the audit of the financial statements before the expiry of the time within which they are to produce their financial statements.

Report. In the report, the chief auditor shall state, in particular, whether the financial statements faithfully represent their financial position and the results of their operations at the end of their fiscal year.  
2001, c. 25, s. 15.

Testimony. 107.16. Notwithstanding any general law or special Act, neither the chief auditor nor the employees under the chief auditor's direction or the professionals under contract may be compelled to give testimony relating to any information obtained in the performance of their duties or to produce any document containing such information.

Immunity. Neither the chief auditor nor the employees under the chief auditor's direction may be prosecuted by reason of any act they have done or failed to do in good faith in the performance of their duties.

Immunity. No civil action may be instituted by reason of the publication of a report of the chief auditor prepared under this Act or of the publication in good faith of an extract or summary of such a report.

Immunity. Except on a question of jurisdiction, no recourse under article 33 of the Code of Civil Procedure (chapter C-25) or extraordinary recourse within the meaning of that Code may be exercised nor any injunction granted against the chief auditor, the employees under the chief auditor's direction or the professionals under contract acting in their official capacity.

**Annulment.**

A judge of the Court of Appeal, on a motion, may summarily annul any proceeding instituted or decision rendered contrary to the provisions of the first paragraph.  
2001, c. 25, s. 15.

**Audit committee.**

107.17. The council may establish an audit committee and determine its composition and powers.  
2001, c. 25, s. 15.

## **LIST OF AUDIT REPORTS ISSUED (STATEMENTS OR OTHER FINANCIAL INFORMATION)**

The audit of the financial statements of the Ville de Montréal as at December 31, 2005, allowed us, as well as the external auditors, to issue an unqualified report in this respect.

At press time for the present report, we had also issued unqualified reports on the following financial statements or financial information:

|   | <b>2006</b> | <b>2005</b> |
|---|-------------|-------------|
| Fonds des conduits souterrains  |             | X           |
| Société de développement de Montréal  | X           |             |
| Société d'habitation et de développement de Montréal  | X           |             |
| La Corporation d'habitations Jeanne-Mance   | X           |             |
| La Société de transport de Montréal (covérificateur)  | X           |             |
| Société du Parc Jean-Drapeau  | X           | X           |
| Société de gestion Marie-Victorin   | X           |             |
| Anjou 80  | X           |             |
| Régime complémentaire de retraite des employés non syndiqués de l'Office municipal d'habitation de Montréal       |             | X           |
| Régime complémentaire de retraite des employés cols blancs de l'Office municipal d'habitation de Montréal         |             | X           |
| Régime complémentaire de retraite des employés cols bleus de l'Office municipal d'habitation de Montréal          |             | X           |
| Conseil des arts de Montréal  | X           | X           |
| Office de consultation publique de Montréal   |             | X           |
| Tableau des dépenses mixtes – Ville de Montréal   | X           |             |
| Régime de rentes pour le personnel de la Commission des services électriques de Montréal                          |             | X           |
| Conseil interculturel de Montréal   |             | X           |
| Programme d'aide gouvernementale au transport en commun – Réseau initial du métro et ses prolongements            |             | X           |
| Programme d'assainissement des eaux usées   |             | X           |
| Marché Bonsecours   |             | X           |
| Commerce Design   |             | X           |
| Chaussegros-De-Léry   |             | X           |
| Office municipal d'habitation de Montréal – État des coûts de réalisation du projet logement abordable Québec (6) |             | X           |
| Office municipal d'habitation de Montréal – Projet logement abordable Québec (8)                                  |             | X           |
| Taux global de taxation de la Ville de Montréal   | X           |             |
| Taux global de taxation de l'agglomération de Montréal  | X           |             |



**EMPLOYEES OF THE GENERAL AUDITOR OFFICE  
YEAR 2006**

|  |   |
|--|---|
| <b>General Auditor</b><br>Michel Doyon, CA, MBA, CIA   | <b>Executive secretary</b><br>Hélène Girard (January – May)<br>Josiane Mauriello (May – )   |
| <b>Management agent – general support</b><br>Jean Roy, CGA (interim)<br><b>Administrative support</b><br>France Benny  | <b>Programmer</b><br>Yolaine Levasseur  |
| <b>Division chiefs</b><br>Denis Blouin, CA<br>Fernande Désormeaux, CGA<br>Robert Duquette, CA<br>Bruno Marcil, CA, CA•TI, CISA, CISM<br>(January – June)<br>Denis Tremblay, CGA  | <b>Senior Advisors*</b><br>Régent Bilodeau, CGA<br>Victor Marchand, CGA, CISA<br>André St-Pierre, CGA   |
| <b>Audit agents and advisors</b>   |   |
| Johanne Boudreau, BAA<br>Jacques Brisson, CA<br>Maryse Brunetta, CGA<br>Luc Chevalier<br>Marie Cormier, CA<br>Julien Faucher<br>André Gagnon, CMA<br>Lucie Gauthier, BAA<br>Bernard Goyette, CGA, CMA<br>Gilles Grimard, CGA<br>Jocelyne Laperrière, CGA, CA<br>Marcel Laplante<br>Nicole Larivière, BAA | Ngoc Le Quang, MMS<br>Chantal L'Heureux, CGA<br>Joanne Major, CA<br>Claude Mongelard, CA, CIA<br>Philippe Pitre, BAA<br>Clément Poirier, CGA<br>Michel Proulx, CGA<br>Ronel Rocher, CGA *<br>André Sergerie, CA<br>Isabelle Tremblay, CA<br>Roch Tremblay |

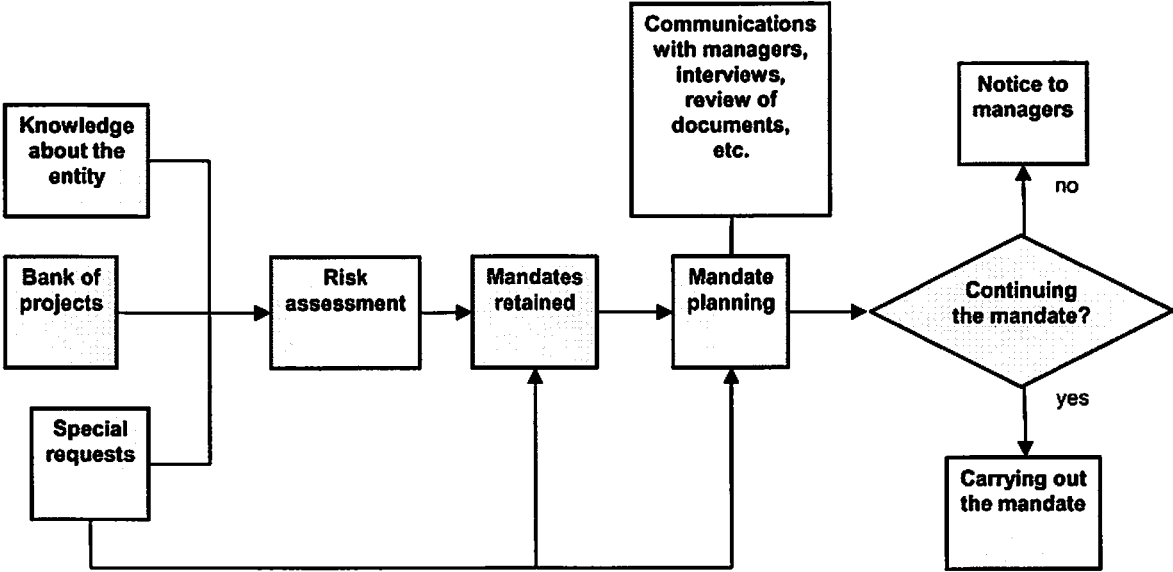
\* Temporary appointment

**VALUE FOR MONEY AUDITS  
FLOW CHART**

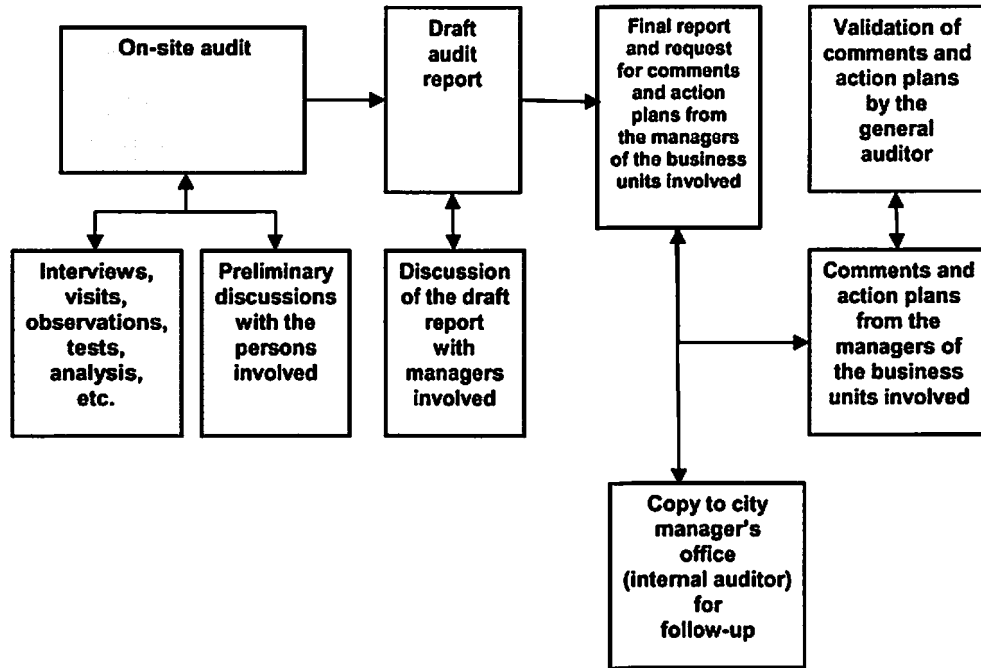
# Planning

Annual

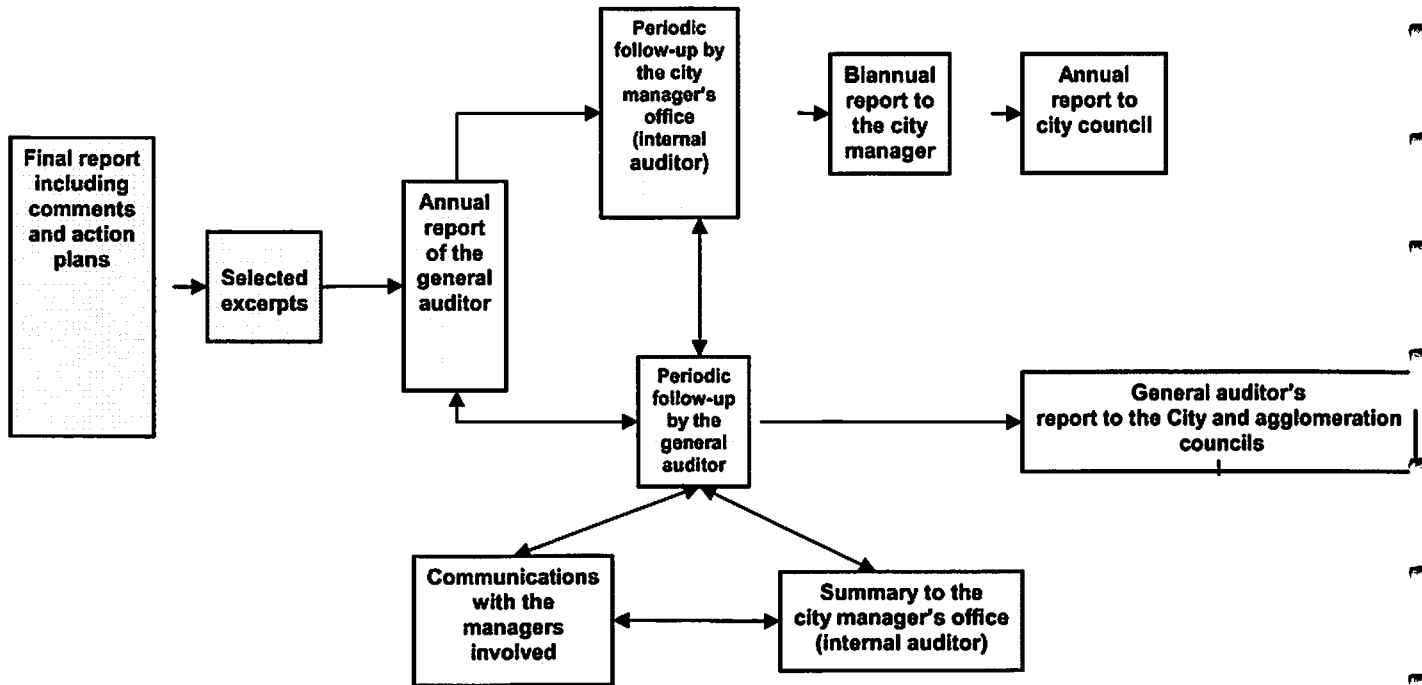
Mandates



# Auditing and Reports



# Annual report and follow-ups



**Office of the Auditor General of the  
Ville de Montréal**

*Schedule of Expense Accounts*

*December 31, 2006*

## Auditors' Report

To the Mayor,  
the Chairman and the Members of the Executive Committee and  
the Members of the Council of the Ville de Montréal

In compliance with the provisions of section 108.2.1 of the *Act respecting cities and towns*, we audited the expense accounts related to the Office of the Auditor General of the Ville de Montréal ("the City") for the year ended December 31, 2006. This financial information is the responsibility of the City's administration. Our responsibility is to express an opinion on this financial information based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial information is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial information. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial information.

In our opinion, these expense accounts in the amount of \$4,328,078 present fairly, in all material respects, the costs incurred by the Office of the Auditor General of the City during the year ended December 31, 2006 in accordance with generally accepted principles in municipal accounting in Quebec, as described in Note 3 to the financial statements of the City.

*Samson Béclair/Deloitte & Touche s.e.n.c.r.l.*

Chartered Accountants

March 16, 2007

**OFFICE OF THE AUDITOR GENERAL OF THE  
VILLE DE MONTRÉAL**

**Schedule of Expense Accounts**

year ended December 31, 2006

(in thousands of dollars)

|   | Budget       | Actual       | Actual       |
|---|--------------|--------------|--------------|
|   | 2006         | 2006         | 2005         |
|   | \$           | \$           | \$           |
| Compensation of personnel:                          |              |              |              |
| Employee wages                                      | 2,786        | 2,743        | 2,882        |
| Employee benefits                                   | 822          | 715          | 827          |
|   | <b>3,608</b> | <b>3,458</b> | <b>3,709</b> |
| Professional, technical and administrative services | 632          | 540          | 422          |
| Other operating expenses                            | 380          | 330          | 316          |
| <b>TOTAL</b>  | <b>4,620</b> | <b>4,328</b> | <b>4,447</b> |

This schedule of expense accounts of the Office of the Auditor General of the Ville de Montréal was prepared in accordance with generally accepted accounting principles in municipal accounting in Quebec, according to the same accounting policies described in Note 3 to the financial statements of the Ville de Montréal for the year ended December 31, 2006.