



# Report of the Auditor General of the Ville de Montréal to the City Council and to the Urban Agglomeration Council

For the Year Ended December 31, 2013

## PRESS RELEASE





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**For immediate release**

## **THE AUDITOR GENERAL OF THE VILLE DE MONTRÉAL PUBLISHES HIS FIFTH ANNUAL REPORT**

**Montréal, June 17, 2014** – In accordance with the provisions of the *Cities and Towns Act* (CTA), on June 12, 2014, Jacques Bergeron, the auditor general of the Ville de Montréal, presented Mayor Denis Coderre with his fifth annual report for the year 2013. As planned, the mayor tabled the report at yesterday afternoon's city council meeting and will do so again at the June 19 session of the urban agglomeration council.

The primary duty of the auditor general is to audit the financial statements of the city and the municipal bodies that it controls or that are included within its reporting entity. The auditor general's responsibilities also include verifying that city operations comply with acts, regulations, policies and directives and conducting value-for-money and information technology audits.

The 2013 annual report is available on the auditor general's website at [bvgmtl.ca](http://bvgmtl.ca). Following is a presentation of some of the highlights of the report that includes 11 value-for-money and information technology audits.

### **HIGHLIGHTS**

#### **[Follow-Ups to Recommendations from Previous Years](#)** (Section 5.1)

The percentage of the recommendations made by the Bureau du vérificateur général (BVG) that received concrete corrective measures is an essential indicator to ensure that departments and boroughs implement these recommendations promptly.

In 2013, the city's Direction générale set new performance targets for implementation of the recommendations made by the BVG. From now on, the business units will be evaluated on the following performance targets:

- **70%** of the recommendations made must be **completed** within the first year following their publication;
- **90%** of the recommendations made must be **completed** within the second year following their publication.

Regarding the 2012 recommendations more specifically, those whose status is considered “completed” represent a proportion of only 43% compared with the 70% annual performance target set by the municipal administration.

Furthermore, the follow-up to the 40 major recommendations made between 2005 and 2010, and not completed to the auditor's satisfaction as of March 31, 2012, reveals a situation similar to that of the previous year. No progress has been observed on the 26 recommendations that are still not completed.

### Monitoring of Municipal Building Indoor Air Quality (Section 5.2)

Ville de Montréal (the city) owns a major building inventory (1,338 buildings); these buildings service both Montrealers and municipal employees. This inventory is comprised of the following types of buildings such as:

- Sports and leisure centres;
- Community centres;
- Administrative offices;
- Municipal workshops;
- Police and fire stations.

Below are some of the common causes of indoor air pollution:

- Mismatched comfort parameters (e.g., excessively warm or cool temperatures, excessively high or low humidity rates, abnormal concentrations of carbon dioxide [CO<sub>2</sub>]<sup>1</sup>);

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<sup>1</sup> This gas—which is naturally present in the atmosphere—is generated by human breathing. Outdoor air must be brought in to reduce the concentration of CO<sub>2</sub>.

- Presence of biological and chemical contaminants in the indoor air (e.g., chemical substances, dust, mildew or fungi, bacteria, gases, vapours, odours, material and equipment releasing high quantities of volatile organic compounds [VOCs]<sup>2</sup> in the air);
- Poor maintenance (e.g., filters in poor condition) and/or inadequately functioning heating and ventilation systems resulting, for example, in an insufficient intake of fresh air or the infiltration of stale air.

There exists no law or by-laws that deals specifically with indoor air quality. However, various legislative sources on standardization set out the applicable responsibilities and obligations.

The objective of the audit was to ascertain the existence and implementation of a preventive maintenance program (PMP) for heating, ventilation and air conditioning (HVAC<sup>3</sup>) systems. We conducted this audit with the Service de concertation des arrondissements et des ressources matérielles (SCARM) and two boroughs.

We first sought to confirm that the city holds a complete and up-to-date inventory of the buildings for which it is responsible and air-related components. We noted that the administrative unit responsible for updating the inventory of the city buildings on an ongoing basis had no formal communication mechanism in place to enable the city's business units to notify it of changes. With respect to the inventory of 5,200 HVAC system components accounted for in the database, we also noted that it was neither complete nor up to date.

### Recommendation

**We recommend that the city take the required measures to implement a formalized mechanism for updating the inventory of buildings and their components.**

We also noted that the PMPs do not cover all HVAC system components that require maintenance and that they are incomplete or outdated with respect to maintenance activities and tasks as well as standard maintenance time requirements. It has been demonstrated that the absence of a PMP or an inadequate maintenance of HVAC systems hinders their efficiency and may adversely affect building occupant comfort levels.

<sup>2</sup> Volatile organic compounds can be released in the indoor air namely by building materials, janitorial supplies, furniture items, etc. Certain VOCs are toxic but only when they are present in high concentrations in the air.

<sup>3</sup> HVAC (heating, ventilation and air conditioning) is an acronym used to designate all air systems designed to ensure a safe and secure environment as well as occupant comfort.

**Recommendation**

**We recommend that the city take the required measures to update the content of the PMPs for the purpose of having PMPs that are complete and compliant with the city's and the industry's requirements for all buildings and their components.**

Also, the lack of reliability of the information entered in the information system used to generate the PMPs makes it difficult to accurately determine the actual percentage of PMPs that were implemented.

**Recommendation**

**We recommend that the city take the required measures to improve the reliability of the information entered in the existing computerized management system and optimize the use of said information.**

As for water cooling towers, they must be adequately maintained to prevent the growth of harmful bacteria such as *Legionella pneumophila*. Recall the events that occurred in Québec City in July 2012 (181 people were infected by the *Legionella pneumophila* bacteria propagated by a water cooling tower, of whom 14 died).

We noted that several water cooling towers were not associated with a PMP. Furthermore, certain PMPs that are in place for this type of equipment do not provide for bacteriological analyses of the water circulating in the towers to screen for the presence of bacteria.

**Recommendation**

**We recommend that the city take the required measures to have a specific PMP for each water cooling tower.**

### **Management of Software Licences** **(Service des technologies de l'information)** **(Section 5.3)**

The purpose of the *Copyright Act* of Canada is to protect the intellectual property of works; this ensures that, particularly in the area of computer programs, a work may not be copied, transmitted, downloaded or used without the permission of the author or copyright owner. For all applications that are not developed internally, software licences must be purchased from suppliers.

Our reason for conducting this audit stemmed mainly from the fact that three software supplier audits conducted from 2009 to 2012 cost the city more than \$2.7 million in non-compliance expenses for adjustment of software licences.

For the purposes of our audit, it must be pointed out that corporate software includes all applications installed on a central server that can be accessed from a workstation by means of a user code, while commercial software includes all types of licences generally associated with a particular workstation.

The objective of our audit was to assess the extent to which the existing control framework makes it possible to ensure that software licenses provided by various suppliers are complied with and that agreements concluded with the latter are established on the basis of needs and under the best conditions.

On the one hand, our findings lead us to conclude that the city runs the risk of incurring once again substantial expenses for failing to comply with software licences and having its image tarnished as a result.

This situation stems from shortcomings involving the current framework and more particularly as commercial software is concerned. Indeed, there is no centralized information system for the licences held and used for the purpose of monitoring compliance with the licences of various software products on a city-wide basis. By virtue of the guideline entitled “Droit d’auteur en matière de programme d’ordinateur” ([TRANSLATION] “Copyright as it pertains to computer programs”), all administrative units are responsible for managing software licences. However, in reality, none of them is actually held accountable for copyright infringements. Furthermore, no global reports are systematically generated on compliance monitoring and no formal accountability process exists in this respect. Finally, although the Service des technologies de l’information (STI) locks workstations to facilitate or regulate commercial software licence compliance, the efficiency of this measure is average given approximately 3,800 workstations—or 22% of the city’s total pool—are outside of its control.

### Recommendation

**We recommend that the city take necessary steps to amend the copyright guideline as it pertains to computer programs and, if necessary, any other relevant management framework, so that the Service des technologies de l'information:**

- **is designated as a corporate entity responsible for monitoring compliance with software licensing throughout the city;**
- **is invested with sufficient authority to exercise this responsibility, in particular with respect to obtaining appropriate information from business units for this purpose;**
- **has the necessary means for obtaining and validating the information required for compliance monitoring;**

**so that it can submit accountability reports to the Direction générale on copyright compliance as it pertains to computer programs throughout the city, at a frequency and in a format to be established.**

On the other hand, our findings lead us to conclude that this exposes the city to the risk that it will be unable to take effective action on either of the variables upon which optimization of its software licensing agreements depends, their prices and the number used.

Indeed, the abovementioned shortcomings concerning the control framework in place also hinder the optimization of software licensing agreements. For example, because of the lack of an overall profile of the licence inventory, the city does not have the information it needs to rationalize the use of software licences, and its negotiating power vis-à-vis its suppliers is weakened. To these shortcomings must be added, among others, the fact that there is no formalization of periodic centralized acquisition strategies based on needs, products and opportunities, particularly with respect to commercial software. Moreover, there are no officers responsible designated for individual suppliers, especially corporate software suppliers, thereby undermining the city's negotiating power.

### Recommendation

**We recommend that the city:**

- **evaluate the possibility, through a cost/benefit analysis, of applying the following principles in order to optimize software licensing agreements:**
  - **formalization of periodic centralized acquisition strategies,**
  - **designation of an officer responsible for each supplier;**
- **determine changes, if any, that need to be made to the various processes and implement them.**



## Security of Wireless Networks (Section 5.4)

With the rise of mobile communications and information equipment, wireless networks are everywhere. These networks make it possible to connect all kinds of equipment (e.g., laptop computers, tablets, smartphones) to corporate networks, such as that of Ville de Montréal. Wireless networks are often vulnerable to attacks by malicious individuals who attempt to access confidential information without needing to be physically present in the company.

The purpose of our audit was to determine if the controls that were put in place ensure that only duly authorized wireless networks are present within the city and that their security mechanisms prevent unlawful access to the city's corporate network.

While we conclude that, overall, the wireless networks are adequately protected, the city runs the risk of malicious persons taking advantage of security gaps in some wireless networks to access confidential information.

The lack of a process to detect unauthorized wireless networks has allowed some potentially prohibited wireless access points to be installed, some of which are concealed. Furthermore, some wireless access points, which were unsecured or used security protocols that were not robust, do not meet the city's security requirements.

### **Recommendation**

**We recommend that the city:**

- **implement a recursive process to detect unauthorized wireless networks and, where necessary, take the corrective action needed to remove them;**
- **ensure that all wireless access points are configured with a robust security protocol;**
- **ensure that wireless network equipment use only the most robust security protocols.**

## Penetration Tests (Section 5.5)

In an effort to ensure a reasonable level of confidence in the quality of existing controls and to reduce to an acceptable level the risks of cyberattacks on the information systems of some of the city's business units and bodies controlled by the city, we continued during 2013 a program of penetration testing that we initiated in 2012. This program is continuing in 2014.

The main objective is to test the security of computer environments that have been deemed critical and assess their resistance to a certain level of cyberattack originating externally and internally.

For obvious security reasons, we are unable to disclose the results of the penetration tests carried out in 2013. Besides, it is important to stress that the concerned business units have prepared appropriate action plans to address the deficiencies we have identified.

### **M-IRIS Project** (Section 5.6)

The implementation of the M-IRIS software package (Montréal – Inscription et recherche de l'information sur la sécurité) stems from the desire of the Service de police de la Ville de Montréal (SPVM) to improve the effectiveness of its police operations. By replacing several independent applications with an integrated data system, the intention is to provide police officers with a more user-friendly tool, quicker access to the most current data and cross-tabulation of information, thereby better targeting prevention activities and staff deployment.

The M-IRIS software package comprises various modules that are being progressively installed to the end of 2016. The concept behind the M-IRIS software package is first to enable officers to complete the information required in an incident report from their patrol car. Then, if this information meets certain criteria, it may be subject to an investigation. The file can then be added to in order to build a case to submit before the appropriate court. Information from incidents and citizens' reports is also factored into various analyses that the SPVM uses to guide its actions in the short and medium terms. Clearly, the M-IRIS software package is of strategic importance for the effectiveness of the operations of the SPVM.

The purpose of our audit was to ensure that the M-IRIS project has appropriate oversight and that the city has put in place the proper management practices to guarantee its efficiency and effectiveness.

A detailed report of the results of our audit was sent to the SPVM and to the Service des technologies de l'information, which was mandated to oversee the implementation of the M-IRIS software package. The report, which brings to light significant and worrisome weaknesses, remains confidential given the sensitive nature of the information it contains in regard to public safety. Nevertheless, we would like to stress that the comments received from the SPVM and from the Service des technologies de l'information suggest that they are in agreement with the contents of our audit report and with the recommendations that we have made.

## Food Inspection under the Agreement with the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec (MAPAQ) and Street Food Pilot Projects (Section 5.7)

Since January 1, 2002, the city has been responsible for food inspection on the territory of Montréal. An agreement is in place with the MAPAQ, designating the city as the authorized agent with regard to food inspection in exchange for a financial consideration of \$4.1 million for 2011 and 2012.

Food inspection covers restaurant operations and the retail sale, processing, distribution and storage of food products. The food sector, which counted over 15,300 establishments in 2012, is strictly regulated with regard to hygiene and sanitation. In addition, the arrival of street food vehicles has led to an increase in the number of establishments to be inspected.

Our audit consisted of two parts. First, we sought to ensure that the city has taken the appropriate measures to implement the MAPAQ inspection programs. Second, we sought to ensure that the processes for issuing public occupancy permits to operate street food vehicles comply with applicable laws and by-laws and that these vehicles undergo the same inspection procedures as stationary establishments.

The first thing we observed was that the budgets set aside for compensating inspectors had not been spent in their entirety because several inspector positions were vacant and had been since 2010 or earlier. This situation has led to delays in conducting the planned number of inspections. As of January 4, 2013, 2,754 establishments were affected by inspection delays, 467 of which had been assigned a response priority of 1. We also concluded that the job descriptions currently in use do not reflect the responsibilities that are actually assumed by inspectors and scientific advisors.

### **Recommendation**

**We recommend that the city rectify this situation as quickly as possible by filling the vacant positions and taking all the necessary measures to mitigate unexpected vacancies within its resources during the year to be able to fulfill the initial obligations included in the agreement with the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec. The city must also update the job descriptions for the positions of scientific advisor and food inspector so that these reflect the tasks performed and take into account the skills needed to use the required computer tools.**

**Recommendation**

**We recommend that the city ensure that inspection planning prioritizes establishments affected by inspection delays in order to meet the requirements of the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec regarding inspection frequency.**

We noted delays in updating the list of active establishments, which is maintained using an information management system (the Montréal food inspection system). Furthermore, the information received from the boroughs in this regard is often incomplete. This situation is a problem for certain food sectors, especially restaurant operations where the status of establishments changes regularly and quickly (opening, closing, new ownership, etc.). It is problematic in that it makes it more difficult to develop a clear plan for identifying delinquent establishments in a timely manner.

**Recommendation**

**We recommend that the city issue a directive to boroughs and related municipalities with details on the required information and stipulated timeframes. The city will need to take all the necessary means to ensure its list of active establishments is up to date at all times.**

The Ville-Marie borough granted two public area occupancy permits (out of a sampling of 10) to operators that had not already obtained a restaurant and retail sale permit from the MAPAQ, a prerequisite for issuing an operating permit. We did not find any evidence of subsequent follow-up by the borough with these two applicants to ensure that the MAPAQ did eventually grant them a permit.

**Recommendation**

**We recommend that the Ville-Marie borough require operators to obtain a permit from the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec before granting them the occupancy permit to operate a street food vehicle in the public domain, in accordance with the normative regulatory framework.**

In addition, differences were observed between the menus approved by the borough during the selection process for street food vendors and the food actually sold from the vehicles.

### Recommendation

**We recommend that the Ville-Marie borough examine the means of reinforcing the normative framework and the selection process to be able to enforce compliance with requirements surrounding the operation of street food vehicles as part of the pilot project.**

### Compliance with Laws and By-laws (Section 5.8)

To carry out activities and provide services, the boroughs must comply with a large number of laws and by-laws. If the city fails to comply with the laws and by-laws to which it is subject, it exposes itself to several serious consequences, in particular financial losses, legal action, public criticism and a negative image. To mitigate these non-compliance risks, it is now an integral part of good risk management practices to implement measures designed to ensure compliance with laws and by-laws.

In the wake of the city manager's approval of an administrative framework, borough directors, central department directors and the president of the Commission des services électriques de Montréal are now required to submit to the city manager a certificate of compliance every year attesting that they have taken every reasonable measure to ensure compliance with the laws and by-laws associated with their areas of activity.

We wanted to examine all the measures implemented by the boroughs to ensure compliance with certain laws and by-laws governing their activities and services.

More specifically, we focused on compliance with the following provisions of the laws and by-laws:

- The provisions of the *Act respecting land use planning and development* (ALUPD) on the contribution for parks, playgrounds and natural areas as well as the municipal by-laws enforced by the boroughs;
- The *Regulation respecting the hours of driving and rest of heavy vehicle drivers*;
- The *Private Security Act*.

In general we found that, despite the boroughs' obligation to follow an administrative framework on compliance with laws and by-laws and to submit to the city manager a certificate of compliance every year, the boroughs were unaware of or failed to properly enforce the laws and by-laws affecting the three areas of activity selected. In order for such certificates to assume their full value, it is essential that the boroughs take every reasonable

measure to ensure compliance with all the laws and by-laws and that the procedure be properly regulated.

In the following paragraphs, we deal specifically with the laws and by-laws examined.

### **The Act Respecting Land Use Planning and Development and Applicable Municipal By-laws**

The first legislation that we examined was the *Act Respecting Land Use Planning and Development* (ALUPD) and certain applicable by-laws. Under this Act, the city can claim, by municipal by-law, a contribution for parks before an applicant receives a subdivision permit (cadastral operation) or building permit. The purpose is to obtain funds to establish, maintain and improve parks and playgrounds and to preserve natural areas on the territory of Ville de Montréal. City council has jurisdiction over the contribution for parks. However the power to enforce the by-law has been delegated to the boroughs. Note that various by-laws have been adopted by the boroughs but, overall, they have the same objectives and essentially the same provisions. A simple reading of these by-laws illustrates their complexity and the need for the employees responsible for enforcing them to have expertise in the field and thorough knowledge of their content and specifics.

In the case of the three boroughs, we examined whether monitoring mechanisms had been established to ensure compliance with the ALUPD and the applicable by-laws. We also wanted to ensure that, when non-compliances were detected, they were properly handled.

Based on a sample of 18 files dealing with applications for a subdivision permit or building permit, we identified several shortcomings in the boroughs selected. The following paragraphs present our major findings:

- Employees in two of the boroughs were unaware of By-law 02-065, which was adopted in 2002, requiring the contribution for parks before a building permit is issued. This by-law must be enforced consistently by all boroughs. Failure to do so results in financial losses to the city since the boroughs do not bill the amounts relating to the contribution for parks to which it is entitled. Furthermore, when we broadened our audit, we were astounded to discover that employees in four of the remaining 16 boroughs were unaware of the by-law and, consequently, failed to enforce it. The amounts involved can be considerable and represent a substantial shortfall, especially given that the period we examined extends over more than 10 years. In one example, a borough failed to properly enforce By-law 02-065, leading to \$150,000 in lost revenue.

- Furthermore, in the case of one file selected, we found a contribution of \$160,000 that had been calculated but never billed. This file should have been billed two years earlier.
- In the vast majority of cases, files do not contain any trace of the analyses done by borough employees. This makes it difficult for managers to detect errors.
- Exemptions granted to individuals applying for permits must follow a thorough and documented analysis process to avoid granting an exemption where none is warranted, resulting in lost revenue to the city. We found cases that raised many questions about the strict enforcement of the current by-laws. For example, in one case an exemption was granted but the methodology that the borough used was unclear and prone to errors.
- In cases where a contribution for parks is deemed applicable, it is important for the calculation to be accurate and comply with the by-law. Since this involves complex calculations, specific precautions need to be taken by the boroughs to ensure accuracy. For example, in one case the results of our audit uncovered an error of nearly \$450,000. The borough had billed only \$144,000 whereas it should have billed nearly \$600,000 as part of the application for a subdivision permit.
- Permit application files require that employees have a very good knowledge of the current by-law. A review mechanism should be in place to reduce the risk of permit applications not being billed the contribution for parks when this is warranted. Our audit found that there was no such mechanism in place in the three boroughs examined. In addition, files were often approved by the person who had prepared them, which is incompatible with the person's duties. Moreover, in one borough regulatory requirements for approval of this type of contribution by the borough council were not followed.
- Given the complexity of the by-laws respecting the issuing of subdivision and building permits, which includes calculating contributions for parks, employees who are responsible for these activities should be competent and properly trained. It is important, therefore, that these employees be given a complete inventory of the laws and by-laws that may concern them. We found that the inventory compiled by the city and disseminated to the boroughs was incomplete. In addition, we did not find any specific procedural guide for training staff on how to enforce the laws and by-laws that concern them. Finally, we concluded that the training for employees and managers was incomplete and that not everyone involved had been trained.

To sum up, we are very perplexed by the results of our audit. Our examination of only a limited sample of 18 cases of permit applications for three boroughs raised major non-compliances and errors totalling nearly \$800,000. We can only conclude that the risk of underbilling is high and that the amount involved could be substantial, given that the by-law has been in effect for many years.

The risk of financial losses from one permit application file alone could reach hundreds of thousands of dollars, thus depriving the borough of revenue. Moreover, still regarding enforcement of this same by-law, the many non-compliances detected and internal monitoring deficiencies leave a cloud of suspicion that there may be deliberate misappropriation of funds (corruption, collusion), both for permit files in which a contribution for parks was claimed and those for which a contribution was not claimed.

### Recommendation

**We recommend that the city:**

- **ensure, for all building permit files, the production of regulatory analysis sheets that specify reasons for the enforcement or non-enforcement of the current by-laws in order to facilitate the file review process and document the explanations provided to justify an exemption;**
- **equip itself with dedicated monitoring tools for the contribution for parks;**
- **ensure that all building and subdivision permits are signed by a manager so that this person is accountable for compliance with laws and by-laws governing the issuing of permits;**
- **provide proper training to the employees and managers involved.**

### ***Regulation Respecting the Hours of Driving and Rest of Heavy Vehicle Drivers***

The *Highway Safety Code* sets out special rules for owners and operators of heavy vehicles, including rules governing hours of driving, work and rest, to help limit fatigue in heavy vehicle drivers. These standards are set out in the *Regulation respecting the hours of driving and rest of heavy vehicle drivers*.

To counter the problem of driver fatigue in heavy vehicle drivers, this Regulation contains many provisions designed to regulate the hours of driving and rest of heavy vehicle drivers. In particular it prescribes a maximum number of hours of driving and work for a day and for a work cycle, and it requires the keeping of daily logs or registers in which to enter drivers' activities.

The boroughs use heavy vehicles for several activities (e.g., transportation of materials, infrastructure maintenance and repair). Driver fatigue generally sets in after 10 hours of consecutive driving. Beyond 10 hours, there is a high risk that employees and citizens could be involved in accidents.



We wanted to assess the extent to which the city ensures that the Regulation adopted to regulate the hours of driving is enforced. Note that recent events in the news involving heavy vehicles add to the importance of complying with this regulation.

Our initial finding deals with the list of heavy vehicles that the boroughs must keep to train employees who drive these vehicles. These lists are not up-to-date and the information contained in them is insufficient to ensure adequate monitoring of the hours of driving and rest of heavy vehicle drivers. In addition, not all managers responsible for monitoring the hours worked on these vehicles have such a list.

#### **Recommendation**

**We recommend that the boroughs take the necessary steps to keep complete and up-to-date lists and distribute them to the managers responsible for monitoring.**

Regarding the hours of driving for snow removal operations, our audit did not find any evidence of monitoring by a person in charge to ensure that the drivers did not contravene the provisions of the Regulation.

#### **Recommendation**

**We recommend that the boroughs implement strict monitoring mechanisms to regulate the consecutive hours of driving of heavy vehicle drivers, as well as their hours of rest.**

We also found that there was no register detailing the activities of heavy vehicle drivers, including hours of driving and rest, although the Regulation requires that such a register be kept when the driver does not keep a daily log.

#### **Recommendation**

**We recommend that the boroughs keep such a register as required in the provisions of the Regulation.**

Regarding hours worked, the results of our sample were troubling. In several cases, we did not find any evidence of monitoring of the maximum number of consecutive hours of driving per day (13 hours) and the minimum number of hours of rest (eight hours) by the manager in charge. Moreover, in one borough we noted several problems of concern. In three cases, employees assigned to heavy vehicles had worked more than 20 consecutive hours. In five other cases, employees assigned to heavy vehicles had worked between 14 and

18 consecutive hours. We did not find any evidence that these employees' ability to drive such heavy vehicles for such long periods had been checked.

#### **Recommendation**

**We recommend that the boroughs establish mechanisms to monitor compliance with the maximum number hours of consecutive driving and the minimum number of hours of rest.**

We also found deficiencies in the training of managers regarding the enforcement of this Regulation. This finding also applies to employees assigned to drive heavy vehicles.

#### **Recommendation**

**We recommend that the boroughs properly define the training needs of their employees covered by the Regulation.**

To sum up, we were astonished to find that the basic principles of the Regulation governing the hours of driving and rest of heavy vehicle drivers were not being respected. This could have consequences on the physical safety of city employees and citizens.

### ***Private Security Act***

The *Private Security Act*, which came into force in full in July 2010, prescribes that individuals who carry out security activities must hold an agent licence. Some of these activities involve security guarding, investigation, locksmithing and areas of activity related to electronic security systems.

In the case of municipalities, employees must hold an agent licence if they perform such duties as their main activity solely for the municipality.

If an employee carries out such activities without holding an agent licence, this constitutes a non-compliance for the borough. If a borough is not compliant, it runs the risk of facing a fine in the \$500–\$5,000 range. It also lays itself open to other risks, such as a negative image for the borough, public criticism of the government and dissatisfied citizens.

We wanted to know whether the boroughs selected had adopted a procedure to ensure that their employees who carry out security activities hold agent licences, as required by the Act.

Our audit uncovered the following:

- The managers of one of the three boroughs mentioned that they were unaware of the existence of this Act. Clearly, the borough did not have any procedure in place to comply with this law.
- The other two boroughs that were part of our sample did follow a procedure to determine if employees who carried out security activities had an agent licence. However, this procedure was not carried out on a yearly basis or was not documented.

#### **Recommendation**

**We recommend that the boroughs conduct a job analysis to determine whether employees need to hold an agent licence in order to perform their duties.**

#### **Recommendation**

**We recommend that the boroughs define their training and information needs concerning the *Private Security Act* so that they can ensure compliance with it.**

## **General Conclusion**

As mentioned at the beginning of this section, borough directors and central department directors must sign a certificate of compliance every year attesting that they have taken every reasonable measure to ensure compliance with the laws and by-laws associated with their areas of activity. It is clear that, in the wake of our audit, we need to question the value of this certificate. Although we chose only three activities that are regulated by some laws and by-laws and limited our sample, we uncovered several non-compliances. Yet the city and the boroughs are required to comply with more than 300 laws and by-laws. We believe that more complete accountability mechanisms, which include the boroughs and central department managers, must be put in place so that these managers are accountable for enforcing the laws and by-laws that regulate their areas of activity.

## **Water Line Breaks** (Section 5.9)

The city's water supply system comprises water mains (740 km), lateral mains (3,572 km), valves, service lines and fire hydrants. One of the signs of decaying water infrastructure is frequent breaks as a result of corrosion, material degradation, poor installation practices, manufacturing defects or unsuitable operating conditions. The average number of secondary water line breaks repaired per year between 2006 and 2012 was 800. No data have been

compiled for the primary system during this period, but there were 57 burst water mains logged in 2012. These figures do not take into account as-yet undetected underground leaks.

Breaks must be kept to a minimum to avoid public inconvenience (water damage, traffic obstruction, etc.).

Replacement, rehabilitation and maintenance are ways of reducing the number of water line breaks. The city has therefore developed a response plan (RP) to:

- create a georeferenced inventory of water and sewer lines;
- collect information to determine the condition of water systems;
- identify priority water lines for rehabilitation or replacement in the coming years.

Between December 2009 and May 2010, RPs were completed for the primary water system and the secondary water and sewer systems for all 19 boroughs. Revised RPs, incorporating road works, were issued for the secondary systems in each of the boroughs in June 2012.

The greatest challenge is securing the RP's sustainability. It is therefore vital for the city to carefully focus its efforts and commit the required time and budgets to priority water lines that the RP databases are accurate, complete and up to date. One of the figures in these databases concerns the break rate, which is the number of breaks per kilometre per year. Improving the condition of the water supply system is therefore contingent on reducing the number of water line breaks and lowering leakage rates. This requires a system status report that is as accurate as possible to determine the overall state of deterioration and identify priority actions.

We wanted to ensure that the city possesses reliable data to carry out the necessary maintenance and repair work. For example:

- Are the water line break data used to prepare RPs compiled properly?
- Are water lines with a break history targeted as priorities?

A break history (including the number of breaks repaired) is an essential piece of information for qualifying the condition of a water line. This information must be updated on a regular basis.

We also noted that many water line break repairs in the audited boroughs were either not recorded or recorded improperly in the database used to produce the RP. Moreover, we observed that there were considerable delays in entering the data on water line breaks into the designated system. The resulting lack of complete, reliable information for the RPs may

prevent the city from taking swift action on water lines with priority repair or rehabilitation needs and, consequently, hasten their deterioration.

Furthermore, the unexpected discrepancies between the various sources used to compile the number of water line breaks cast serious doubt on the integrity of the water line break data used to generate the RP. Given these discrepancies and the data entry delays, we concluded that the information the city possesses on the number of water line breaks per year is neither complete nor accurate. Without this information, the city cannot interpret the data correctly or compare them with other pieces of information.

As for the primary water system, the city does not compile water line break data in an effective way, which prevents it from having a comprehensive picture of the situation. This makes it more complicated to plan water main rehabilitation and replacement work, thereby increasing the risk of a major incident.

In terms of costs related to water line repairs, we concluded that the city does not take a centralized approach to tallying the direct costs (leak location, excavation, repair, signage) or indirect costs (property damage, disruption of local business, ancillary costs related to emergency services, etc.) of water line breaks. These indirect costs can nevertheless represent up to 80% of total water line repair expenditures. All repair operations are therefore assigned the same degree of importance regardless of their total cost, which undermines the city's ability to plan effectively.

#### **Recommendation**

**We recommend that the city take the necessary measures to ensure the information on water line breaks is properly updated in the database used to generate the RP. Any necessary corrections must be made by the city in a timely manner.**

#### **Recommendation**

**We recommend that the city formalize the process for updating data on primary and secondary water line breaks.**

In addition, we were surprised to learn that the vast majority of water lines repaired in 2012 following a break were not identified as rehabilitation or replacement priorities in either the 2009 or the 2012 RP. For instance, in the audited boroughs, between 95% and 99% of repairs in 2012 were performed on water lines that had not been targeted as a priority in the 2012 RP, which we find puzzling.

Finally, we noted the absence of a comprehensive process for generating data on the various types of failures, types of repairs and causes of water line breaks that could be used by the city to conduct analyses and establish correlations in order to gain a better understanding of these incidents and prioritize its actions accordingly.

#### **Recommendation**

**We recommend that the city implement a process to generate detailed information on water line breaks (types of failures, types of repairs and causes).**

These observations are unsettling. They point to some significant shortcomings in the management of water line breaks. Without reliable data, the city cannot prioritize its actions to focus on the most vulnerable water lines, thus increasing the likelihood of breaks in the short term.

#### **Laboratory Activities – Quality Control of Materials and Expert Assessments (Service des infrastructures, du transport et de l’environnement – Direction des infrastructures)** (Section 5.10)

Infrastructure includes:

- the arterial road system;
- bridges and tunnels;
- pipes in the secondary water and sewer systems.

The quality and sustainability of the infrastructure depend in large part on the quality of the materials and processes used during construction. It is vital that the city exercise strict control to prevent rapid deterioration of the condition of its streets, bridges and tunnels and secondary water and sewer systems.

To this end, quality control testing of materials takes place on two levels, namely:

- in the laboratory: to confirm that the type of material and formulas (cement concrete, asphalt paving, granular materials) proposed by the contractor meet the specifications provided in the plans and technical specifications for the project, as well as the city’s standards;
- on the site: to ensure that the materials that are delivered and installed are those approved by the city and that the installation conditions are adequate to ensure the sustainability of the structure. Sampling and work-site tests must be performed and analyzed.

We wanted to evaluate the extent to which the quality control tests ensure that the materials used comply with the requirements set out in the technical specifications and with the city's standards. We also wanted to determine whether the non-compliances identified are properly taken into account.

In almost all cases, the city assigns the mandates for quality control testing of materials to private laboratories covered by master agreements. We initially found that the city calls on these firms very late in the process leading up to actual construction. Moreover, we identified several significant gaps in the management of the mandates assigned to these firms. The call for tenders stipulates that, in order for their services to be retained, laboratory firms must submit a quality control program (including the tests to be performed and the number of proposed samples) and a cost estimate for each mandate. To do this, the firms must obviously consult the plans and specifications for the construction project. We found no evidence of such documents in the files that we audited. Furthermore, the firms did not even consult the project plans and specifications beforehand. This finding is worrisome because it makes it very difficult for the city to corroborate the accuracy of the invoices submitted by the firms. The city runs the risk of paying for work that is not required or simply not done. Failure to ask for an estimate at the start of the work also greatly increases the risk of overbilling. As well, this situation gives the firms the responsibility for determining the nature of the work to be done. The city is unable to ensure that the quality controls carried out by the firms are comprehensive and meet its requirements. Another worrisome finding is that the city does not make sporadic site visits to verify the controls carried out by these firms and thus corroborate the work being billed. In the case of one project that went over budget, laboratory tests were not carried out, casting doubt on the quality of the construction work done.

#### Recommendation

**We recommend that the city, in order to pay only for the services requested and provided, take the necessary means, on a short-term basis, to review its procedures with respect to assigning mandates to private laboratories and make sporadic site visits in order to have access to complementary sources of information that can serve to corroborate the accuracy of the invoices that are later submitted by the firms.**

Quality control testing of bulk materials to be used (cement concrete, asphalt paving, granular materials) is essential to ensure that the infrastructures to be repaired or replaced remain in good condition for a reasonable amount of time. We found that the formulas and technical specifications for this type of material were not always verified and pre-approved by the city. This situation is worrisome because there is a risk that the materials used will not meet the

requirements and standards of the city or the technical specifications of the tender documents, and that the contractor will use inferior quality materials to save costs.

In addition, the private laboratories are mandated to ensure, while the work is in progress on the site, that the materials delivered correspond to those previously approved and that they are installed in keeping with the city's standards. To do this, they must collect samples of these materials and test them in the laboratory. In several cases, we found that the sampling was not done or that the number of samples was far lower than what was required. These findings, which apply equally to the pouring of concrete, asphalt paving and the installation of granular materials, increase the risk that the work done by the contractors will not satisfy the standardized technical specifications of the tender documents and will increase the possibility of rapid deterioration of the infrastructures.

#### **Recommendation**

**We recommend that the city tighten internal controls concerning approval of the compliance of “bulk” materials, as well as the monitoring of laboratory analyses and on-site tests required when the materials are installed.**

With respect to the pre-fabricated materials (e.g., ductile cast iron pipes and reinforced concrete pipes), we found no evidence that these materials were verified as part of the work-site monitoring process to ensure their quality and compliance with the city's standards. This situation increases the risk that the contractor will install inferior quality materials, thereby compromising the sustainability of the infrastructures.

Laboratory test results must be sent in a timely manner to the principal parties concerned at the city so that they can take appropriate corrective measures. Reports presenting non-compliances must be sent in writing no later than 24 hours after the non-compliance is detected. We noted that the delays in forwarding non-compliant test reports varied from 2 to 31 days and even longer. These delays obviously prevent the city from taking prompt and effective action to correct the problems.

#### **Recommendation**

**We recommend that the city take the necessary means to ensure that the firms respect the prescribed deadlines for sending their test reports.**



Decisions made regarding the handling of reported non-compliances are not always documented. The city also does not always receive work-site test reports. We are unable, therefore, to corroborate that these non-compliances were handled diligently. In addition, the procedure for sharing roles and responsibilities with respect to following up on the handling of the detected non-compliances is unclear.

#### Recommendation

**We recommend that the city take the necessary means to document the evaluations and ultimately the decisions made with respect to handling non-compliances reported during the course of the work.**

All the shortcomings we identified raise reasonable doubt about the quality of the work done on the city's infrastructure. The poor quality or improper installation of materials is certainly a factor in hastening the deterioration of the infrastructures and thus increasing the costs of repairs, restoration and replacement. In addition, the city runs the risk of paying for poor quality materials and work, adding to the spiralling costs associated with its infrastructure and increasing the risk of premature failure.

#### Snow Clearing Contracts Awarded from 2005 to 2013 (Section 5.11)

A regulation adopted by the city council delegated maintenance activities on the arterial road system to each borough council. Such activities included clearing snow from streets, sidewalks and public places as well operational activities on snow elimination sites (e.g., elimination operations per se, preparatory work on elimination sites before winter or between loads, cleanup work on elimination sites as well as site surveillance).

For this reason, when exercising their powers, city boroughs are responsible for planning and organizing snow clearing operations on their respective territories' arterial and local road systems. As appropriate, these activities may be carried out internally, under contract by private contractors or according to a combination of both operating modes.

Thus, given the revelations regarding the awarding of infrastructure construction contracts, and with the goal of providing authorities with information on the rules and practices that characterize the snow clearing industry, we decided to undertake this audit in order to paint a complete picture of the situation (e.g., the number and value of contracts awarded, information on the contracting companies).

As part of our audit, we examined four main activity sectors regarding snow clearing operations, namely:

- Snow clearing per se;
- Snow clearing equipment rentals (with or without operators);
- Snow loading;
- Snow disposal operations.

The purpose of the audit was to identify the number and amounts of contracts covering all snow clearing operations that were awarded for the period from 2005 to 2013. We sought to ensure that there was open competition between contractors so as to enable the city to obtain the best prices.

During the audited period from 2005 to 2013 inclusively, 518 contracts were awarded by the boroughs for all snow clearing operations on their respective territory.

Overall, with respect to snow clearing operations, the contracts in force from 2005 to 2013, which were awarded, totalling a little over \$490 million were shared by 163 private companies. As we previously mentioned, these operations are distributed between four main activity sectors. Our audit focussed on each of these sectors.

For the first sector, snow clearing (315,8 M\$), 25 companies out of the 54 that were awarded snow clearing contracts obtained 83.6% of the total amount of the contracts in force from 2005 to 2013. Of these 25 companies, the same nine were awarded 53.6% of the contracts. Of these nine companies, two were awarded 100% of the contracts in a borough. As for the seven others, although active in more than one borough (two or three, as the case may be), we generally note that they are increasingly present in one borough in particular. As for the other 29 companies, they are present on an intermittent basis in the boroughs.

For the second sector of activity, i.e., snow clearing equipment rentals (with or without operators), 92 companies were awarded contracts in force from 2005 to 2013 totalling \$64.1 million. Of these 92 companies, 12 had the lion's share or 67% of the total amount of the contracts. Of this group, one company was awarded 100% of the contracts in a borough, whereas three others were awarded all of the contracts in another borough.

For the snow loading sector, a total of 25 different companies and two groups comprised of various snow loading companies were awarded contracts. Six companies had the lion's share, i.e., \$52.8 million out of a total of \$86.8 million in contracts awarded for this business sector from 2005 to 2013.

In the case of the last business sector, i.e., snow disposal operations, 12 companies were awarded all of the contracts representing a total of \$23.2 million. Of these, four had the lion's share or 88% of the total amount of the contracts for this business sector. Moreover, these four companies are present in six of the seven boroughs that award snow disposal contracts.

In conclusion, we are able to make the following observations with respect to the four sectors of activity covered by our audit:

- Snow clearing: The same three companies were awarded 100% of the contracts in three boroughs since 2005;
- Snow loading: The same company was awarded 100% of the contracts in a borough since 2005;
- Snow disposal operations: The same two companies were awarded 100% of the contracts in two boroughs since 2005;
- Four sectors combined:
  - Four companies were awarded between 80% and 99% of the contracts in a single borough,
  - Thirty-four companies among the 163 identified during our audit were awarded contracts by at least one borough on a regular basis from 2005 to 2013.

Based on the information that we obtained, while the boroughs knew the companies that were operating on their respective territory, we were unable to confirm that they also knew the distribution of companies present from one borough to another across the entire territory of Montréal. In our opinion, knowing and sharing this information about the overall market is relevant for the city and the boroughs to enable them to perform comparative analyses and, if necessary, to implement measures that will ultimately foster healthy competition to obtain the best prices.

With respect to the amounts spent by the boroughs on snow clearing operations, in absolute terms, they vary from one borough to the next. Furthermore, although the average percentages of the amounts spent by the 19 boroughs sit at 64% for snow clearing, 13% for snow clearing equipment rentals (with or without operators), 18% for snow loading and 5% for snow disposal operations, these percentages nevertheless vary from borough to borough within each business sector.

### Recommendation

**We recommend that Direction générale forward this report to the inspector general or UPAC if circumstances warrant, to confirm or refute any basis for the concerns of the city's auditor general about collusion in the snow clearing business sectors.**

**Recommendation**

**We recommend that the Direction générale draw a comprehensive picture annually of the contracts awarded by the boroughs to the various contractors and forward these results to the political authorities (city council, executive committee).**

**Recommendation**

**We recommend that the Direction générale, in collaboration with the boroughs, develop common benchmark indicators between the various boroughs and neighbouring municipalities.**

For the boroughs, it is important to identify and document possible signs of irregularities as well as the decisions made, as the case may be. In this regard, we arrived at the following conclusions:

- Decision-making summaries were sometimes mute about not insignificant price differences (more than 15%) between the first and second lowest compliant bidder. Our review identified the following price differences:
  - between 16% and 204% for snow clearing tenders,
  - between 16% and 74% for snow loading tenders,
  - between 16% and 98% for snow disposal tenders;
- We found no explanation for the choice of successful bidder, especially when the company was the only tenderer to submit a compliant bid although several other companies had obtained the call for tenders documents;
- The reasons that the bids received were non-compliant were not adequately documented;
- The justification for the choice of the successful tenderer that had not submitted the lowest bid was not explicitly documented in the decision-making summaries;
- We noted that related companies submitted simultaneous bids.

That said, our audit helped identify several potential sources for improving the information that should be included in the decision-making summaries presented to the authorities to help them arrive at a decision. It should be noted, however, that our audit dealt with contracts in force over a nine-year period from 2005 to 2013, so it is likely that improvements were made over time by the boroughs to correct the irregularities that we found at the start of the audited period. Under the circumstances, we believe that each borough is responsible for assessing how it operates and taking the necessary measures to ensure that the irregularities that were found, if they still exist, do not continue.

## General Conclusion

While we do not purport to show beyond a doubt that bid-rigging exists among businesses to share contracts for snow clearing operations on the territory of the various boroughs, our audit brought to light a sufficient number of indicative factors to raise suspicions that such a practice likely does exist to the detriment of obtaining the best prices for the services requested. There were many indications of collusion that notably emphasize the fact that a limited number of companies are constantly and consistently awarded the snow clearing contracts. Even more convincing was our finding that certain boroughs, in the past nine years, had awarded exclusive contracts to a single contractor in certain snow clearing business sectors. Our research also revealed that several of these contracted businesses were affiliated, thus providing a greater potential for bid-rigging. In the presence of an openly competitive market, this kind of situation would, at the very least, be unlikely.

### Contracts for the Collection and Removal of Residual Materials – Household Waste and Recyclable Materials – from 2005 to 2013 (Section 5.12)

In exercising their powers, the city's boroughs are responsible for planning and organizing the collection and removal of residual materials produced on their respective territory. They can choose to do this work internally or entrust it to a private contractor. The vast majority of boroughs generally choose the second option and, depending on the expenditure involved, award service contracts after a call for public tenders, especially in the case of the collection and removal of household waste and recyclable materials.

In view of the strategies that have come to light regarding the awarding of infrastructure contracts and in an effort to clarify for the authorities the rules and practices that characterize this other business sector, represented by the collection and removal of household waste and recyclable materials, we felt it timely to perform an audit to gain an overall picture of the situation (e.g., number and monetary value of the awarded contracts and information about the contracted companies).

The purpose of the audit was to identify the number and amounts of the contracts for the collection and removal of residual materials that were awarded by the city's boroughs to various private companies and that were in force for the period from 2005 to 2013. During this period, 165 contracts were in force, amounting to \$504 million. They had been awarded to 29 companies within the 19 boroughs for this business sector. It should be noted that 42 companies make up the "market" for this business sector, which means that 13 of them

were not awarded contracts during this period. We also examined the relevant contract awarding documents as well as the minutes prepared for all borough council meetings.

Seven companies received contracts for both the collection and removal of household waste and of recyclable materials, totalling \$294.6 million. Of these seven companies, four had the lion's share or 92.2% of the total amount of the contracts in the boroughs for this business sector. They are continually present in 17 boroughs. Furthermore, our examination of the calls for tenders leads us to conclude that there was little competition between three of them when submitting a bid in response to a call for tenders. Also, the distribution of their services for the collection and removal of household waste is often concentrated in boroughs that share the same territorial boundaries. The three remaining companies that had contracts for both the collection and removal of household are of lesser importance seeing they are present in six boroughs only.

With respect to companies that provide services for the collection and removal of household waste only, fourteen firms share contracts totalling \$98.2 million. Of these 14 companies, two have the lion's share or 65% of the total amount of the contracts for this business sector. Several companies in this group concentrated their activities in one or two boroughs.

As for companies that provide services for the collection and removal of recyclable materials only, eight firms share contracts totalling \$111.1 million. Of these eight, two have the lion's share or 83.6% of the total amount of the contracts for this business sector. Two other companies are also active in several boroughs. With a few exceptions, the competition between these companies is not very fierce when bidding in response to calls for tenders.

In sum, we can make the following conclusions based on the maps showing the concentration of contracts by borough from 2005 to 2013 (see Appendices 6.10 and 6.11 of the report).

#### **Collection and removal of household waste**

- In nine boroughs, the same four companies always received 100% of the contracts;
- In four boroughs, four companies received between 80% and 99% of the contracts;
- In three boroughs, two companies received between 50% and 79% of the contracts.

#### **Collection and removal of recyclable materials**

- In six boroughs, three companies received 100% of the contracts;
- In two boroughs, two companies received between 80% and 99% of the contracts;
- In 10 boroughs, six companies received between 50% and 79% of the contracts.

Furthermore, we noted that the amounts spent to have waste and recyclable materials collected and removed vary considerably from one borough to another. Although various factors may explain these differences, we believe, nonetheless, that by having a comprehensive picture over time of information about the companies that are contracted in the various boroughs and the annual cost trends by borough for the collection and removal of household waste and recyclable materials, the city would be better equipped to pinpoint the causes of these gaps and ensure that contracts are awarded fairly.

**Recommendation**

**We recommend that the Direction générale forward this report to the inspector general or UPAC if circumstances warrant, to confirm or refute any basis for the concerns of the city’s auditor general about collusion in the collection and removal of household waste and recyclable materials business sectors.**

**Recommendation**

**We recommend that the Direction générale draw a comprehensive picture annually of the contracts awarded by the boroughs to the various contractors and forward these results to the political authorities (city council, executive committee).**

**Recommendation**

**We recommend that the Direction générale, in collaboration with the boroughs, develop common benchmark indicators between the various boroughs and neighbouring municipalities.**

With respect to the process used by the boroughs to award contracts, our audit revealed the following irregularities:

- Decision-making summaries were sometimes mute about not insignificant price differences (more than 15%) between the first and second lowest compliant bidder;
- Decision-making summaries do not always provide explanations that are sufficient when there is only one bidder or a limited number of bidders;
- The reasons that the bids received were non-compliant were not always adequately documented;
- In certain cases, the successful tenderer was not the one who had submitted the lowest bid;
- In certain boroughs, we noted that related companies submitted simultaneous bids.

That said, our audit helped identify several potential sources for improving the information that should be included in the decision-making summaries presented to the authorities to help them arrive at a decision. It should be noted, however, that our audit dealt with contracts in force over a nine-year period from 2005 to 2013, so it is likely that improvements were made over time by the boroughs to correct the irregularities that we found at the start of the audited period. Under the circumstances, we believe that each borough is responsible for assessing how it operates and taking the necessary measures to ensure that the irregularities that were found, if they still exist, do not continue.

## **General Conclusion**

While we do not purport to show beyond a doubt that bid-rigging exists among businesses to share contracts for the collection and removal of household waste and recyclable materials on the territory of the various boroughs, our audit brought to light a sufficient number of indicative factors to raise very serious suspicions that such a practice likely does exist to the detriment of obtaining the best prices for the services requested. There were many indications of collusion leading to the same conclusion that a handful of contractors were receiving almost all the contracts for the collection and removal of household waste and of recyclable materials. Even more convincing was our finding that several boroughs, in the past nine years, had awarded exclusive contracts to a single contractor, without taking into consideration the fact that our research revealed that several of these contracted businesses were affiliated, thus providing a greater potential for bid-rigging. In the presence of openly competitive markets, this kind of situation would, at the very least, be unlikely.

## **Comments and Recommendations from the Auditor General** **(Chapter 1)**

As in past years, I have a few comments and recommendations for the municipal administration based on the findings of my audit. This year, I feel it is appropriate to address the following topics of interest:

- Process for following up on recommendations issued by the Bureau du vérificateur général;
- Compliance with laws and by-laws;
- Quality of infrastructure work;
- Corruption and collusion awareness program;
- Audit of the financial statements of the Ville de Montréal and the Société de transport de Montréal (STM).



## **Process for Following Up on Recommendations Issued by the Bureau du vérificateur général**

In May 2014, Bureau du vérificateur général (BVG) officials followed up, as they do every year, on the recommendations from previous audit reports and the extent to which they have been implemented. I would like to draw your attention to three points that we observed during this process.

First, after the BVG issues audit reports, the concerned business units are asked to prepare a plan of action, including a target completion date for putting the recommendations into practice. The proposed timeframes often run longer than a year. During our follow-up work, we came to the conclusion that some of these recommendations could have been implemented in a timelier manner. I feel that awareness within the business units must be raised so that most of the BVG's recommendations are executed in less than a year.

Second, in an effort to monitor the status of these recommendations, the BVG consults the information entered into the audit record management system (GDV) by the business units. In many cases, the BVG must obtain additional information and documentary evidence to substantiate the status as indicated by the corresponding business unit. In some instances, the requested information is slow to arrive and requires several follow-up calls or emails to those in charge. I believe that the business units should be apprised of the importance of providing the requested information promptly and recording it in the GDV application.

Third, a number of new people have been put in charge of implementing certain recommendations since our last follow-up (as a result of staff retirements or reassignments) without having been briefed by their respective business units on the nature of the recommendations made and the initial action plan. This can lead to protracted implementation times. Given that the recent changes made in the city's organizational structure will exacerbate this situation, I believe that the business units must ensure that designated individuals carry out the recommendations issued by the BVG in accordance with the action plan as submitted, regardless of any personnel changes that occur.

## Recommendation

I recommend that the city take the necessary measures to:

- raise awareness among the business units about the importance of implementing the recommendations issued by the Bureau du vérificateur général within a year's time, in most cases, and that this condition be taken into account in the action plans submitted;
- impress upon the business units the importance of submitting the requested information to the auditor general in a timely manner and to upload it to the GDV application as proof of the status of the recommendations made in order to ensure their implementation can be monitored in an efficient manner;
- remind the business units to be prompt in reassigning these tasks following a staff departure or rotation in order to minimize implementation times for the BVG's recommendations.

## Compliance with Laws and By-laws

The laws and by-laws that the business units must apply are numerous and, in some cases, complex. This requires the people in charge of various activities to develop and maintain a body of knowledge and implement control mechanisms to ensure these activities comply with all applicable legislative and regulatory requirements.

Accordingly, an administrative framework was adopted in September 2011 by the Direction générale requiring all business units to issue a compliance certificate on an annual basis, attesting that they have taken all reasonable measures to ensure that they adhere to the laws and by-laws that govern their areas of responsibility.

Despite this, the audits conducted by the BVG within select boroughs revealed several significant instances of non-compliance with regard to laws and by-laws, including three related to the following: provisions of the *Act Respecting Land Use Planning and Development* concerning the contribution to parks, the *Regulation Respecting the Hours of Driving and Rest of Heavy Vehicle Drivers* and the *Private Security Act*. I have therefore concluded that, even though all the required compliance certificates were issued and submitted to the Direction générale, more still needs to be done to ensure legislative and regulatory adherence. I am of the opinion that the Direction générale should re-emphasize how important it is for the business units to comply with all applicable laws and by-laws, since the risks associated with not doing so can lead to serious consequences in terms of financial loss, wrongdoing and accidents involving employees and the public, not to mention the city's credibility.

**Recommendation**

**I recommend that the city reiterate to the business units the importance of adhering to laws and by-laws that govern their operations, in accordance with the administrative framework adopted in this regard, in order to minimize the risks associated with non-compliance.**

**Quality of Infrastructure Work**

One of the sections in my annual report deals with activities undertaken to control the quality of materials used to replace and maintain infrastructure assets, including bridges, tunnels, roads, sewers and the water supply system. The observations included in this section suggest that the construction work associated with the city's infrastructure may have been done without obtaining the assurance that the quality of the materials used was adequate and consistent with the city's needs. This is particularly worrisome in the current context, with many of the city's infrastructure assets already in a state of disrepair.

In my report dated December 31, 2010, I highlighted the poor condition of many city-managed bridges and tunnels. I contended that years of serious underfunding were hastening the deterioration of these assets. The action plan drafted by the Direction des transports stated that the BVG's recommendations would be taken into account. Although we have not conducted a thorough follow-up evaluation on the investments made or planned in order to improve the condition of bridges and tunnels, I do expect that measures have been undertaken in this regard. In fact, recent reports confirm that significant investments have been made for this very purpose.

The report I filed last year also stressed the chronic underfunding of secondary water and sewer system infrastructure upkeep and upgrades. The same observation was made about the arterial road system. In both cases, this lack of adequate investment has hastened the deterioration of these infrastructure assets, just as it has done in the case of bridges and tunnels. I stipulated that if nothing is done to remedy the situation the city could find itself in a critical position, in which the ensuing backlog would be difficult and very costly to address. Once again, action plans were drafted by the city, this time outlining specific corrective measures.

There is an undeniable link between the state of disrepair of the city's assets and level of quality and compliance of the materials used. Although this is not the only underlying cause of the precarious state of municipal infrastructure, it is reasonable to conclude that the lack of quality control with regard to the materials used could be one of the driving factors behind the poor condition of these assets. Furthermore, it is disturbing to realize that past infrastructure investments may have been made without a comprehensive quality control process in place to ensure the materials and installation adhered to strict standards.

In addition, considering that the city will need to make substantial investments in the coming years for infrastructure renewal purposes, sufficient controls will be required to ensure the quality of the materials used and avoid squandering public funds on substandard work whose durability may be compromised as a result.

#### **Recommendation**

**I recommend that the city include a control mechanism in the new organizational structure to provide fully independent confirmation that all frameworks governing the quality of infrastructure work have been adhered to in order to optimize the annual investments made.**

### **Corruption and Collusion Awareness Program**

In my report dated December 31, 2009, I referred to a situation that I found particularly puzzling. According to figures and studies compiled by the BVG between 2005 and 2009, 21 contracting firms had been awarded a substantial percentage of contracts for the development, rehabilitation and replacement of facilities and infrastructure assets (\$158 million for the boroughs and \$811 million for the central city). What's more, the proportion of the contracts granted to these firms varied from borough to borough. In some boroughs, contracts were awarded to several different contractors, while in others almost every contract was given to the same firm, which implied a deliberate distribution of contracts in Montréal to select contractors.

Recent testimony at the Commission of Inquiry on the Awarding and Management of Public Contractors in the Construction Industry (the Charbonneau Commission) shed light on the schemes allegedly used by various players active in the Montréal market. These alleged strategies can be broken down into three categories:

- Internal collusion involving several individuals in the city's chain of command;
- Corruption of municipal employees and elected officials by organizations with interests in the city;

- External collusion by various firms with the intent of creating cartels to share contracts and fix prices.

It is important to point out that this is a “highly organized” system in which all the stakeholders have interests and wish to keep their schemes from being disclosed.

Corruption and collusion schemes are extremely complex and difficult to detect because they involve secret agreements made behind closed doors. However, the testimony heard at the Charbonneau Commission, presuming it is true, corroborates the findings I outlined in my 2009 report.

This year, the BVG decided to examine the process for awarding contracts in two core sectors vital to Montréal residents, namely snow removal and the collection of household waste and recyclables. I sought to come up with an overall picture of the contracts awarded during the previous nine years (2005–2013). The results of our efforts lead me to conclude that bid rigging is possible in the case of snow removal operations and probable in the case of household waste and recyclable collection and transportation. Furthermore, it would seem that some companies are closely affiliated, which increases the risk of bid rigging while still creating an illusion of competitive bidding.

As I mentioned earlier, external collusion schemes are extremely difficult to uncover because they involve secret agreements between third parties. However, I find the results of our analysis of the construction industry in 2009 as well as this year’s findings to be extremely telling.

The data used in the BVG’s studies, both in the 2009 analysis of the construction industry and the 2013 audit of snow removal and household waste and recyclable collection and transportation, were accessible through the boroughs’ administrations and the city’s Direction générale. Nevertheless, I firmly believe that if the data had been easier to obtain and compiled and analyzed for all business units, it would have undoubtedly made it easier to draw decisive conclusions and take the appropriate measures to put an end to any “cartel-like” agreements.

I applaud the municipal administration’s initiative in creating the Bureau de l’inspecteur général. This additional measure will no doubt help expose possible collusion and corruption, although it should not be seen as a cure-all for detecting every incident of contract-related wrongdoing. The city’s employees and senior managers remain the first line of defence.

In addition to the three recommendations made to the Direction générale in Sections 5.11 and 5.12 of my annual report concerning contracts for snow removal and for the collection and transportation of household waste and recyclables, I also recommend the following.

#### **Recommendation**

**I recommend that the city establish a corruption and collusion awareness program for employees in the various business units who are more likely to be exposed to incidents of this nature. This program should provide information on possible schemes, available means of detection and escalation practices to be employed if a potential scheme is unearthed. The program should also make use of specific analytical tools and methods.**

### **Audit of the Financial Statements of the Ville de Montréal and the Société de transport de Montréal (STM)**

An audit of the consolidated financial statements of the Ville de Montréal for the fiscal year ended December 31, 2013, was conducted jointly with the firm Deloitte. Subsequently, an unqualified audit report was issued by the auditor general and a qualified audit report was issued by Deloitte. The reason for the qualified opinion is the approach used in the accounting of government transfers. A revised version of the government transfers accounting standard is now in effect for all fiscal years beginning on or after April 1, 2012. The basis for my unqualified opinion stems from my interpretation of this new standard. This new standard asserts that a government transfer must be recorded as revenue when it is authorized and the corresponding eligibility criteria are met. However, it also specifies the recipient's authorization criterion, linking it with the authorization from the assigner. This explains the divergent interpretations. I believe that government representatives are qualified to negotiate and conclude valid agreements and that, consequently, a government transfer is considered to be authorized when a duly designated representative signs an agreement and informs the recipient in writing of the decision to proceed with the transfer. In my opinion, these facts establish that there is an expectation that these government transfers will indeed be authorized and obtained.

It should be noted that this interpretation is shared by the auditors general of the nine other largest municipalities in Québec, the provincial auditor general and various accounting firms.

As concerns the audit of the financial statements of the Société de transport de Montréal (STM), the opposite occurred: a qualified audit report was issued by the auditor general, while Deloitte, once again the joint auditor, issued an unqualified audit report. Here too, the basis of my qualified opinion lies in my interpretation of this new standard vis-à-vis the manner in which the accounting figures are presented by the STM.

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**Source:** Bureau du vérificateur général

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