



**Report on the Jean-R.-Marcotte
Wastewater Treatment Plant
Ozone Wastewater Disinfection Project**

(call for tenders 10-11277, 10-11257 and 12-12107)

**(Sections 57.1.10 and 57.1.23 of the
Charter of Ville de Montréal, metropolis of Québec)**

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SUMMARY STATEMENT

The Office of Inspector General conducted an investigation concerning three (3) main calls for tenders regarding the same Ville de Montréal project, namely the ozone disinfection of wastewater at the Jean-R.-Marcotte wastewater treatment plant in Montreal. The three (3) calls for tenders are as follows:

- *Call for tenders 10-11277 "Professional services regarding technical expertise in ozonation relating to the ozone disinfection project at the Jean-R.-Marcotte wastewater treatment plant", i.e. the call for tenders aiming to retain an expert to advise the Station for the implementation of the wastewater disinfection project (hereinafter "call for tenders for an expert 10-11277"),*
- *Call for tenders 10-11257 "Qualification of suppliers of ozone systems", i.e. the call for tenders serving as the first qualifying phase for the selection of the eventual supplier of ozone systems (hereinafter "call for tenders for qualification of suppliers 10-11257"), and*
- *Call for tenders 12-12107 "Supply of the ozone unit for the Jean-R.-Marcotte wastewater treatment plant", i.e. the call for tenders serving as the second and last phase for the selection of the supplier of ozone systems (hereinafter "call for tenders for the supply of an ozone unit 12-12107").*

This project aims to disinfect the wastewater that is treated before being discharged into the St. Lawrence River via the Jean R.-Marcotte wastewater treatment plant in eastern Montreal (hereinafter "Station")¹. After years of research and analysis, three (3) pilot-trials were carried out at the Station between 2005 and 2007 to determine which of the two technological processes, UV or ozone, is the best for disinfecting the City's wastewater. At the end of these pilot-trials, treatment by ozone was the chosen method of disinfection.

During these three (3) years, the pilot-trials using ozone were carried out by a single company, Degrémont, which had been selected by the City for this purpose. A multinational company involved in multiple fields, Degrémont is notably a supplier of ozone systems and would ultimately be the winner of the contract resulting from the call for tenders for the supply of an ozone unit 12-12107.

While the last pilot-trial in 2007 was used to validate whether the ozone injection system was a viable solution for the Station, it was designed by Pierre-André Liechti, then a Degrémont employee and internationally recognized ozone expert. According to him, the information obtained thanks to this pilot-trial enabled him, as well as Degrémont, to develop the patent for the "New U-Tube" to disinfect wastewater. It should be noted that Pierre-André Liechti is one of the three inventors of this patent.

¹ It is possible for wastewater to have been treated yet remain not disinfected. The treatment of wastewater allows the elimination of solid matter and several toxic products before their discharge into the river, but it does not ensure disinfection from a microbiological point of view.

The First Call for Tenders: Call for Tenders for an Expert 10-11277

The selection of ozone disinfection led the City to publish call for tenders for an expert 10-11277 in June 2010, seeking the professional services of an ozone expert. This expert would notably assist Station employees during the evaluation of bidders for call for tenders for qualification of suppliers 10-11257, also launched in June 2010, as well as those received for call for tenders for the supply of an ozone unit 12-12107, published in 2013.

Pierre-André Liechti submitted a bid in which he expressed the opinion, without being required to, that the "New U-Tube" is the best way to disinfect water at the Station if the existing infrastructure was to be used. However, he did not mention that this solution is patented and that he is one of its inventors. Being the only bidder, he was awarded the contract resulting from call for tenders for an expert 10-11277 in October 2010.

As aforementioned, Pierre-André Liechti is an internationally renowned engineer and expert in the field of ozone and wastewater treatment, having worked at Degrémont for many years before his retirement in March 2008. Immediately after his retirement, he began a career as a consultant, also with Degrémont, in order to transfer all of his knowledge. The investigation reveals that he provided professional services to his former employer until the end of 2009, then again in June 2010, less than two (2) weeks before the publication of call for tenders for an expert 10-11277.

The investigation also reveals that, while this call for tenders was being drafted, several Station employees, including the Station director, the Station project manager and the engineer assigned to the project, communicated with Pierre-André Liechti. These exchanges aimed, among other things, to solicit the latter so that he would become the City's expert for the upcoming project.

During these discussions, a copy of the tender documents for call for tenders for an expert 10-11277 were sent by Station employees to Pierre-André Liechti. The facts reveal that Pierre-André Liechti then examined the tender documents and proposed criteria to Station employees that were ultimately retained in the final version of the call for tenders. Pierre-André Liechti himself would eventually confirm that he tried to draft the tender documents to his advantage and in favor of his candidacy by proposing criteria he knew he would meet.

Furthermore, not only was the call for tenders for an expert 10-11277 directed towards Pierre-André Liechti, but the investigation also reveals that Pierre-André Liechti gave false information when he submitted his tender.

Section 57.1.10 of the Charter of Ville de Montréal, metropolis of Québec states two (2) cumulative conditions for the Inspector General to intervene. First, she must find non-compliance with one of the requirements specified in the tender documents or contract, or that the information given during the contracting process is false. Second, she must be of the opinion that the seriousness of the breach observed justifies rescinding of the contract.

Regarding the first criterion, it is met for three (3) reasons. First, by participating in the drafting of the tender documents, Pierre-André Liechti contravened the provisions of the Instructions to Bidders aimed at promoting transparency. By submitting his bid, the bidder states that he did not participate in the drafting of the tender documents nor will he hire a person who participated in such a process. However, in light of the above, Pierre-André

Liechti's solemn declaration in this regard is clearly false.

Next, a similar finding emerges regarding his declaration of absence of a conflict of interest with a potential supplier of ozone systems. The tender documents indicate that a bidder will be considered to have a conflict of interest with those of the City if he has been directly or indirectly under contract with a supplier of ozone systems in the 6 months prior to the submission of his tender. However, not only did he provide his professional advice to Degrémont less than two (2) weeks before the publication of the call for tenders for an expert 10-11277, but Pierre-André Liechti was also aware of the situation in which he had placed himself, asking Degrémont to be discreet about the advice he was offering and not to mention his name.

Finally, Pierre-André Liechti contravened his obligation of independence, in particular by examining the submission of Degrémont which, as will be explained below, is based on the patent for the "New U-Tube" of which he is an inventor and in respect of which he demonstrated a favorable bias in his own bid as an expert. In doing so, if Pierre-André Liechti were to render a negative opinion or find a major non-conformity regarding Degrémont's bid, this would amount to disavowing in part the work he himself had accomplished during the pilot-trials and the patent that he had invented a few years earlier.

Regarding the seriousness of these breaches, the Inspector General is of the opinion that it has been established beyond a shadow of a doubt. The essence of a call for tenders for expert services, within the framework of a project as complex as that of ozone disinfection, is to have the certainty that it is possible to rely entirely on the advice of the selected expert. The point here is not to question the validity, or the accuracy of the extremely complex calculations previously carried out by Pierre-André Liechti, but rather to recognize that his actions, revealed by the present investigation, foster a nagging doubt as to the level of confidence that may be placed in him. For these reasons, the Inspector General concludes that the conditions of section 57.1.10 of the Charter of Ville de Montréal, metropolis of Québec are met and that the expert contract 10-11277 must be rescinded.

In addition, the Inspector General strongly denounces the conduct of the Station employees assigned to this project. Their actions demonstrate a clear will to favor Pierre-André Liechti and attest to a gross blindness regarding application of the rules for the award of public contracts for call for tenders for an expert 10-11277.

Second Call for Tenders: Call for Tenders for Qualification of Suppliers 10-11257

Simultaneously to publication of call for tenders for an expert 10-11277, the City published call for tenders for qualification of suppliers 10-11257. The first step in the process leading to the acquisition of an ozone unit, this call for tenders aimed to qualify the suppliers, who would then be the only ones authorized to submit bids on the call for tenders for the supply of an ozone unit 12-12107. After call for tenders for qualification of suppliers 10-11257, three companies were qualified, including Degrémont.

However, the investigation reveals that Degrémont was advantaged in two (2) distinct ways regarding this call for tenders, that is, by having been the only company to participate in the pilot-trials from 2005 to 2007 and, above all, having participated in the drafting of tender documents for said call for tenders.

First of all, the fact that the Station allowed only Degrémont to carry out the pilot-trials from

2005 to 2007 gave it an advantage when preparing its bid for the call for tenders for qualification of suppliers 10-11257. Whether it is qualified as a “psychological advantage”, as does Pierre-André Liechti, or whether we accept Degrémont's point-of-view, put forth in its response to the Notice, that it is simply a “legitimate competitive advantage”, the fact is that the pilot-trials carried out from 2005 to 2007 were an opportunity for Degrémont to test a solution in the Station's particular conditions and environment.

Yet, the documents for call for tenders for qualification of suppliers 10-11257 attached great importance to knowledge of the Station's particular environment and to proposing a solution adapted to its existing facilities.

Thus, although the situation stems once again from decisions made by Station employees, the fact remains, in the opinion of the Inspector General, that an advantage has been conferred on Degrémont by enabling it to be the only company to carry out the pilot-trials from 2005 to 2007, especially as the decision-making summaries submitted to elected officials indicated that all potential suppliers would have the possibility of validating their own proposed systems proposed, even though this was never the case.

The investigation by the Office of Inspector General also reveals that Degrémont obtained a preliminary version of the tender documents for the call for tenders for qualification of suppliers, and was able to suggest modifications to certain clauses.

As of February 2009, emails obtained during the investigation show that an employee of Degrémont sent to the microbiologist assigned to the Station's project the company's suggestions regarding modifications to be made to the tender documents for call for tenders for qualification of suppliers 10-11257. Some of these exchanges were made via the personal e-mail addresses of Degrémont and Station employees, with the titles of three (3) documents then transmitted all ending with “RevisionDGT.doc”. The microbiologist assigned to the Station's project forwarded these documents to his colleagues who incorporated four (4) of the modifications proposed by Degrémont into the qualification specifications. They could ultimately be found in the final version of the tender documents.

At this point, it is important to remember that the call for tenders for qualification of suppliers 10-11257, being only a preliminary step in the process of awarding the contract for the supply of an ozone unit 12-12107, there is, as such, no longer any contractual process in which the Inspector General could intervene under section 57.1.10 of the Charter of Ville de Montréal, metropolis of Québec.

However, this observation cannot justify ignoring the seriousness of the breaches of conduct of the employees assigned to the Station's project. Admittedly, it should be noted that Degrémont did not hesitate to take advantage of the Station's employees' largesse, but it simply cannot be tolerated that they allow a potential bidder to have the opportunity to read and comment on draft versions of the tender documents and even less, agree to modify the documents accordingly.

Being the main architects of the advantages conferred on Degrémont, the fact that the tendering process was not directed towards the latter to the exclusion of any other supplier and allowed the qualification of three (3) bidders in no way excuses the unacceptable carelessness shown by the Station employees towards the integrity of the rules for awarding public contracts.

Third Call for Tenders: Call for Tenders for the Supply of an Ozone Unit 12-12107

Third, and last call for tenders analyzed in the context of this investigation, the call for tenders for the supply of an ozone unit 12-12107 is the second phase of the qualification process of suppliers carried out by the Station in order to select a supplier of ozone systems. Published on July 22, 2013, it was only open to three (3) companies qualified following the call for tenders for qualification of suppliers 10-11257. Ultimately, there were only two (2) bidders, including the eventual winner, Degrémont. The contract resulting from this call for tenders is still in force today.

At the end of the investigation and of an in-depth analysis of each of the elements which emerged from it, one observation must be made regarding the contract for the supply of an ozone unit 12-12107. The Inspector General's investigation did not allow the identification of a non-compliance, as such, by Degrémont, with one of the specific provisions of these tender documents. This is not to say that the call for tenders for the supply of an ozone unit 12-12107 was not affected by breaches of integrity. However, they were caused by other actors.

On the one hand, it appears from the investigation that Pierre-André Liechti played a preponderant role during the work of the technical committee which served for the evaluation of the bids received on the call for tenders for the supply of an ozone unit 12-12107. The majority of the witnesses met, including Pierre-André Liechti himself, said that the difficulty of the analyzes that had to be carried out, and the latter's specialized expertise in this high-tech field compared to that of the other members meant that it was his analysis which was the determining factor in evaluating the bidders. Consequently, the conformity of the submissions was assessed mainly according to Pierre-André Liechti's analysis, who evaluated a submission which he considered to be based on his own invention, thus raising concerns about the independence of his role as an expert-consultant.

On the other hand, the decision not to comply with requests from other bidders to send them the data and results of the pilot-trials carried out from 2005 to 2007 was made by employees of the Station. From this, stems an appearance of favoritism towards Degrémont, which then had sole access to said data and results.

Admittedly, the facts preceding the award of the contract for the supply of an ozone unit 12-12107, as revealed by the investigation, raise questions likely to have an impact on the bond of trust with Degrémont. But since they do not constitute breaches of the requirements of the tender documents, a direct intervention by the Inspector General through section 57.1.10 of the Charter of Ville de Montréal is not possible.

Nevertheless, the Inspector General remains greatly preoccupied by the portrait emerging from all of the facts revealed and she is of the opinion that this bond of trust, in the absence of certainty as to its solidity, be placed under strict surveillance at the very least. In this sense, the development of the capacity, by the City's own personnel, to verify compliance with the contract's prescriptions is essential. The preservation of the integrity of contractual performance and the sound management of public funds, in particular those invested in the numerous contracts related to the project and awarded to other contractors, are at stake. Taken together, these contracts represent an investment of nearly five hundred million dollars (\$ 500 million) of which more than one hundred and sixty-five million dollars

have already been committed (\$ 165 million).

In response to the Notice to an interested party, officials at the City's Water Department transmitted a recovery plan for the entire project, the City having ensured its viability to the Inspector General. The guidelines of the proposed framework include, among others:

- the creation of a new post of project manager;*
- the establishment of two (2) committees, each consisting of four (4) independent experts who must review all of the project's main technical aspects and advise the City accordingly;*
- the exclusive assignment of a lawyer specializing in municipal contract management;*
- periodic monitoring of the progress of the project by a committee of directors including the director of the Water Department; and*
- supervision by the Comptroller General, who must report to the City's senior management.*

As such, the Inspector General takes note of the recovery plan submitted to her by the City. In light of this plan, there is a clear desire on the part of senior municipal management to act swiftly and take control of the project.

However, the Inspector General reiterates that a rigorous and continuous application of the measures provided for in the recovery plan is necessary and to this end, she will thoroughly verify their implementation.

Table of Contents

1. Preliminary remarks	1
1.1 Details	1
1.2 Applicable standard of proof.....	1
1.3 Notice to interested parties	1
1.4 Glossary	2
2. Context of the Office of Inspector General's investigation	3
2.1 Project background.....	3
2.1.1 Lack of wastewater disinfection.....	3
2.1.2 Searching for an alternative to chlorine disinfection	4
2.2 Implementation of the pilot tests	5
2.2.1 Selection of the suppliers for the pilot tests	5
2.2.2 The 2005 and 2006 pilot tests.....	6
2.2.3 The 2007 pilot test	6
3. The calls for tenders for the Ozone Wastewater Disinfection Project	12
3.1 Denunciation received	13
3.2 Call for tenders 10-11277 "Professional services for technical ozonation expertise relating to the ozone disinfection project at the Jean-R.-Marcotte wastewater treatment plant"	13
3.2.1 The purpose of the Request for an Expert Consultant Tender 10-11277	14
3.2.2 The contract clauses regarding independence, conflicts of interests and transparency.....	14
3.2.3 Pierre-André Liehti	16
3.2.4 Exchanges between Plant employees involved in the wastewater disinfection project and Pierre-André Liehti.....	17
3.2.5 Pierre-André Liehti's participation in the drafting of the documents for the Request for an Expert Consultant Tender 10-11277 and the Request for Qualification Tender 10-11257	24
3.2.6 The relationship between Pierre-André Liehti and Degrémont after his retirement.....	25

3.2.7	<i>Results of the Request for an Expert Consultant Tender 10-11277</i>	30
3.3	Call for Tenders 10-11257 “Qualification of Ozonation System Suppliers”	30
3.3.1	<i>Drafting of Request for Qualification Tender 10-11257 documents</i>	31
3.3.2	<i>Publication of Request for Qualification Tender 10-11257 and its contents</i>	45
3.3.3	<i>Results of Request for Qualification Tender 10-11257</i>	49
3.4	The contract resulting from the Call for Tenders 12-12107 “Supply of an Ozone Unit for the Jean-R.-Marcotte Plant”	49
3.4.1	<i>The questions and answers exchanged during the publication period of the Call for Tenders to Supply an Ozone Unit 12-12107</i>	49
3.4.2	<i>The technical committee’s work</i>	51
3.4.3	<i>The result of the Call for Tenders to Supply an Ozone Unit 12-12107</i>	54
4.	Responses to the Notice to Interested Parties	54
4.1	Response from Pierre-André Liechti	55
4.1.1	<i>Concerning his bid and the patented “New U-Tube”</i>	55
4.1.2	<i>Concerning any benefit that Degrémont may have obtained by participating alone in the pilot testing conducted at the Plant and the impact of non-disclosure of the results</i>	55
4.1.3	<i>Concerning his relationship with Degrémont</i>	56
4.1.4	<i>Concerning his involvement in drafting the documents for the Request for an Expert Consultant Tender 10-11277 and Request for Qualification Tender 10-11257</i>	56
4.1.5	<i>Concerning the work of the technical committee of the Call for Tenders to Supply an Ozone Unit 12-12107</i>	57
4.2	Degrémont.s response	57
4.2.1	<i>Concerning the benefit it may have obtained as sole participant in the 2007 pilot test and in developing the patented “New U-Tube”s</i>	57
4.2.2	<i>Concerning the fact that its bid is based on the “New U-Tube” in the Request for Qualification Tender 10-11257 and the Call for Tenders for the Supply of an Ozone Unit 12-12107</i>	59
4.2.3	<i>Concerning the inclusion of its comments in the Request for Qualification Tender 10-11257 documents</i>	60
4.2.4	<i>Concerning its relationship with Pierre-André Liechti</i>	61
4.3	Response from the Plant Manager	61

4.3.1	Concerning Degremont's completion, on its own, of the 2007 pilot test and the non-disclosure of the results	61
4.3.2	Concerning the drafting of the Request for an Expert Consultant Tender 10-11277.....	62
4.3.3	Concerning the relationship between Pierre-André Liechti and Degremont	62
4.3.4	Concerning the drafting of the Request for Qualification Tender 10-11257.....	63
4.3.5	Concerning the work of the technical committee on the Call for Tenders to Supply an Ozone Unit 12-12107	63
4.4	Response of the Plant Project Manager	64
4.4.1	Concerning the drafting of the Request for an Expert Consultant Tender 10-11277.....	64
4.4.2	Concerning the relationship between Pierre-André Liechti and Degremont	65
4.4.3	Concerning international publication.....	65
4.4.4	Concerning the drafting of the Request for Qualification Tender 10-11257.....	65
4.4.5	Concerning Pierre-André Liechti's involvement in the Request for Qualification Tender 10-11257 process.....	66
4.4.6	Concerning the refusal to disclose the pilot test results during the Call for Tenders to Supply an Ozone Unit 12-12107.....	67
4.5	Response of the Plant Project Engineer	67
4.5.1	Concerning the 2005 pilot test.....	67
4.5.2	Concerning the 2007 pilot test, Degremont's involvement, and non-disclosure of the results to the bidders	67
4.5.3	Concerning the drafting of the Request for an Expert Consultant Tender 10-11277.....	68
4.5.4	Concerning the participation in an external technical meeting with Degremont.....	69
4.5.5	Concerning the documents for the Call for Tenders to Supply an Ozone Unit 12-12107	69
4.6	Response of the Water Department.....	69
5.	Findings and Analysis.....	69
5.1	Findings concerning the Request for an Expert Consultant Tender 10-11277	70
5.1.1	The Request for an Expert Consultant Tender 10-11277 was directed in favour of Pierre-André Liechti	70

5.1.2	<i>Breaches of the tender document requirements</i>	73
5.2	Findings concerning the Request for Qualification Tender 10-11257	77
5.2.1	<i>Advantage conferred on Degrémont by allowing it to participate in drafting the tender documents</i>	78
5.2.2	<i>Advantage conferred on Degrémont by allowing it to be the sole participant in the 2005 to 2007 pilot tests</i>	78
5.2.3	<i>The appearance of favouritism resulting from the non-disclosure of the 2005 to 2007 pilot test results to the other bidders</i>	79
5.3	Findings concerning the Call for Tenders to Supply an Ozone Unit 12-12107	80
5.3.1	<i>Pierre-André Liechti's lack of independence</i>	80
5.3.2	<i>The appearance of favouritism resulting from the responses to the bidders</i>	80
6.	Conclusions and Recommendations	81
6.1	The contract resulting from the Request for an Expert Consultant Tender 10-11277 must be rescinded	81
6.2	Several breaches of integrity in the Request for Qualification Tender 10-11257 process	82
6.3	The recovery plan presented by senior City management	83
6.4	The Contract to Supply an Ozone Unit 12-12107 must be subject to strict supervision and constant monitoring	84
	ANNEXE – CHRONOLOGIE SOMMAIRE DES ÉVÈNEMENTS	87

1. Preliminary remarks

1.1 Details

Under section 57.1.8 of the *Charter of Ville de Montréal, metropolis of Québec* (R.L.R.Q. c. C-11.4, hereinafter the “Charter of Ville de Montréal”), the Inspector General’s mandate consists in overseeing contracting processes and the carrying out of contracts by Ville de Montréal or by a related legal person.

The Inspector General does not conduct criminal investigations. She conducts investigations of an administrative nature. Throughout this report, wherever the term “investigation” is used, it means an investigation of an administrative nature and under no circumstances shall it be interpreted as referring to a criminal investigation.

1.2 Applicable standard of proof

The Inspector General has the duty to deliver quality reports that are timely, objective, accurate and presented in a manner that will ensure that the individuals and organizations under her authority are able to act in accordance with the information provided.

In support of her opinions, reports and recommendations, the Inspector General imposes upon herself the burden of proof of the civil standard of the balance of probabilities.²

1.3 Notice to interested parties

Before making the results of her investigation public and, if applicable, employing the powers conferred upon her under subsections 57.1.10 and 57.1.23 of the Charter of Ville de Montréal in conformance with her duty of procedural fairness, the Inspector General transmits a Notice to Interested Parties (hereinafter, the “Notice”), indicating the relevant facts gathered in the course of the investigation.

Upon receipt of the Notice, the persons concerned may present, in writing, any comments, representations or observations they believe relevant to, or likely to influence, the Inspector General’s decision.

Such Notice was sent on November 8, 2019, to the winning bidders of the calls for tenders 10-11277 and 12-12107 – Pierre-André Liehti and Suez Canada Inc. respectively. A Notice was also sent to the Ville de Montréal Water Department and to three (3) former City employees who were involved in the wastewater disinfection project. Based on the facts revealed by the investigation, a Notice would also have been sent to a fourth former City employee involved in the project, but he passed away in 2011.

² Evidence is sufficient if it renders the existence of a fact more probable than its non-existence (see section 2804 of the *Civil Code of Québec*).

The facts and arguments invoked by the recipients of the Notice were taken into account by the Inspector General and are addressed in section 4 of this report.

1.4 Glossary

Given the scope and duration of the wastewater disinfection project—approximately twenty (20) years—a short glossary of the main stakeholders and a few preliminary remarks are provided to facilitate the reader’s comprehension.

To begin with, “Degrémont” refers to the company that was qualified through the Request for Qualification Tender 10-11257 “Qualification of Ozonation System Suppliers” and that won the bid for the Call for Tenders to Supply an Ozone Unit 12-12107 “Supply of an Ozone Unit for the Jean-R.-Marcotte Plant.” In 2016, Degrémont merged with Suez Canada Inc. and formed a limited partnership with Suez Canada Holdings Inc. under Alberta’s *Partnership Act* to form Suez Treatment Solutions Canada L.P. However, for ease of reference, the report will continue to use the name “Degrémont,” as it was the name used at the time of the events in question.

As the wastewater disinfection project was carried out over several years at the Plant, several City employees were involved in it, more or less directly. However, the facts collected through the Investigation show that four (4) of them played a more significant role. They will be identified by their title at the moment of the events in question, including the individual who has since passed away.

Lastly, for the sake of simplicity, the word “Plant” will be used to refer to the Jean-R.-Marcotte Wastewater Treatment Plant. The word “Plant” refers to the Jean-R.-Marcotte Plant only and not any other Ville de Montréal plant.

Name	Role or position
Degrémont	Company that was qualified through the Request for Qualification Tender 10-11257 and that won the bid for the Call for Tenders to Supply an Ozone Unit 12-12107.
Pierre-André Liechti	Engineer and expert who was selected following the Request for an Expert Consultant Tender 10-11277.
Jean-R.-Marcotte Wastewater Treatment Plant	Location of the Ozone Wastewater Disinfection Project
Plant Manager	Manager of the Plant at the time of the events in question; now retired
Plant Project Manager	Plant project manager and engineer employed by Ville de Montréal; now retired
Plant Project Microbiologist	Ville de Montréal employee involved in the Plant Project; now deceased

Name	Role or position
Plant Project Engineer	Plant and processes engineer employed by Ville de Montréal; project lead for disinfection in the Plant Project; now retired
Water Department	Ville de Montréal Department in charge of the Plant's Ozone Wastewater Disinfection Project

2. Context of the Office of Inspector General's investigation

The three (3) contracting processes analyzed in this report—Request for an Expert Consultant Tender 10-11277, Request for Qualification Tender 10-11257 and Call for Tenders to Supply an Ozone Unit 12-12107—took place between 2010 and 2015. However, they are the result of several years of work and analyses conducted at the Plant to identify the best option to disinfect the City's wastewater. As such, more information about the Ozone Wastewater Disinfection Project is necessary to provide context for the events that led to this report.

Furthermore, it must be noted that the Office of Inspector General's investigation is not a technical analysis conducted to determine which of the ozone or UV disinfection processes the City should have chosen. The Office of Inspector General's role is rather to prevent breaches of integrity and equity in the contract award process.

Lastly, to facilitate the reader's understanding, a time line showing a summary chronology of the events has been attached as an appendix to this report.

2.1 Project background

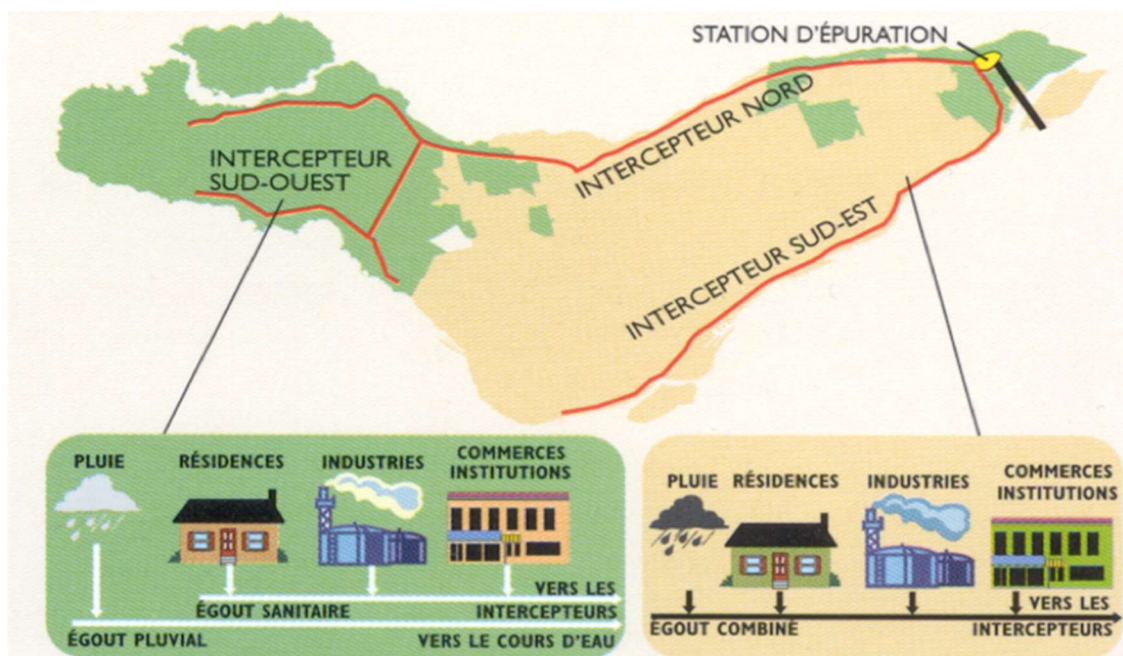
2.1.1 Lack of wastewater disinfection

Before the Plant's construction, which lasted from 1980 to 1995, the City's wastewater used to be flushed directly into the St. Lawrence River or Rivière des Prairies. Once the Plant was put into operation in August 1995, all the wastewater from the island of Montréal was channelled there via a network of interceptors (see map below). The Plant's wastewater treatment process removes solid matter and several toxic products before the water is discharged into the river, but it does not disinfect it at a microbiological level.

When the Plant was built, chlorination equipment was installed for the disinfection phase. However, it was never made operational because the Ministère de l'Environnement issued a moratorium on the use of chlorination to disinfect wastewater in Quebec. No replacement equipment was installed at the Plant, due to a lack of proven alternatives.

But the quickly degrading microbiological quality of the river water around Montréal started giving rise to concerns.

LE RÉSEAU D'INTERCEPTEURS



Map of the interceptors connecting the sewers to the Plant, then to the River

2.1.2 Searching for an alternative to chlorine disinfection

In the early 1990s, the Communauté urbaine de Montréal and the Québec government searched for a solution to replace chlorine disinfection at the Plant by conducting ultraviolet (UV) radiation and ozonation tests to assess each disinfection method's effectiveness.

In 1997, a tripartite committee was created; it consisted of three (3) Plant employees and four (4) representatives of the province's environmental and municipal affairs departments (hereafter referred to as the "Tripartite Committee"). Its mission was to develop an action plan to implement a wastewater disinfection process in Montréal.

In 2001, the Tripartite Committee concluded that a wastewater disinfection system was necessary for the Montréal area and that the selected disinfection processes—ozone and UV—would have to be subjected to comparative analyses and trials.

2.2 Implementation of the pilot tests

As per the Tripartite Committee's May 2001 report, pilot testing was conducted to compare the disinfection methods based on their toxic endpoint and to determine the implementation costs.

The investigation shows that three (3) pilot tests were conducted from 2005 to 2007 at the Plant. This section will present a summary of how the pilot test suppliers were selected, the pilot tests themselves, and their results. It was these pilot tests, and their findings, that led to the contracting processes that are the subject of this report.

2.2.1 Selection of the suppliers for the pilot tests

To begin with, to conduct the pilot tests, the Tripartite Committee needed to select suppliers for the two types of disinfection methods in question. For the UV disinfection system suppliers, the decision-making documents from 2003 show that the Plant thought they should prequalify themselves before being allowed to participate in the pilot tests by demonstrating that they were capable of handling the Plant's effluents specifically. And so, in 2004, two (2) UV disinfection system suppliers were selected through the prequalification process.

The circumstances were different for the ozone disinfection system suppliers. Though a prequalification for this second disinfection method was also mentioned in the decision-making documents from 2003, it never occurred. The reasons why only one ozone disinfection supplier was approached for the pilot tests would only be outlined in the 2005 decision-making documents. To justify this single-source procurement, the City wrote that there was a limited number of suppliers in the ozonation field, they all offered similar technologies, and the City wanted to limit the cost of the pilot testing.

As for the reason for selecting Ozonia North America Inc., a Degrémont subsidiary, specifically, it is mentioned in the decision-making document that the choice was based on the "international recognition" of its expertise, its prior involvement in the 1992 pilot testing, the availability of its ozone generating and contact equipment, and its association with a Québec university.

However, the 2005 decision-making documents specify that other ozone suppliers should be allowed to test their systems, because "if this technology is selected, the subsequent step of developing the final ozone disinfection infrastructure design will not be limited to the equipment offered by the supplier who participated in the ozone pilot tests." [Translation]

2.2.2 The 2005 and 2006 pilot tests

The 2005 decision summary for the award of a professional services contract for the supervision of the pilot tests specifies that *"the purpose of the pilot tests was to establish the performance and effectiveness of various disinfection systems with regards to the Plant's effluents, based on various analyses and observations."* [Translation]

The technologies compared during the 2005 pilot tests were the UV disinfection processes of two (2) suppliers using two different types of lamps, and Degrémont's ozone disinfection. To clarify briefly, UV disinfection is the chemical alteration process of using UV lamps on micro-organisms, while ozone disinfection is a strong oxidation process resulting from the infusion of ozone into wastewater to destroy any pollutants.

One of the data points used to compare the two disinfection methods is their impact on the ecosystem that stands to be affected. Following the experts' observations, the 2005 pilot tests showed that ozone wastewater disinfection did not produce the same mortality rates for the ecotoxicology laboratory's trout as UV disinfection.

It had been planned that if the 2005 pilot test results were non-conclusive, additional pilot tests could be conducted in 2006, which was the case for ozonation only. In 2006, the purpose of the tests was to verify the effect of bubble sizes and to reach bacterial disinfection objectives for ozonation. Degrémont was still the only ozone equipment supplier participating in the Plant's 2006 pilot testing.

From a financial point of view, a 2003 decision summary reported that \$150,000 would be allocated for each pilot test in 2005. In March 2005, this number rose to \$275,000 per pilot test, for a total of \$825,000 before taxes for the three (3) suppliers, namely the two (2) UV system suppliers and the only ozone system supplier, Degrémont.

The Office of Inspector General's investigation was unable to trace any disbursements to Degrémont for the 2006 pilot tests.

2.2.3 The 2007 pilot test

A third pilot test was conducted in 2007; once again, it involved only Degrémont and the ozonation process. As explained in the following subsections, the investigation revealed that special exchanges were had with Degrémont during this third pilot test, before and after the Tripartite Committee submitted its report on June 5, 2007, specifically about the third pilot test and its terms.

Once the pilot test was concluded, the Tripartite Committee submitted its last report recommending ozonation as a disinfection method and stating that tests should be carried out by all ozone system suppliers. Lastly, it must be noted that thanks to the results obtained from the 2005 to 2007 pilot tests, Degrémont developed and patented the "New U-Tube."

2.2.3.1 Tripartite Committee report from June 5, 2007

On June 5, 2007, after analysis of the report from the consultant firm overseeing the pilot tests, the Tripartite Committee recommended using the ozone treatment method to disinfect wastewater because it could eliminate significantly more viruses from the treated wastewater.

However, nowhere in the report was it mentioned that additional pilot testing would be conducted by Degrémont exclusively. On the contrary, the Tripartite Committee recommended that the systems proposed by all ozonation suppliers be tested, as seen in the last paragraph of the report's executive summary:

"For the ozone disinfection method, the Committee deems it necessary that all suppliers validate the performance of the injection systems they want to propose. Validating the design criteria will enable us to make a clear decision regarding the best technological and economic choice. In addition, during the design stage, additional techno-economic studies will be required for some of the options to enable us to make a decision based on technical, economic and environmental aspects." (Bold type in the original, emphasis added) [Translation]

The following subsections show that this recommendation was never implemented.

2.2.3.2 Exchanges before and after the Tripartite Committee report

The Inspector General's investigation showed that, in 2007, several exchanges took place between the Plant and Degrémont regarding additional ozonation pilot testing, before the Tripartite Committee had even submitted its report.

In fact, in a letter dated March 15, 2007, sent by a Degrémont sales representative to the Plant Manager, with a copy sent to the Plant Project Engineer and Plant Project Microbiologist, Degrémont tells the Plant Manager that it is reviewing the possibility of proposing to the City that it conduct an "ozonation demonstration pilot test in summer 2007."

"As part of Ville de Montréal's wastewater disinfection project, Degrémont Technologies is reviewing the possibility of proposing to the City that it conduct an ozonation technology demonstration pilot test in summer 2007."

The pilot test we would like to carry out must also, of course, address an interest that the City has shown, and is also conditional upon an agreement on the terms to be defined. Consequently, we propose that you reserve a pilot testing site that will allow us to procure wastewater under regular Plant operating conditions." [Translation]

The terms to be defined included, in particular, the financing of this third pilot test. Internal Degrémont documents obtained by the Office of Inspector General revealed that this was a matter of concern to them.

Indeed, shortly after the letter of March 15, 2007, the Degrémont sales representative had to answer several questions from one of his superiors, particularly about the “hydro-injection pilot testing” cost scenarios. Based on the selected design, the costs were estimated to be several hundreds of thousands of dollars. The Degrémont sales representative answered the internal Degrémont correspondent’s question as follows (question in bold, answer in italic):

“This all seems much too expensive! Is the City going to chip in? We sent a letter to the City informing it that before starting a pilot test, we would have to come to mutually acceptable terms (confidentiality, etc.). The City’s participation is still a possibility. We have to discuss it and determine if the exclusive ownership of the results is a competitive advantage that Degrémont wants to keep” (Emphasis added) [Translation]

On June 6, 2007, the day after the Tripartite Committee submitted its report, a conference call took place, according to an internal Degrémont email. The topic at hand was the pressure the Plant was putting on Degrémont to conduct additional pilot testing, in return for the Plant’s support later on:

“Today’s conference call [June 6, 2007]

The Plant is pressuring DGT Ltd. to confirm that we are willing to conduct pilot testing and to provide a date.

In return, the Plant assures us it will support us at later stages.” (Emphasis added) [Translation]

Still regarding the pressure exerted by the Plant, this email from June 6, 2007, reads as follows:

“In conclusion, the Plant is doing everything it can to get us to do this pilot testing (they even claimed that [name of another company working in wastewater disinfection] will return to use the site, which would prevent us from conducting the pilot testing, even though everyone knows that company is out of the running). That’s called blackmail.” [Translation]

Despite the Plant’s assurance that it would provide “support” at a later date, the same email revealed that questions were raised within Degrémont regarding obtaining competitive advantages for the company, having drafting control over the specifications of a prospective call for tenders, and the costs incurred:

“Pending issues

. If the tests are conclusive, will there be O3 in this station?

. If so, what competitive advantages will we gain from that? Learning how to get the result with an inferior dose of O3? If that’s the case, do we maintain a competitive edge over [another ozone system supplier] if the call for tenders is released in process guarantee ([the other ozone supplier] can underestimate and correct it later by increasing the capacity)? Wouldn’t be better to go for a performance-based call for tenders [...] (that’s my opinion). How will we control the drafting of the specifications and terms and conditions?

. If we carry out these tests and they select the O3, will we have to redo the tests in 2008 or will the 2007 tests be valid for the 2008 tests? Will the suppliers get paid for the 2008 pilot tests? Will we get paid in 2008 for the tests done in 2007? Will they cover the costs of 2007 in 2008?” (Emphasis added)

In the end, events show that Degrémont chose to conduct a third pilot test in 2007 despite all these questions.

Regarding the financial aspects, the Office of Inspector General failed to trace any evidence of payments or financial compensation made from the City to Degrémont for the 2007 pilot tests, unlike the 2005 pilot tests, for which, as mentioned earlier, the City contributed \$275,000 per pilot test.

Lastly, regarding the confidentiality and exclusive property of the results, they were the subject of several discussions throughout 2007, as will be seen in the next subsection. This issue will also have an impact on the 2010 Request for Qualification Tender and the 2014 Call for Tenders to Supply an Ozone Unit.

2.2.3.3 The meeting on July 9, 2007, and the confidentiality of the 2007 pilot test results

On July 9, 2007, a meeting was held at the Plant with four (4) Plant representatives, including the Plant Manager, Plant Project Engineer and Plant Project Microbiologist; five (5) Degrémont representatives; and one of the latter’s exclusive subcontractors. According to the minutes of the meeting, the Plant began by providing a report of its “Goals and expectations/additional tests,” which were, more specifically, that the 2007 pilot testing will allow it to conclusively choose ozone disinfection:

“The City explained that the 2005 pilot testing showed that ozone disinfection is a promising method and is more cost-effective in the medium and long term.”

“The City expects that it will be able to select ozone disinfection based on the results of the 2007 pilot test.”

Following that, the need for Degrémont to appear independent was also addressed:

“To ensure the apparent independence of the results obtained from the benchmark test (columns with porous diffusers), it is recommended that DT does not move forward with its acquisition while the hydro-injection system pilot testing is ongoing.” (Emphasis added)

The intellectual property issue that arose from the 2007 pilot testing was also discussed, with the Plant stating that it “expects that the results will become the property of DT, Ville de Montréal and the Tripartite Committee.”

Lastly, item 6 of the minutes – titled “Confidentiality Agreement” – states that both parties (the Plant and Degrémont) wanted the agreement, that the Plant demanded that the results be sealed for two (2) years, that there were concerns about information leaks, and that the Plant would send a draft of the agreement after the meeting:

“6. Confidentiality Agreement

A confidentiality agreement was requested by Mtl and DT. Mtl requested that the results of the pilot testing be sealed for two (2) years.

Mtl will provide a confidentiality agreement draft to be reviewed and annotated by DT.

To minimize the risk of an information leak, it has been discussed that access to information would be on a need-to-know basis.

Mtl explained that Environment Canada officers could visit at random and ask about the treatment to which the fish and mussels were being subjected. The information provided to them should be minimal and controlled. (Emphasis added)

A Plant engineer sent a draft of said confidentiality agreement to Degrémont the day after the meeting, on July 10, 2007. Although some exchanges about a “collaboration” agreement with Degrémont Ltd., later called a “confidentiality agreement,” can be retraced between July and October 2007, no signed version of it was found, nor was any decision-making file about it.

Nonetheless, it must be noted that during the 2010 Request for Qualification Tender, Ville de Montréal invoked this confidentiality when refusing to share the results of the previous pilot testing conducted for the ozonation project. In February 2014, during the Call for Tenders to Supply an Ozone Unit 12-12107, the City once again refused to disclose the results of the pilot tests to the bidders, but this time with the explanation that they would not be useful for designing the ozone system.

2.2.3.4 The 2007 pilot test conducted by Degrémont and the lack of validation of any other type of ozone system

The third pilot test was conducted at the Plant in September and October 2007, with Degrémont as the only participant. It was the only company invited to validate its ozone injection system as a viable solution for the Plant. However, no written evidence of this invitation could be provided to the Office of Inspector General.

For his part, the Plant Manager said he invited two (2) other ozone technology companies to conduct tests at the Plant for the 2007 pilot testing. However, when the Office of Inspector General investigating officers questioned a representative of one of these two (2) other potential suppliers, he said he had never been invited to do so. The representative of the third potential supplier said the first he heard about the Plant’s disinfection project was in 2009-2010.

Additionally, in an exchange from June 19, 2007, between two (2) Plant employees, the Plant Project Engineer mentions the possibility that two (2) other companies that work in wastewater treatment and sanitation, other than Degrémont, also want “the same opportunity” to carry out pilot testing in 2007”:

“As such, if Degrémont-Suez confirms it wants to conduct its own tests this summer, by starting with making an initial order for the construction required for pilot testing, we will need much better communication than what we have had over the last few years to conduct these tests. So as per your request, I plan on getting in touch with Degrémont-Suez as soon as it gets the City’s authorization to start its testing, to put in place a communication mechanism with a manager to get the full description of the pilot unit; find out where the ‘temporary’ installations will be located; ask about the supplier’s needs, obviously (power output, water, telephones); get the experimental protocol and the daily progress reports (see the protocol for contract 1641-ae, as requested by [Plant Manager]); and get the emergency procedures and health and safety instructions, as well as the list of first-aid respondents and people to call in case of an incident. (I’m hoping that [two (2) potential suppliers] don’t also ask to participate in this). If need be, I will also share Ville de Montréal’s expectations regarding liability insurance and the health & safety and staff identification instructions for the supplier.” (Emphasis added)

In short, nowhere in the body of evidence obtained by the Office of Inspector General was there any document, exchange or notice whatsoever addressed to an ozonation company other than Degrémont containing information about the additional pilot testing conducted in 2007.

2.2.3.5 The end of the Tripartite Committee’s mandate and its recommendation to elected officials

Following the 2007 pilot testing, the Tripartite Committee concluded its mandate with a letter to the Plant Manager dated November 9, 2007, signed by five (5) of its seven (7) members.

In light of the results obtained from the additional tests, the five (5) authors provided some findings and conclusions, particularly regarding how they anticipated “serious maintenance issues for the injection systems using small or medium bubble diffusers.” Design parameters were also recommended for the water flow, ozone injection dosage and necessary daily ozone production capacity. The Tripartite Committee’s letter again stated that all ozone system suppliers should validate the performance of the injection systems that would be proposed.

In December 2007, a decision-making file was prepared to present the selected disinfection method to the elected representatives. It specifically mentioned the Tripartite Committee’s recommendation to allow other suppliers to test the performance of the ozone injection systems they planned to propose.

However, this validation with different suppliers never took place.

The Office of Inspector General did not find any information about additional pilot testing that, prior to the Request for Qualification Tender 10-11257 and the Call for Tenders to Supply an Ozone Unit 12-12107, would have allowed ozone system suppliers other than Degrémont to validate their product’s control and performance parameters.

In fact, the pilot tests conducted in September and October 2007 were the last ones to take place before the Request for Qualification Tender 10-11257 and Call for Tenders to Supply an Ozone Unit 12-12107 were launched.

2.2.3.6 The New U-Tube

A last item of note at this stage relates to the pilot tests conducted by Degrémont.

Indeed, thanks to the pilot testing and the results it obtained from it at the Plant between 2005 and 2007, Degrémont (France) developed and patented the “New U-Tube.” According to the Canadian Intellectual Property Office, the request for priority was made on September 8, 2006, the international patent application was filed on September 5, 2007, the patent was published on March 13, 2008, and issued on November 20, 2012. In short, the patent is for an ozone contact process where ozone is injected into wastewater to disinfect it.

Additionally, still according to the Canadian Intellectual Property Office, Pierre-André Liechti is one of the patent’s three inventors, and the witnesses, including Pierre-André Liechti himself, acknowledged that he is the main inventor of the patent.

However, Pierre-André Liechti claimed that he did not receive any rewards or promises of rewards, financial or otherwise, for having invented the “New U-Tube.”

3. The calls for tenders for the Ozone Wastewater Disinfection Project

Once the 2005-2007 pilot testing was over and the City decided it would disinfect its wastewater through ozonation, several calls for tenders were required for all the work to be done and to select all the services required for such a project.

The three (3) main calls for tenders, which are the subjects of the denunciation described below and of the Office of Inspector General’s present investigation, are the following:

1. Call for tenders 10-11277 “Professional services for technical ozonation expertise relating to the ozone disinfection project at the Jean-R.-Marcotte wastewater treatment plant,” which aimed to retain an expert to advise the Plant for the implementation of the wastewater disinfection project (hereafter referred to as “Request for an Expert Consultant Tender 10-11277”).
2. Call for tenders 10-11257 “Qualification of Ozonation System Suppliers,” which served as the first qualifying phase for the selection of a potential supplier of ozone systems (hereafter known as “Request for Qualification Tender 10-11257”).

3. Call for tenders 12-12107 “Supply of an Ozone Unit for the Jean-R.-Marcotte Plant,” which was the second and last phase for the selection of the supplier of ozone systems (hereafter known as “Call for Tenders to Supply an Ozone Unit 12-12107”).

Each call for tenders will be addressed in turn in this report.

3.1 Denunciation received

The Office of Inspector General received several denunciations regarding the Ozone Wastewater Disinfection Project at the Plant, and the investigation is based on the most expansive one received in October 2016. The denunciator claimed that the contracts stemming from the Request for an Expert Consultant Tender 10-11277 and Call for Tenders to Supply an Ozone Unit 12-12107 were tailored for their winning bidders, namely Pierre-André Liechti and Degrémont respectively.

In light of the information provided in the denunciation, the Office of Inspector General opened a major administrative investigation to determine if the allegations were well founded. To do so, more than ten thousand (10,000) documents were reviewed and thirty (30) witnesses were questioned. These documents and witnessed led the investigators to expand the scope of the denunciation to include the Request for Qualification Tender 10-11257 as it was a preliminary step to the Call for Tenders to Supply an Ozone Unit 12-12107.

3.2 Call for tenders 10-11277 “Professional services for technical ozonation expertise relating to the ozone disinfection project at the Jean-R.-Marcotte wastewater treatment plant”

As mentioned previously, following the 2005-2007 pilot tests, ozonation was the method selected for the Plant’s wastewater disinfection project. To go forward with the request for qualification and for the supply of an ozone unit, Ville de Montréal employees would obviously have to assess bids using different technologies in a highly specialized technical field.

Despite the experience acquired by some of the employees throughout the pilot testing, the City decided to retain the services of a consultant for the upcoming processes. As such, on June 30, 2010, Ville de Montréal published the Request for an Expert Consultant Tender 10-11277, which would ultimately be awarded to Pierre-André Liechti.

3.2.1 The purpose of the Request for an Expert Consultant Tender 10-11277

The purpose of the Request for an Expert Consultant Tender 10-11277 was to get the help of a technical expert who was internationally renowned in the ozonation field³ to help the City choose the best ozone system for the Plant. The specifications specified that the expert would be involved in two (2) committees for the duration of his mandate, namely the expert committee and a technical committee for each call for tenders (Request for Qualification Tender 10-11257 and Call for Tenders to Supply an Ozone Unit 12-12107). His task was to advise the City and, as such, the expert had only the power to make recommendations⁴ to the various committees.

The expert's mandated tasks were varied, but they involved primarily, on the one hand, the determination of performance criteria for the ozone generation and contact systems to be used for the Request for Qualification Tender and the Call for Tenders to Supply an Ozone Unit to compare potential suppliers, and, on the other hand, the qualitative and quantitative analysis of the bids submitted. Both these steps required complex calculations to validate the ozone contact systems proposed by the suppliers.

In summary, the expert's task was to help the Plant team make decisions throughout the project based on his knowledge of the various fields as required in the Request for an Expert Consultant Tender 10-11277.

3.2.2 The contract clauses regarding independence, conflicts of interests and transparency

The expert's tasks required that he help City employees evaluate the bidders and make decisions during the solicitation period by sharing his knowledge. As such, the selected expert must be neutral and not have anything to gain by favouring one company over another. That is why the contract stemming from the Request for an Expert Consultant Tender 10-11277 had several sections aiming to uphold these requirements and to obtain the winning bidder's guarantee of such impartiality.

Indeed, in section 3.5. of the specifications it is stated that "the firm is responsible for providing neutral and objective advice relating to the Project."

Section 8.2 of the specifications regarding conflicts of interest states that bidders would be in conflict of interest if they had been under contract with an ozone system supplier in the last six (6) months or if any advantages were conferred upon them from such a supplier:

"In signing this Bid, the Bidder declares that it is not in any conflict of interest with Ville de Montréal, in particular with regard to the cases set out below.

Without limiting the generality of the foregoing, the Firm (and/or its expert) shall be deemed to be in a conflict of interest in the following cases:

³ Specifications, Request for an Expert Consultant Tender 10-11277, section 5.2.2.6, al. 1.

⁴ Specifications, Request for an Expert Consultant Tender 10-11277, section 3.4, al.1, par. 1.

8.2.1 *It is currently under Contract, directly or indirectly, with a Supplier of ozone systems or has been in the six (6) months preceding the effective date of submitting its bid.*

8.2.2 *It receives, directly or indirectly, subsidies, advantages or other types of compensations from a Supplier of ozone systems;*

8.2.3 *It accepts interventions or information from third parties that could affect, in a manner that is adverse to the City, the nature and quality of the required services.*

In case of doubt, the Firm must inform the Director of any situation that may create a conflict of interests. The Director's decision regarding this will be final and, if a conflict of interests occurs, the City will not pay any fees or reimburse any eligible expenses for the services rendered and expenses incurred after the date on which the conflict of interests arose. (Bold type in the original, emphasis added) [Translation]

The intent to obtain services from an expert that is free of any conflict of interests is also set out in section 6.5 of the *Professional Services Agreement*, which states that the co-contractor must “disclose to the City any conflict of interests it may have with the City acquiring or using goods or services related to this agreement.”

The *Instructions to Bidders* booklet also contains general provisions to promote the transparency of the tender process. As such, when submitting their bid, bidders must solemnly confirm that they did not participate in the development of the tender documents, nor will they hire a person who participated in such a process. The purpose of these provisions is to ensure fairness between the bidders by making sure none of them have had access to information about the call for tenders:

5.2.1.3 Participation in developing this call for tenders within the six (6) months preceding it

In submitting its bid, the signatory solemnly declares that to its own knowledge, and after careful control,

- *Neither the bidder, nor any of its directors or its shareholders holding at least 10% of the voting shares, in the case of a corporation, or, in the case of a partnership, any partner or individual who was employed by the bidder within the six (6) months preceding the call for tenders, or any of its subcontractors or consultants;*
- *Nor any company that is related to it or any of its directors, or any individual who was employed by the related company within the six (6) months preceding the call for tenders, or any of its subcontractors or consultants,*

Assisted the City in developing this call for tenders.

5.2.1.4 Prohibition on retaining the services of any individual who participated in developing this call for tenders

In submitting its bid, the signatory solemnly declares and undertakes that:

- *Neither the bidder, nor any of its directors or its shareholders holding at least 10% of the voting shares, in the case of a corporation, or, in the case of a partnership, any partner or any of its subcontractors or consultants;*
- *Nor any related company or any of its directors, or any of its subcontractors or consultants;*

Will hire, in the six (6) months following this call for tenders, any individual who accompanied the City in its development for any purpose whatsoever; and

If awarded the contract, the bidder further undertakes:

- *Not to retain the services of any individual who participated in developing this call for tenders to perform the contract referred to herein; and*

To ensure that its subcontractors or consultants do not retain the services of any individual who participated in developing this call for tenders to support it in performing the contract referred to herein.” (Emphasis added)

In short, the Request for an Expert Consultant Tender 10-11277 clearly states that the City is searching for a neutral expert who is free of any conflict of interests with any potential ozone system supplier, and who has not participated in the development of the tender documents.

3.2.3 Pierre-André Liechti

As the Request for an Expert Consultant Tender 10-11277 was ultimately awarded to Pierre-André Liechti, we are now compelled to provide a brief presentation of the man.

A Swiss citizen, Pierre-André Liechti is an internationally renowned engineer and expert in ozonation and wastewater treatment. He has worked for various private sector companies in the water treatment field, including Degrémont where he worked for many years before his retirement in March 2008.

During his time at Degrémont, he worked on the pilot tests conducted at the Plant in 1992 and those conducted in 2005-2007, which were mentioned previously. When he met with the Office of Inspector General investigators, Pierre-André Liechti confirmed that he was one of the parties who designed the 2007 pilot testing, while still working for Degrémont. It was also during the 2007 pilot testing that Pierre-André Liechti fraternized with certain Plant employees who would later be involved in the Ozone Wastewater Disinfection Project. It must be recalled that following the three (3) 2005-2007 pilot tests, Pierre-André Liechti became one of the three (3) inventors of the “New U-Tube,” whose patent is owned by Degrémont.

After he retired from Degrémont in April 2008, Pierre-André Liechti, under the name “Ozone Knowhow,” became a consultant for Degrémont and one of its exclusive subcontractors. He added that he came to a verbal agreement with his former employer and that no paper documents were signed regarding his consultancy work. According to Pierre-André Liechti, his consultancy work consisted in transferring the knowledge about ozonation he had acquired throughout his career to Degrémont. He worked one (1) or two (2) days a week and the company paid him for his work.

Documents obtained for the Office of Inspector General’s investigation showed that Pierre-André Liechti’s last invoice to Degrémont for his consultancy work was dated November 2009. However, another document obtained by the investigators showed that he consulted for Degrémont in June 2010 for a treatment plant project on the South Shore of Montréal. This will be addressed in more detail in subsection 3.2.6.4 below.

In October 2010, Pierre-André Liechti was awarded the contract stemming from the Request for an Expert Consultant Tender 10-11277. He was then hired by Ville de Montréal to help its employees select an ozone system that met the criteria of the call for tenders for the Ozone Wastewater Disinfection Project.

3.2.4 Exchanges between Plant employees involved in the wastewater disinfection project and Pierre-André Liechti

Between the time the 2007 pilot testing was conducted and the contract was awarded for the Request for an Expert Consultant Tender 10-11277, there was no contractual relationship between the City and Pierre-André Liechti. As mentioned above, at the time Pierre-André Liechti had been retired from Degrémont since March 2008, but he had still been working part-time for them as a consultant since April 2008.

However, documents obtained by the Office of Inspector General investigators showed that during the period when the Plant employees were drafting the documents for the Request for an Expert Consultant Tender 10-11277, in winter 2009, they had exchanges with Pierre-André Liechti precisely about the requirements included in the Request for an Expert Consultant Tender 10-11277 and his participation in the Plant’s Ozone Wastewater Disinfection Project.

After analysis of the documents, it appeared that the employees wanted Pierre-André Liechti to be selected as the expert for the project. The following paragraphs provide excerpts from the documents obtained during the Office of Inspector General’s investigation.

3.2.4.1 The Plant’s first solicitation to Pierre-André Liechti

In an email exchange from February 20, 2009, between Pierre-André Liechti and the Plant Manager, the former invited the latter to host a plenary session at a conference scheduled later that year. The Plant Manager declined Pierre-André Liechti’s invitation, but added that they should discuss his involvement in the Plant’s project:

"P.S. I think we need to discuss your involvement in our project and we should schedule some potential meetings for the week of March 17 if possible." [Translation]

3.2.4.2 Identification of Pierre-André Liechti as the targeted expert

On June 2, 2009, the Plant Project Manager sent an email to the Plant Manager stating that Pierre-André Liechti and another individual should be part of the project's committee of scientific experts. In the email, the Plant Project Manager targeted several upcoming phases of the project in which Pierre-André Liechti could be involved, including the qualification of suppliers and the tasks of the committee of experts. In addition, he included a preliminary financial estimate for the services required, which amounted to \$230,000 per targeted expert.

It must be noted that the amount of \$230,000 far exceeds the legal threshold for public tendering. Calls for tenders are meant to be a fair method of soliciting bids from competitors to obtain the best price. It is unusual that the Plant Project Manager and the Plant Manager were already talking about their targeted tenderers more than one (1) year before the Request for an Expert Consultant Tender 10-11277 was launched.

3.2.4.3 The Plant's second solicitation to Pierre-André Liechti

On June 5, 2009, the Plant Project Manager emailed Pierre-André Liechti to tell him that the financing for the project had been approved and that he wanted to "talk to you about the project and your potential involvement as a consultant."

Pierre-André Liechti replied on June 6, 2009, and gave the Plant Project Manager some dates and times when he would be available for a call. The latter forwarded the email to his colleague, the Plant Project Engineer two (2) days later, on June 8, 2009.

3.2.4.4 Drafting a version of the mandate that takes into account Pierre-André Liechti's place of residence

On June 11, 2009, the Plant Project Engineer sent the Project Manager an email with the subject "KNOWHOW mandate," and an attachment of the same name. As mentioned previously, this is the name Pierre-André Liechti had been using for his consultancy work since April 2008. That is also the name Pierre-André Liechti used in his tender for the Request for an Expert Consultant Tender 10-11277 in October 2010.

[REDACTED] MONTREAL 11/06/2009 17:55

A [REDACTED]@MONTREAL

cc

Objet mandat knowhow

C'est à travailler mais l'essentiel y est. Les directives aux soumissionnaires et l'envergure du temps relatif aux mandats doivent être refait à ta convenance.

[rattachement "Mandat KNOWHOW.doc" [REDACTED]/MONTREAL]

A jeudi

[REDACTED], ing., M. ing.
Ingénierie d'usine et de procédé

[REDACTED]/MONTREAL 2009-06-22 11:13

A [REDACTED]@MONTREAL

cc

Objet RE mandat knowhow

Bonjour [REDACTED],

Tu trouveras, ci-joint, le mandat Ozone KnowHow révisé avec mes commentaires et les ajouts (à propos de la qualif et de l'analyse dimensionnelle que tu as suggéré jeudi dernier). Je propose que nous révisions ensemble demain lors de notre rencontre du mardi.

Salutations !

[REDACTED], ing.

Chef de projet - Désinfection
Direction de l'épuration des eaux usées

Subject: RE RE mandat knowhow
MailDate: 2009-06-22 11:42:22
From: [REDACTED]
SendTo: [REDACTED]@MONTREAL
Attachment: Mandat KNOWHOW.doc Size :302592

Ok Pourquoi limité à 2010... le mandat inclue une assistance lors de l'ingénierie des valeurs!

[REDACTED], ing., M. ing.
Ingénierie d'usine et de procédé

The attachment – "KNOWHOW mandate.doc" – contained a large portion of the content of the Request for an Expert Consultant Tender 10-11277, which would be published more than one (1) year later, in June 2010. The Plant Project Engineer's comments in the documents included the following one regarding a section in the instructions to bidders that stipulated that bidders had to pick up a copy of the call for tenders in person at the Plant to be eligible to bid: *"Modify this paragraph to take into account Pierre-Liechti's geographic reality."* It should be noted that Pierre-André Liechti is Swiss and has been living in Switzerland since his retirement.

The sentence preceded a paragraph about bidders having to pick up a copy of the call for tenders:

“To be eligible to submit a tender, natural or legal persons or partnerships must pick up a copy of the call for tenders at the City’s Wastewater Treatment Plant, at 12001 Maurice-Duplessis Boulevard, and cover any required costs. Only the representatives of the aforementioned Plant are allowed to act on behalf of the City and provide such a copy.”

In the final version of the tender documents, the instruction to have bidders physically obtain the documents at the Plant has been removed and the section says only that the copy must be obtained from the Procurement Department, with no specific address provided.

3.2.4.5 The Plant’s third solicitation to Pierre-André Liechti

On June 30, 2009, the Plant Project Manager emailed Pierre-André Liechti, with the Plant Project Engineer in cc, and asked him to help draft the specifications for the consultant’s mandate:

Von: [redacted]@ville.montreal.qc.ca [mailto:[redacted]@ville.montreal.qc.ca]
Gesendet: Dienstag, 30. Juni 2009 21:53
An: pierre@[redacted].com
Cc: [redacted]@ville.montreal.qc.ca
Betreff: Projet de désinfection - Mandat d'expert-conseil en ozonation

Bonjour M. Liechti,

Nous souhaitons, [redacted] et moi, discuter avec vous jeudi ou vendredi du mandat d'expert-conseil pour lequel nous sommes présentement à rédiger le devis technique dans le cadre du projet de désinfection à l'ozone. Vos commentaires nous aideront à définir l'envergure et les activités associées du mandat.

SVP Me confirmer vos disponibilités jeudi le 2 juillet et vendredi le 3 juillet afin que nous puissions fixer un rendez-vous (téléphonique) pour en discuter ensemble.

Salutations !

[redacted] ing.

Chef de projet - Désinfection
 Direction de l'épuration des eaux usées
 Ville de Montréal

In his reply from July 1, 2009, Pierre-André Liechti agrees to help and lets the Plant Project Manager know when he will be available for a phone call.

The next day, on July 2, 2009, the latter emailed Pierre-André Liechti a preliminary draft of the specifications and asked for his comments “on the nature and scope of the mandate and the required qualifications for the ozonation expert consultant.” The preliminary draft contained several items relating to the mandates of the committee of experts and the technical committee, which can be found in the Request for an Expert Consultant Tender 10-11277. Pierre-André Liechti replied with his comments on July 6, 2009, and attached a copy of his resume, though neither of the two Plant employees had asked for it.

3.2.4.6 *Pierre-André Liechti asks for information about the mandate's workload and exclusivity*

On July 20, 2009, Pierre-André Liechti sends another email to the Plant Project Manager, with the Plant Project Engineer in cc, in which he summarizes the work time requirements for the committee of experts and technical committee activities. He also asks for more information about the mandate's exclusivity and confidentiality agreement.

3.2.4.7 *The Plant's fourth solicitation to Pierre-André Liechti*

On August 5, 2009, the Plant Project Manager sent an email to Pierre-André Liechti to ask him for a few minutes of his time to talk about the project's future contracts:

Betreff: Projet de désinfection -
Von: [REDACTED]@ville.montreal.qc.ca
Datum: 05.08.2009 21:59

Bonjour M. Liechti,

J'aimerais prendre quelques minutes de votre temps pour discuter avec vous

de processus de qualification des fournisseurs, de qualifications de produits, d'essais de performance et de contrat de fourniture d'équipements dans le cadre d'un projet d'envergure comme celui de la Ville de Montréal à la lumière de projets antérieurs auxquels vous avez participé. J'estime que nous aurons besoin de 20 à 30 minutes si ce n'est

pas trop demandé.

SVP M'indiquer vos disponibilités au cours des prochains jours pour que je puisse vous contacter à un moment approprié.

Merci !

[REDACTED] ing.

Chef de projet - Désinfection
Direction de l'épuration des eaux usées

It must be recalled that at that time Pierre-André Liechti had no contractual relationship with Ville de Montréal, and that the qualification processes for suppliers and products and the contract to supply equipment mentioned in the email refer to the Request for Qualification Tender 10-11257, which would be published less than a year later, on June 30, 2010. However, at that same time, Pierre-André Liechti was also working as a consultant for Degremont, one of the potential suppliers.

3.2.4.8 *Pierre-André Liechti asks the Plant to approve a report*

Between November 7 and November 24, 2009, Pierre-André Liechti, the Plant Manager, the Plant Project Manager and the Plant Project Engineer exchanged several emails in which Pierre-André Liechti made a surprising request to his correspondents.

The thread began on November 7, 2009, when Pierre-André Liechti asked the Plant Project Manager to approve a report he had prepared on the “New U-Tube,” which he planned to present in the next few weeks. It must be recalled that, at the time, Pierre-André Liechti was not under contract with Ville de Montréal and thus had no obligation to ask for such approval from a Plant employee who, what is more, did not have any claim on Degrémont’s patent for the “New U-Tube.”

When the Office of Inspector General investigators asked him about these emails, Pierre-André Liechti said that when he sent the document, he believed that the “New U-Tube” was the best method to disinfect water at the Plant if using existing infrastructure.

The Plant Project Manager’s reply, sent on November 16, 2009, with the Plant Manager and Plant Project Engineer in cc, was just as surprising:

Von: [redacted]@ville.montreal.qc.ca [mailto:[redacted]@ville.montreal.qc.ca]
Gesendet: Montag, 16. November 2009 19:22
An: liechti.pa@[redacted]
Cc: [redacted]@ville.montreal.qc.ca; [redacted]@ville.montreal.qc.ca
Betreff: RE Mon exposé traitant du Nouveau Tube en U

Bonjour M. Liechti,

Nous avons pris connaissance de votre exposé traitant du nouveau tube en U et avons trouvé celui-ci des plus intéressants.

Comme vous le savez, nous demeurons concernés par toute apparence de conflits d'intérêt entre la Ville de Montréal et un fournisseur potentiel qui pourraient affecter la bonne conduite du projet de désinfection. Nous préférons donc que la Ville de Montréal ne soit pas citée en référence dans l'exposé. Il en va de même pour la référence à [redacted] qui peut être reliée à la Ville de Montréal. Nous vous suggérons d'utiliser une expression telle "an important North American waste water treatment plant" plutôt que de faire référence directement à la Ville de Montréal.

En vous remerciant de prendre en considération nos préoccupations,

[redacted] ing.

Chef de projet - Désinfection
Direction de l'épuration des eaux usées
Ville de Montréal

As such, the Plant Project Manager, who wanted to avoid the appearance of a conflict of interest with a potential supplier, was in contact with this same potential supplier and suggested modifications to be made to a report on a patent that he himself had developed at the Plant for the same wastewater disinfection project following the 2007 pilot testing. This all happened while Pierre-André Liechti had no obligations to, and no contract or mandate, with Ville de Montréal.

On November 17, 2009, Pierre-André Liechti replied to the Plant Project Manager that he would modify his report based on his comments. In the same email, he also asks a question about his “potential role as the expert”:

"Pierre Liechti" <liechti.pa@[redacted]>
 A [redacted]@ville.montreal.qc.ca>
 cc [redacted]@ville.montreal.qc.ca>, [redacted]@ville.montreal.qc.ca>
 Objet AW: RE Mon exposé traitant du Nouveau Tube en U

17/11/2009 04:19

Monsieur [redacted] bonjour

Je vous remercie pour votre réponse et vos commentaires.
 Je modifier cet exposé selon vos recommandations.

En ce qui concerne mon éventuelle fonction comme expert, vous est-il possible de me laisser savoir si cela est toujours actuel, et si oui quand vous pensez que cette fonction devrait commencer.
 J'ai bien retenu vos commentaires exprimés lors de notre dernière conversation téléphonique, à savoir que je dois montrer toute indépendance par rapport

- à toute firme livrant des systèmes d'ozone, et
- à toute firme d'ingénierie conseil étant active dans le domaine de l'ozone.

Sur la base du programme provisoire que vous m'avez soumis j'ai l'intention de me consacrer exclusivement à ce mandat, [redacted]

La Ville de [redacted] m'a demandé de leur aider à mettre au point le système d'ozone pilote et de les accompagner quelque peu lors des essais effectués sur l'effluent de la station d'épuration dans l'année qui suit.

Je vous remercie par avance une information de votre part.

Avec mes meilleures salutations

Pierre-André Liechti
Ozone Knowhow

Although this was still seven (7) months before the Request for an Expert Consultant Tender 10-11277 was published on June 30, 2010, Pierre-André Liechti seemed increasingly convinced that he would ultimately be awarded the expert consultant contract.

In the last email of this thread, one (1) week later on November 24, 2009, the Plant Project Manager asked Pierre-André Liechti when he would be available for a phone call to "discuss the disinfection project and the expert's role."

3.2.4.9 The Plant's fifth solicitation to Pierre-André Liechti

Lastly, on June 2, 2010, less than one (1) month before the Request for an Expert Consultant Tender 10-11277 was published, the Plant Project Manager emailed Pierre-André Liechti to share the "latest news about the project." He asked Pierre-André Liechti when he would be available for a phone call.

In brief, these exchanges between Pierre-André Liechti and various Plant employees involved in the ozone disinfection project took place between February 20, 2009, and June 2, 2010. As evidenced by these exchanges, the correspondents shared information about the Request for an Expert Consultant Tender 10-11277 that was not yet available

to the public and other bidders, and Pierre-André Liechti participated in the drafting of the documents for this same call for tenders.

3.2.5 Pierre-André Liechti's participation in the drafting of the documents for the Request for an Expert Consultant Tender 10-11277 and the Request for Qualification Tender 10-11257

The investigation revealed that Pierre-André Liechti participated in the drafting of two (2) calls for tenders, namely the Request for an Expert Consultant Tender 10-11277 and the Request for Qualification Tender 10-11257.

3.2.5.1 Request for an Expert Consultant Tender 10-11277

In addition to the various exchanges described above, Pierre-André Liechti himself admitted to the Office of Inspector General investigators that he had helped draft the documents for the Request for an Expert Consultant Tender 10-11277 by sending his comments to Plant employees involved in the ozone disinfection project.

Indeed, Pierre-André Liechti acknowledged having communicated with the Plant Project Engineer by phone and email to draft the specifications for the expert, specifically by proposing bidder qualification criteria that he would be able to meet.

As such, he claimed he proposed the requirements related to the expert knowledge of ozone contact methods, the electric processes of ozone generators and dielectrics, the power supply, and harmonic mitigation. Each of these items was included in the technical proposal's assessment criteria for the Request for an Expert Consultant Tender 10-11277, for a combined total of thirty-five (35) points out of a possible hundred (100) points.

Additionally, Pierre-André Liechti acknowledged having proposed the requirement about the water-gas differential in ozone generators, which was included in the technical committee's mandate for the qualification of suppliers. He also stated that he proposed the scaling up requirement included in the services required of the specifications for the expert. Scaling up is the process of demonstrating that a small-scale pilot test will produce the same result on a larger scale.

Lastly, Pierre-André Liechti acknowledged that he attempted to tailor the specifications to his advantage, otherwise at least two (2) experts would have been required to replace him, given his vast expertise in the ozonation field.

In the end, the investigation revealed that Pierre-André Liechti had such significant influence on the tender documents that a former colleague of his from Degrémont forwarded him the Request for an Expert Consultant Tender 10-11277, thinking that the job would suit him well:

"[...] I stumbled upon this call for tenders for professional services for technical ozonation expertise relating to disinfection in Montréal. Reading the specifications made me smile and think of you. The job seems so well suited to you..." (Emphasis added)

It must be noted that when this email was sent in July 2010, the former colleague was no longer working at Degrémont and he was not involved in the drafting of the documents for the Request for an Expert Consultant Tender 10-11277. When the Office of Inspector General investigators spoke to him, he explained that he had sent the email to Pierre-André Liechti as a friend, since he has to browse the SEAO regularly at his new job. The requirements found in the tender documents made him think of Pierre-André Liechti.

3.2.5.2 Request for Qualification Tender 10-11257

Furthermore, Pierre-André Liechti acknowledged to the investigators that he had also helped draft the specifications for the Request for Qualification Tender 10-11257, which was launched on the same day as the Request for an Expert Consultant Tender 10-11277. This is consistent with the email of August 5, 2009, previously mentioned in subsection 3.2.4.7, in which the Plant Project Manager asked him to talk about "supplier qualification, product qualification, performance tests and equipment supply contracts processes for a large-scale project like that of Ville de Montréal."

In other words, Pierre-André Liechti admitted he had participated in the drafting of two (2) calls for tenders, even though he was in no way mandated by the City to do so. He also acknowledged to the investigators that he gave the Ville de Montréal employees free advice on how to draft these two specifications.

3.2.6 The relationship between Pierre-André Liechti and Degrémont after his retirement

As mentioned in section 3.2.3, Pierre-André Liechti retired from Degrémont in March 2008, after working there for several years. However, Pierre-André Liechti promptly started consulting for Degrémont to transfer the knowledge he had acquired throughout his career.

It must be recalled that section 8.2.1 of the Request for an Expert Consultant Tender 10-11277, mentioned in subsection 3.2.2 above, stipulated that the retained expert must not have been under contract, directly or indirectly, with a potential supplier of ozone systems in the six (6) months preceding his bid, to avoid any conflict of interests with the City.

The information collected during the investigation showed that, while he was working as a consultant, Pierre-André Liechti attended meetings, along with other Degrémont employees, about the Plant's disinfection project. Though he claimed that he stopped consulting for Degrémont in December 2009, just before the beginning of the six (6) month period, the Office of Inspector General obtained an email exchange between him and Degrémont that

took place approximately two (2) weeks before the Request for an Expert Consultant Tender 10-11277, and in which he provided professional advice about another one of the company's projects.

The following subsections provide more information about each of these items.

3.2.6.1 Pierre-André Liehti's attendance at Degrémont's technical meetings leading up to the Americana Conference

On March 20, 2009, Pierre-André Liehti and a Degrémont employee gave a presentation on ozone at the Americana Conference in Montréal. According to a Degrémont internal memo from April 10, 2009, titled "MONTREAL ERU – OZONE DISINFECTION AND TREATMENT OF THE WATER DISCHARGED IN THE ST. LAWRENCE RIVER PROJECT," several Degrémont employees took the opportunity to have discussion meetings combined with visits "for the purpose of doing an overview of the tests that were carried out and planning future action in view of the anticipated call for tenders." [Translation]

Whereas the Degrémont internal memo explicitly mentions the company's preparation in view of responding to the Request for Qualification Tender 10-11257, three (3) events recounted in it draw attention to Pierre-André Liehti.

First, he is listed as having attended an internal technical meeting at Degrémont that was held on March 18, 2009. The meeting was about the Plant's new ozone disinfection project and the "New U-Tube" – Pierre-André Liehti was the only one of its three inventors who attended the meeting.

Second, Pierre-André Liehti was also on the list for a second "external technical meeting" that was held the next day, on March 19, 2009, and attended by five (5) Degrémont employees and executives, the Plant Project Engineer, the Plant Project Microbiologist and an expert. This meeting also covered the Plant's ozone disinfection project, as well as the upcoming calls for tenders, namely the Request for Qualification Tender 10-11257 and the Call for Tenders to Supply an Ozone Unit 12-12107.

Lastly, the memo revealed that Degrémont registered Pierre-André Liehti as an "internal speaker" for the Americana Conference held on March 20, 2009:

"Internal speakers:

- *[Degrémont Employee] (Degrémont Technologies – Degrémont SA DII)*
- *Pierre LIETCHI (Ozone Know How Consultant – Degrémont Technologies Ltd Retiree)*

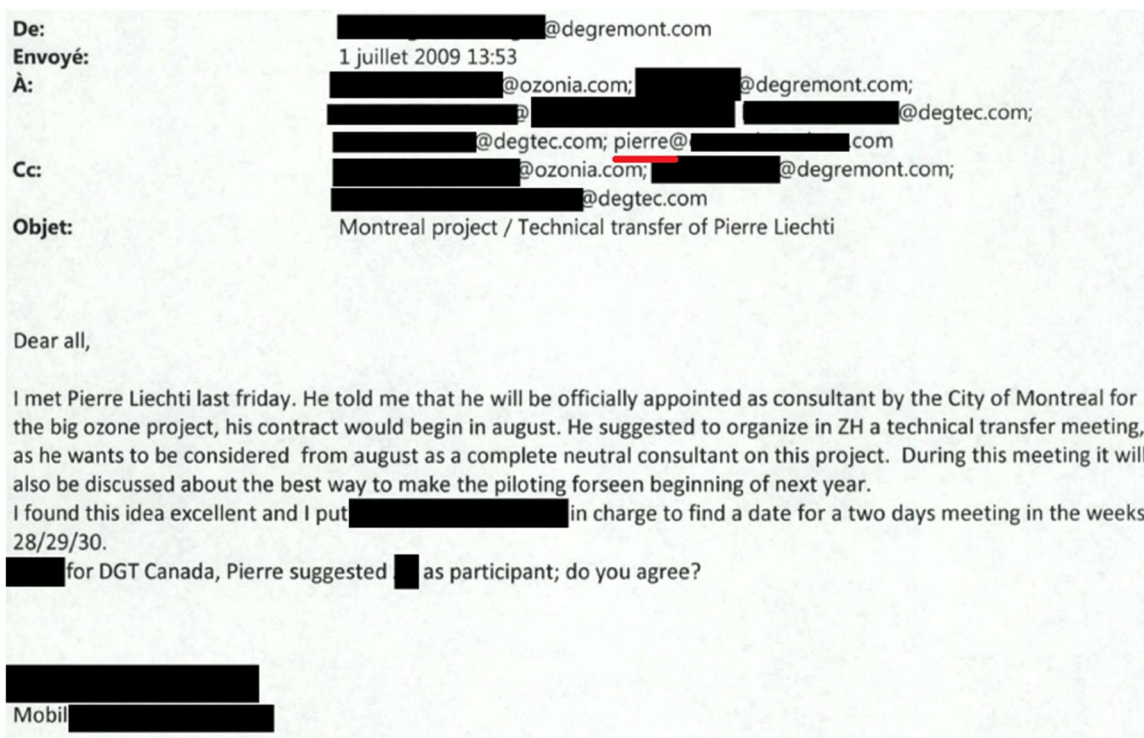
- Other participants

- *[Degrémont Executive] (DT Degrémont Ltd)*
- *[Degrémont Application Engineer] (Degrémont Canada)*
- *[Degrémont Employee] (Degrémont SA-DTI)*
- *[Plant Project Engineer] (Ville de MONTRÉAL – Process Manager)*
- *[Plant Project Manager] (Ville de MONTRÉAL – Head of the Disinfection Project) »*

In short, according to this internal memo from Degrémont, Pierre-André Liechti attended meetings about the Plant's disinfection project with Degrémont employees and certain Plant employees while he was working as a consultant for the company.

3.2.6.2 *The announcement of a knowledge transfer meeting in preparation for Pierre-André Liechti becoming the City's expert*

On July 1, 2009, a Degrémont employee sent an email to several colleagues to inform them that Pierre-André Liechti had told him that he would be appointed as a consultant by Ville de Montréal sometime in August 2009. The Degrémont employee also informed his colleagues that he would organize a technical knowledge transfer meeting with him:



The email showed that they would also discuss the best way to conduct pilot testing. This is the additional pilot testing that the Plant had planned for at the time in its internal preliminary drafts of the Request for Qualification Tender 10-11257, but that did not ultimately appear in the final version published on June 30, 2010.

It is made clear, once again, that Pierre-André attended meetings specifically about the Plant disinfection project with other Degrémont employees while he was working as a consultant for Degrémont.

3.2.6.3 *Pierre-André Leichti's criticism of a Degrémont competitor's advertisement*

An exchange between Pierre-André Liechti and Degrémont showed that he also had opinions about Degrémont's competitors in the market. Indeed, in an email thread from November 3, 2009, between twelve (12) Degrémont employees and Pierre-André Leichti, the latter criticized the advertisement of one of Degrémont's competitors, one of the five (5) companies that would bid on the Request for Qualification Tender 10-11257.

3.2.6.4 *Professional advice requested by Degrémont and provided by Pierre-André Leichti in mid-June 2010*

On June 16, 2010, one of the company's vice-presidents emailed Pierre-André Liechti to ask him for "his advice on the feasibility of a hydro-injection in the 'New U-Tube' [...], so that they could decide whether to keep going in that direction with the consultant or not." The project in question was for a wastewater treatment plant in a city on the South Shore of Montréal.

Pierre-André Liechti agreed, in an email, to provide a design based on the information given, but, wary of publicizing his contacts with Degrémont, he added a caveat to his reply⁵:

⁵ The Office of Inspector General added the red box in the email for the reader's convenience.

De: Pierre Liechti <liechti.pa@[REDACTED]>
 Envoyé: 17 juin 2010 05:56
 À: [REDACTED]@degremont.com'
 Cc: [REDACTED]@degremont.com'; [REDACTED]@degremont.com'
 Objet: [REDACTED] - caractéristiques de l'émissaire - désinfection à l'ozone

Importance: Haute
 Critère de diffusion: Confidentiel

[REDACTED] bonjour

J'ai fait un premier dimensionnement sur la base de l'information reçue, que j'espère avoir bien comprise et interprétée. En principe rien ne s'oppose à proposer un nouveau tube en U.
 Les points principaux à bien clarifier avant de faire une proposition techniquement acceptable sont:

1. le débit minimum
2. la dose d'ozone transférée requise
3. la concentration en ozone dans le gaz vecteur oxygène

Je ne pense pas que de l'air comme gaz vecteur soit acceptable

4. D'autre part il conviendra de bien connaître les conditions locales pour l'installation, en particulier le génie civil.

Je demande toute discrétion en ce qui me concerne, je demande instamment que mon nom ne soit pas mentionné en dehors de Degrémont pour cette affaire.

Meilleures salutations et [REDACTED]

Pierre

Pierre-André Liechti
 Ozone Knowhow

M.Sc. ETH-L
 [REDACTED]
 [REDACTED]
 Switzerland
 Phone: +[REDACTED]
 Mobile: +[REDACTED]
 E-mail: pierre@[REDACTED].com

The Degrémont vice-president then agreed to his request: "Don't worry, we will make sure to be discreet. Thanks again."

It must be recalled that the Request for an Expert Consultant Tender 10-11277 and the Request for Qualification Tender 10-11257 were published less than two (2) weeks after this exchange, on June 30, 2010.

3.2.6.5 *The email sent to Pierre-André Liechti by one of Degrémont's exclusive subcontractors during the solicitation period for the Request for an Expert Consultant Tender 10-11277*

On July 7, 2010, one (1) week after the Request for an Expert Consultant Tender 10-11277 was published, the president of a company that subcontracts exclusively for Degrémont sent the following email to Pierre-André Liechti regarding the open call for tenders:

"I sent you the bid notification last week, did you receive it? I included it below again.

Also, I have some idea of their budget for your work. Tell me when I can call you, but please keep this very confidential."

In the email, the president said he sent Pierre-André Liechti the tender documents the week before, which was when—or very close to when—the call for tenders was published. This email showed, once again, just how close Pierre-André Liechti was to his former employer, this time through his contact with a subcontractor working for Degrémont.

3.2.7 Results of the Request for an Expert Consultant Tender 10-11277

The Request for an Expert Consultant Tender 10-11277 was posted only on the Québec government's electronic call for tenders system (Système électronique d'appel d'offres du gouvernement du Québec, hereinafter "SEAO"). Of the ten (10) companies that requested the documents for the Request for an Expert Consultant Tender 10-11277, Pierre-André Liechti-Ozone Knowhow was the only one who had submitted a bid when it closed on August 11, 2010.

It must be noted that Degrémont was one of the companies that requested the documents, but it did not submit a bid, as the winning bidder would automatically be excluded from the running for the other two calls for tenders (Request for Qualification Tender and Call for Tenders to Supply an Ozone Unit).

On October 28, 2010, Ville de Montréal awarded to "Pierre-André Liechti – Ozone Knowhow" the expert consultant contract for a maximum amount of \$415,000 before taxes and the authorization to spend up to a total of \$468,431.35.

3.3 Call for Tenders 10-11257 "Qualification of Ozonation System Suppliers"

Ville de Montréal published the Request for Qualification Tender 10-11257, the second call for tenders assessed during the Office of Inspector General's investigation, on June 30, 2010.

As the first stage in the acquisition of an ozonation unit for the Plant, this call for tenders consisted in inviting *"companies to submit a bid to demonstrate their technical, manufacturing, financial and after-sales service capability in view of designing, manufacturing, supplying and supporting a complete ozonation system, including production, destruction, ozone contact and cooling systems for the disinfection of Ville de Montréal's wastewater."* [Translation]

Following Request for Qualification Tender 10-11257, qualified firms would be the only ones invited to bid for the second phase of the process, i.e. the call for tenders for the supply of an ozonation unit (No. 12-12107).

This section 3.3 is divided into three subsections containing the events that occurred at each stage of Request for Qualification Tender 10-11257, i.e. during the drafting of the tender documents, when the call for tenders was published, and lastly in relation to the results.

3.3.1 Drafting of Request for Qualification Tender 10-11257 documents

With respect to the drafting of the Request for Qualification Tender 10-11257 documents, the investigation conducted by the Office of Inspector General revealed that:

- Plant employees, including the Plant Project Microbiologist, had contact with Degrémont regarding Request for Qualification Tender 10-11257, including sharing a copy of the tender documents with the company;
- Degrémont's comments regarding said tender documents were used by Plant employees and ended up in the final version of Request for Qualification Tender 10-11257; and
- The contact which Plant employees had with other potential ozonation system suppliers was significantly different than their contact with Degrémont in terms of its nature and frequency.

These aspects will be successively covered in the following subsections.

3.3.1.1 Interactions between Plant employees and Degrémont employees regarding Request for Qualification Tender 10-11257

The e-mails obtained from Degrémont by the Office of Inspector General reveal that a Degrémont application engineer had repeatedly communicated with the Plant Project Microbiologist between November 2008 and May 2009. The purpose of said communication was to inform Degrémont of the status of the qualification process, followed by the content and assessment criteria of Request for Qualification Tender 10-11257.

The e-mails obtained also revealed that the Degrémont application engineer was informing the firm's engineers of the communication he had with the Plant Project Microbiologist.

(i) Preliminary exchanges in November 2008

On November 3, 2008, while it was still planned at the time that a new series of pilot tests would be held in 2009, the Degrémont application engineer wrote the following in an e-mail to company executives:

"5- [the Plant Project Microbiologist] is asking us to provide him with all information likely to give us an advantage for next year's pilot tests. Which parameters should be retained for performance assessment?"
[Translation]

Two (2) weeks later, on November 17, 2008, the Degrémont application engineer followed up by e-mail with the same company executives:

"Just to let you know that we have not yet followed up on discussions with the [Plant Project Microbiologist]. I do not believe that I can respond without first consulting you and having a plan." [Translation]

(ii) Transmission of draft version of Request for Qualification Tender 10-11257 documents in February 2009

Between November 2008 and February 2009, it appears that the Plant's employees changed their approach on the procedure to follow. Rather than conducting a new series of pilot tests, the decision was made to proceed with a request for qualification for potential suppliers. Communication between the Plant Project Microbiologist and the Degrémont application engineer continued.

On February 5, 2009, the Degrémont application engineer mentioned to the company's engineers that he had received a call from the Plant Project Microbiologist. He also told them that the *"pre-qualification specifications are in the final draft stage"* and that the microbiologist *"suggested that we could meet to discuss it."* [Translation]

Six (6) days later, on February 11, 2009, the Degrémont application engineer sent the following e-mail from his personal e-mail address to the personal e-mail addresses of the Plant Project Microbiologist and a Degrémont executive:

From: [REDACTED]@hotmail.com
To: [REDACTED]@sympatico.ca; [REDACTED]@hotmail.com
Subject: Documents de prequalif
Date: Wed, 11 Feb 2009 20:19:14 -0500

Bonsoir [REDACTED],

Voici les documents avec nos suggestions surlignées.
Nous n'avons pas vu de modifs sur les autres documents.

Merci et à très bientôt,

[REDACTED]

As the e-mail reveals, the Degrémont application engineer sent a preliminary version of the qualification tender documents *"with our suggestions highlighted."* [Translation]

Also on February 11, 2009, and again from his personal e-mail address, the Plant Project Microbiologist forwarded the documents received from Degremont to the Plant Project Manager and the Project Engineer:

██████████@sympatico.ca> 11/02/2009 21:17
 A: ██████████@ville.montreal.qc.ca>, ██████████@ville.montreal.qc.ca>
 cc:
 Objet Les devis de pré-qualification

Bonsoir messieurs

J'ai relu les documents concernant les différents textes de pré-qualification et j'ai apporté quelques corrections au niveau de certaines coquilles. De plus, il m'apparaît qu'il y a certaines incongruités dans certains paragraphes. Ils sont en jaunes avec des ???.

Bonne lecture

██████████ [rattachement "devis_techniqueXXXXa_Revision DGT.doc" supprimé par ██████████/MONTREAL]
 [rattachement "grilleXXXXjanvier2009a_Revision DGT.doc" supprimé par ██████████/MONTREAL] [rattachement
 "XXXXcahier_des_chargesspecialesa_Revision DGT.doc" supprimé par ██████████/MONTREAL]

He wrote that he had reread *"the documents related to the various pre-qualification texts"* and made *"a few corrections in terms of some typos."* [Translation] It can be seen that he included three (3) documents entitled:

- *"devis_techniqueXXXXa_Revision DGT.doc,"*
- *"grilleXXXXjanvier2009a_Revision DGT.doc" and*
- *"XXXXcahier_des_chargesspecialesa_Revision DGT.doc."*

The next morning, on February 12, 2009, the Degremont application engineer forwarded his prior day's e-mail to three (3) company executives. He attached three (3) documents named the same as those sent by the microbiologist to the Project Manager and the Plant Project Engineer:

De: ██████████@hotmail.com>
 Envoyé: 12 février 2009 09:34
 À: ██████████@degremont.com; ██████████@degremont.com;
 ██████████@hotmail.com
 Objet: FW: Documents de prequalif
 Pièces jointes: devis_techniqueXXXXa_Revision DGT.doc; grilleXXXXjanvier2009a_Revision DGT.doc;
 XXXXcahier_des_chargesspecialesa_Revision DGT.doc

Pour votre info, email envoyé hier soir.
 Les documents sont dans le dossier commercial.

██████████

The Office of Inspector General obtained a copy of the above three (3) documents. As subsection 3.3.1.2 will show, a comparative analysis of the above documents and the final Request for Qualification Tender 10-11257 documents reveal that some of the

comments sent by the Degrémont application engineer to the Plant Project Microbiologist were included in the final version of the call for tenders.

(iii) *Meetings at the time of the Americana Conference in March 2009*

As indicated in subsection 3.2.6.1, a Degrémont internal memo dated April 10, 2009 states that on March 20, 2009, Pierre-André Liechti and a Degrémont employee gave a presentation on ozone at the Americana Conference in Montreal. Several Degrémont employees took the opportunity to have discussion meetings combined with visits *“for the purpose of doing an overview of the tests that were carried out and plan future action in view of the anticipated call for tenders.”* [Translation]

Whereas the Degrémont internal memo explicitly mentions as context the company's preparation in view of responding to the qualification call for tenders, two related events stand out.

First, a mention is made of an *“external technical meeting”* held on March 19, 2009 attended by five (5) Degrémont employees and executives, in addition to Pierre-André Liechti, the engineer and the Plant Project Microbiologist, and an expert.

Second, the Degrémont internal memo states that a tour of the Plant was held, summarized as follows:

“For this specific occasion, the group was welcomed by [the Plant Manager], who mentioned previous communication with [a Degrémont senior executive].

[The Plant Project Manager and Plant Project Microbiologist] reiterated the procedure in two successive calls for tenders.

Four responses are expected for the first call for tenders; they correspond to major ozone equipment suppliers, most likely: [three (3) other potential suppliers] and Degrémont. All will benefit from the same level of information as Degrémont. Degrémont has a definite advantage associated with the tests that were previously carried out.

Note that the consultation was started, as a meeting had been held with [another supplier] the day before, who made a strong impression by announcing an ozone level of [xx]%.

Given the size of the project, the existence of references on criteria for equipment availability and ozone levels will be a determining factor for pre-qualification. [...]

Two pre-qualified suppliers are expected for the second call for tenders.

Moreover, following the conference, [the Plant Project Manager] retained the option of using ozone for deodorization, with the latter presenting a problem at the Plant. [The Plant Project Microbiologist] is likely in charge of drafting the first call for tenders and is looking for general performance monitoring methods.

It was agreed that a [Degrémont employee] would give a presentation on the application of ozone to treat gas, as well as Degrémont publications on the use of ozone for wastewater treatment and standardized methods for monitoring microbiological pollution.” [Translation] (Emphasis added)

This summary of the visit makes several mentions that will be important for what follows. First, although it is stated that *“All will benefit from the same level of information as Degrémont,”* this is followed by the statement that *“Degrémont has a definite advantage associated with the tests that were previously carried out.”* [Translation] The tests in question refer to the pilot tests that Degrémont conducted at the Plant between 2005 and 2007. The impact of the pilot tests and the knowledge which Degrémont may have obtained from the existing facilities and the issues specific to the Plant will be covered in subsections 3.3.2.1 and following below.

Furthermore, the internal memo states that the Plant employees present during the Degrémont visit appear to have notified Degrémont’s representatives that another supplier had also made a visit to the Plant and had stated at the time that it could supply impressive levels of ozone. As shown by the e-mails of April 7, 2009, which will be analyzed below, the ozone levels announced by the competition will be an aspect of concern for Degrémont, requiring the development of response strategies. However, it was stated that Degrémont had learned at that visit that the ozone levels would be a determining factor for supplier qualification.

Lastly, the memo indicated that the Plant Project Microbiologist is in charge of drafting the request for qualification tender and *“is looking for general performance monitoring methods.”* [Translation]

As shown by subsequent exchanges, *“looking for general performance monitoring methods”* will result in the Plant Project Microbiologist directly contacting the Degrémont application engineer for this purpose.

(iv) Outcome of visits to the Plant by Degrémont and another potential supplier

A few weeks after the above-mentioned visit to the Plant, on April 7, 2009, the Degrémont application engineer sent an e-mail to company employees and executives regarding *“a new conversation”* he had with the Plant Project Microbiologist. The topic of the e-mail was once again in response to the visit of another ozone supplier to the Plant:

“A ‘delegation’ [from a Degrémont competitor] met with plant personnel. They made a ‘strong’ impression by promising ozone production levels of [xx]% with maximum nitrogen doping of [xx]% vol. They also plan to use the outfalls for ozone contact par hydroinjection.... [The Plant Project Microbiologist] asked me to send him the following:

- A comparison of the ratings and specifications of the competition’s ozonizers versus ours.*
- A explanatory document on nitrogen doping.*

He would need this information to intervene on our behalf from his end within the company. [Translation] (Emphasis added)

Again on April 7, 2009, another Degrémont employee responded to the application engineer's e-mail as follows:

"We are developing strong and substantiated arguments not only in relation to [a Degrémont competitor]. A good amount of communication will most likely be needed to provide a similarly strong impression. In terms of the use of the outfalls, that's too bad for us. In my opinion, this will have to be communicated [to the Plant Project Microbiologist] as usual + ensure that we also have a technical delegation on generation." [Translation] (Emphasis added)

These exchanges reveal that in addition to being able to consult and comment draft versions of the tender documents, Degrémont was also told about the meetings held by Plant employees with the competition.

On this occasion, Degrémont not only obtained certain technical specifications presented by its competitors, but was also given the opportunity to respond through the Plant Project Microbiologist, who was proposing to intervene internally on Degrémont's behalf. Note that the level of familiarity at Degrémont with respect to the microbiologist is such that a company employee other than the application engineer wrote that he will be told to proceed "as usual."

(v) Requests for assistance sent in April and May 2009 to Degrémont by the Plant Project Microbiologist to define the performance criteria

As previously mentioned, the Plant Project Microbiologist contacted the Degrémont application engineer for help in defining the ozonizer performance parameters in relation to the request for qualification tender.

In fact, on April 29, 2009, the Degrémont application engineer e-mailed a "conversation record" to company executives. This document details, in the section "Conversation summary," a meeting which a Degrémont executive and he had with the Plant Project Microbiologist:

- "1) The pre-qualification documents were sent to the legal department for revision (pending)*
- 2) Last signature required from the Ministère des Affaires Municipales (pending)*
- 3) Project financing (including the monitoring and control unit): City 15%, Federal and Provincial 85% @ 50/50*
- 4) [The president of an exclusive Degrémont subcontractor] met with [the Plant Manager]. No additional details in this respect.*
- 5) [The Plant Manager] prefers that the installations be built directly by the actual supplier. No consulting engineer involved.*

6) *[Another large Quebec city] is using a “tripartite” committee to assess the process and equipment used for the disinfection of their urban wastewater. [The Plant project microbiologist] may possibly be part of this committee.*

7) *[An exclusive Degrémont subcontractor] is “very much” involved in building the ERU project facilities [of another large Quebec city]. [The Plant Project Microbiologist] mentioned a “container”... No further details were sent.*

8) *[The Plant Project Microbiologist] is asking for our help in defining the parameters and measurement methods for ozonizer performance. A meeting will be held in May with [a Degrémont executive] and [the Degrémont application engineer] in this respect at a neutral location.* [Translation] (Emphasis added)

Besides the information and rumours involving the pilot tests being carried out in another large Quebec city, it appears from this conversation record that the Plant Project Microbiologist notified the Degrémont application engineer of the status of financing and the preparation of the Request for Qualification Tender. More specifically, item 8) again shows that Degrémont was contacted to define the parameters that will be ultimately used in the qualification call for tenders and that a meeting is to be held for this purpose.

Moreover, in preparation for the meeting, the Degrémont application engineer sent an e-mail on May 11, 2009 to a company executive and employees asking for their opinion regarding performance criteria he had drawn up and intends to send to the Plant Project Microbiologist. As shown in subsection 3.3.1.2 below, one of the criteria mentioned in the Degrémont application engineer's e-mail will be included in the Request for Qualification Tender 10-11257 documents.

3.3.1.2 Inclusion of Degrémont's comments in Request for Qualification Tender 10-11257 documents

In addition to the transmission of information related to the drafting of the future Request for Qualification Tender 10-11257 during exchanges between Plant employees and Degrémont, the investigation shows that on two occasions comments sent by Degrémont were included in Request for Qualification Tender 10-11257 documents.

(i) First instance of inclusion of Degrémont's comments

The first time that Degrémont's comments were included in Request for Qualification Tender 10-11257 was after the Plant Project Microbiologist was e-mailed a draft version of the tender documents from Degrémont's application engineer “*with our suggestions underlined.*” [Translation] Note that this exchange of e-mails was done through their two personal e-mail addresses on February 11, 2009.

The same day, the Plant Project Microbiologist forwarded to his colleagues (the Project Manager and the engineer) the three (3) following documents obtained from Degrémont:

- “devis_techniqueXXXXa_Revision DGT.doc,”
- “grilleXXXXjanvier2009a_Revision DGT.doc” and
- “XXXXcahier_des_chargesspecialesa_Revision DGT.doc.”

On February 19, 2009, the Plant Project Manager again forwarded the above e-mail from the microbiologist, including the three (3) attached documents, to the Project Engineer.

Lastly, on February 23, 2009, the Plant Project Engineer sent an e-mail to the project manager, with a copy to the microbiologist. *“Following the meeting with the [Plant Manager], please find enclosed the revised specifications, including the comments sent by the [Plant Project Microbiologist]. I increased the weighting allotted to the guarantee.”* [Translation] The documents included as attachments are now called:

- “devis_techniqueXXXXb.doc,”
- “grilleXXXXfévrier2009b.doc,”
- “XXXXcahier_des_chargesspecialesb.doc,” in addition to documents
- “XXXXdirectiveb.doc” and
- “XXXXformuledesoumissionb.doc.”

The Office of Inspector General obtained a copy of the above three (3) documents as “...a_Revision DGT.doc.” As shown in the following tables, a comparative analysis of the tables and the Request for Qualification Tender 10-11257 documents revealed that the four (4) following comments sent by the Degrémont application engineer to the Project Plant Microbiologist were included in the final version of Request for Qualification Tender 10-11257.

First change: removal of quote related to the Tripartite Committee

The first change proposed by Degrémont was to strike out the entire paragraph in the left-hand column from the tender documents consisting of a quote from the Tripartite Committee. As mentioned in section 2.2 above, note that the Tripartite Committee is the ad hoc body that produced a report following the UV and ozone pilot tests conducted from 2005 to 2007, with Degrémont being the only company to take part in the ozone pilot tests.

In the final version of the Request for Qualification Tender 10-11257 documents, the Plant deleted the first two sentences, including the one referring to the Tripartite Committee. The only references to the Tripartite Committee that are included involve its recommendations in favour of ozone disinfection along with those related to the project design ozone contact flow rate and dosage. No mention was made of the pilot tests from 2005 to 2007.

Initial content of draft tender documents	First change proposed by Degrémont in the e-mail of February 11, 2009	Content of Request for Qualification Tender 10-11257 documents
<i>"The tripartite committee concluded in November 2007 that a "bubbling system presents serious maintenance issues for the injection systems using small or medium bubble diffusers." [Translation] Without a reason justifying that the proposed design be reviewed, Ville de Montréal could reject any proposal aimed at implementing a conventional bubbling system. Without being exclusive, Ville de Montréal favours any proposal involving the injection of ozone in its outfalls that would enable it to benefit from the significant pressure and long residence time provided by its two treatment plant outfalls." [Translation]</i>	Remove entire paragraph	<i>"5. Ozone contact technology</i> <i>The City is prepared to consider various ozone/wastewater contact technologies that enable the target results to be attained, but considers a contact system that uses the pressure and residence time provided by the outfalls to present an advantage. [...]"</i> <i>[Translation]</i>

Second change: after-sales service requirement added

The second change proposed by Degrémont involves adding a requirement related to after-sales service.

As shown in the table below, a requirement to this effect was not only added to the tender documents but was included in an eliminating criterion in the final version of Request for Qualification Tender 10-11257.

Initial content of draft tender documents	Second change proposed by Degrémont in the e-mail of February 11, 2009	Content of Request for Qualification Tender 10-11257 documents
<i>"4.3 References to specific major ozone production system facilities</i> <i>[...] In addition to the information stipulated in Section 4.2, the supplier shall provide:</i> <i>[...] The reports from two (2) years of operational and maintenance follow-ups for at least two of these similar facilities with a production capacity of at least 5.7 t/day (or 10% of maximum anticipated ozone production)." [Translation]</i>	Insert the following: <i><u>"The supplier must show its capacity to provide follow-up and after-sale service as well as a quality and timely response to operational service requests regarding Montreal wastewater treatment within minimum time periods..."</u></i> [Translation] (Emphasis added)	<i>"Reports on delivered services that show compliance with guarantees and services provided for at least two years to at least two reference facilities. This document must show the Candidate's capacity to provide adequate follow-up and after-sale service as well as a quality and timely response to operational service requests (ELIMINATION BASIS)"</i> <i>[Translation] (Bold type in the original, emphasis added)</i>

Third change: increase in guarantee weighting

The third change proposed by Degrémont also affects after-sale service and the guarantee, for which the company would like to see the weighting increased to twenty (20) points rather than ten (10).

In the final version of the Request for Qualification Tender 10-11257 documents, the numbering of the criterion was changed, but essentially corresponds to the initial criterion 4. Although not to the extent which Degrémont would have liked, the weighting was increased by (5) points to fifteen (15). Moreover, note that in his e-mail of February 23, 2009 quoted at the start of this subsection, the Plant Project Engineer explicitly stated having increased the weighting related to the guarantee.

Initial content of draft tender documents	Third change proposed by Degrémont in the e-mail of February 11, 2009	Content of Request for Qualification Tender 10-11257 documents
<i>"4. Capacity to honour guarantees and provide quality after-sale technical support. (10 points)"</i>	Increase weighting to 20 points: <i>"4. Capacity to honour guarantees and provide quality after-sale technical support. (10 20 points)"</i>	<i>"7. Capacity to provide after-sale service that includes the availability of replacement parts and proposed custom guarantees 15 points"</i> [Translation]

Fourth change: reduction of weighting allotted to maintenance

The last change proposed by Degrémont was to reduce by ten (10) points the weighting allotted to component durability and ease of maintenance and replacement. The final version of Request for Qualification Tender 10-11257 shows that this was done after combining two (2) criteria from the initial version and reducing their combined weighting by ten (10) points.

In fact, as shown in the following table, initial criteria 6 and 7 were grouped to become final criterion 4, the detailed description in Appendix 1 of which indicates that the ozonation system proposed by the Candidate must provide *"component durability and ease of maintenance and replacement and lastly limit storage constraints."* [Translation] Rather than combining the twenty-five (25) initial points, their final combined weighting was reduced by ten (10) points.

Initial content of draft tender documents	Fourth change proposed by Degrémont in the e-mail of February 11, 2009	Content of Request for Qualification Tender 10-11257 documents
<i>"6. Component durability and ease of maintenance and replacement (20 points)"</i>	Reduce the weighting and modify the designation of the criterion: <i>"6. Component durability and Component ease of maintenance and replacement (20 10 points)"</i>	<i>"4. Technical and organizational capacity to provide a preliminary technical design for the Plant (15 points)"</i> <i>"[...] The Candidate must show that the complete ozonation system being proposed is suited to existing infrastructures, ensures component durability and ease of maintenance and replacement, and limits storage constraints."</i> [Translation] (Emphasis added)
<i>"7. Storage constraints (5 points)"</i>	N/A	

In summary, four (4) changes were made to the tender documents upon receiving Degrémont's comments sent by the application engineer on February 11, 2009.

(ii) Second instance of including Degrémont's comments

The investigation shows that there was a second instance when Degrémont's comments were added to the tender documents.

As mentioned at the end of subsection 3.3.1.1 above, on May 11, 2009, in preparation for an upcoming meeting with the Plant Project Microbiologist in mid-May 2009, the Degrémont application engineer sent an e-mail to an executive and employees of the company asking them for their opinion regarding the performance parameters that could be submitted to the microbiologist, given that the latter was involved in drafting the Request for Qualification Tender 10-11257 documents:

"As planned, I am writing to you regarding the Montréal ERU Project since we will be having an initial informal meeting with [the Plant Project Microbiologist] at the end of this week. As you know, he is asking for our help in defining the performance parameters to be included for prequalification and ultimately for next year's pilot tests. The idea would be to specify the parameters for which the Ozonia technology is superior to that of the competition. As part of an initial brainstorming, here are some points that we consider relevant:

[...]

5) PSU performance:

- *Distortion on the power supply system / generation of harmonics: Assessment of maximum voltage and current distortions (expressed as a percentage) up to the umpteenth harmonic*

[...]

What do you think about these points? Do these parameters give us an edge over the competition? What other parameters should be considered? For the measurement method, we are considering indicating that the instruments must be specified and calibrated by the city or an independent person... The same instruments and analyzers may possibly be used for all the suppliers... Your comments on a measurement methodology would be appreciated.

Another point that will come out from our meeting with [the Plant Project Microbiologist] will be the potential ozone concentration. The key value is [xx]% since the City assumes there is more efficient action on certain biological organisms. Can we comfortably maintain a production rate of [xx]% long term (the competition is proposing [zz])? Could a pilot unit (certainly in the [abc] range) attain this production rate and will performance be comparable to a full-scale generator? Your comments would be appreciated. For information, during the 2007 tests, the plant's service water was used as direct cooling water. The maximum temperature can be as high as 28°C. The figures from 2005 describe the versions with an open and closed loop. [Translation] (Emphasis added)

In another e-mail sent a few minutes later, the Degrémont application engineer forwarded the same e-mail to Degrémont executives while stating that “two e-mails with the same content sent in English to Switzerland and to ONA.” [Translation] He was thus attempting to solicit several intervenors within Degrémont.

These e-mails show that following the request for assistance from the Plant Project Microbiologist, the Degrémont application engineer drew up a list of several performance parameters that could benefit the company. Parameter 5) which the Degrémont application engineer was proposing regards “PSU performance” and suggests taking into account the “*distortion on the power supply system / generation of harmonics: Assessment of maximum voltage and current distortions (expressed as a percentage) up to the umpteenth harmonic.*” [Translation]

An analysis of a preliminary version of the specifications for Request for Qualification Tender 10-11257 drafted at the same time in May 2009 revealed that a requirement had been added in relation to harmonics:

“Detailed description and technical specifications

• [...]

• Components ensuring the correction and compensation of harmonics and of the power factor; [Translation] (Emphasis added)

In addition, when Request for Qualification Tender 10-11257 was published on June 30, 2010, Section 4 “Preliminary technical design” in Appendix 1 stated that:

*“The preliminary technical design must include the following plans, data and specifications (**ON AN ELIMINATION BASIS**): [...]*

The following preliminary data must be specified: [...]

- *The proposed mitigation measures for minimizing the effects of harmonic currents on the rest of the Plant’s electrical network.* (Bold type in the original, emphasis added) [Translation]

The issue of harmonic-current mitigation and reduction was added to Request for Qualification Tender 10-11257 documents as of May 2009 and was part of the “*preliminary data*” to be specified in the “*preliminary technical design*” submitted by bidders, all of which was on an elimination basis.

3.3.1.3 Pierre-André Liechti’s involvement in Request for Qualification Tender 10-11257

As previously mentioned, when met by Office of Inspector General investigating officers, Pierre-André Liechti confirmed having participated in the drafting of Request for Qualification Tender 10-11257 documents. He in fact stated that the issue of harmonics was part of the items he had brought up at the time.

Note that at the time that Request for Qualification Tender 10-11257 was being drafted, i.e. from 2009 to June 2010, Pierre-André Liechti was not yet under contract with Ville de Montréal; as mentioned in subsections 3.2.3 and 3.2.6, he was still a consultant for Degrémont in 2009, and also provided professional advice on another company project on June 16, 2010.

3.3.1.4 Interactions between Plant employees and three (3) other potential suppliers regarding Request for Qualification Tender 10-11257

The investigation conducted by the Office of Inspector General revealed that Plant employees took steps in 2009 to meet with potential ozonation system suppliers other than Degrémont.

In fact, an internal e-mail sent on February 27, 2009 by the Plant Project Engineer (with a copy to the Project Manager) revealed the Plant Manager’s desire to meet with each supplier’s executives to inform them of the ozone wastewater disinfection project. The Plant Project Engineer added that he intended to communicate with his contacts to “*make sure that the minimum requirements can be met for at least three suppliers.*” [Translation]

However, the exchanges that were traced between Plant employees and the three (3) other potential suppliers reveal an approach opposite to the one that was adopted, during the same period of time, with Degrémont and previously recounted in subsections 3.3.1.1 and 3.3.1.2.

The investigation revealed that Potential Supplier A had contacted the Plant Project manager on March 25, 2009, at which point the latter referred him to the Ville de Montréal's website and to public documents from spring 2008 that presented the project. Following the above communication, a lunch was scheduled for April 1, 2009 to be attended by the Project Manager, the Plant Manager and five (5) representatives of Potential Supplier A.

Ten (10) days later, Potential Supplier A contacted the Plant Project Manager again and said that he was still awaiting a CD with the dimensions of the Plant outfalls in order to look at which approach could be taken by his company with respect to ozone injection. In addition to enquiring about the proposed timetable for supplier qualification, he mentioned that the project manager had stated that he was interested in revising *"your pre-qualification document before releasing it publicly,"* and noted that he would gladly take part in the process *"if you need us."* [Translation]

The project manager responded that he greatly appreciated Potential Supplier A's interest in the project and that the meeting enabled him to find out about the supplier's products and services. He said that he intended to send the information CD during the week and that he would contact him to schedule a work meeting to *"discuss our pre-qualification call for tenders"* once the financing agreement was finalized with government authorities. As revealed by subsequent events, there was no follow-up on Potential Supplier A revising the Request for Qualification Tender 10-11257 documents.

In fact, while financing was authorized in early June, Potential Supplier A had to follow up itself with Plant employees in late June. The Plant Project manager responded that financing had in fact been approved early in the month and that he was reviewing the qualification specifications with Ville de Montréal's legal department and that informal meetings were planned with the various suppliers to discuss the technical specifications before issuing the request for qualification tender.

Regarding Potential Supplier B, the investigation revealed that as the latter had submitted a request related to the project in late August 2009, the engineer assigned to the Plant Project was asking for the project manager's opinion before responding to the request. Noting that *"this is basically a public document,"* the project manager concluded that he did not see a problem in sharing it with Potential Supplier B.

Similarly, when a representative of an outside consulting firm asked the Plant Project Engineer if he had any comments or concerns regarding Potential Supplier B's system, the engineer submitted a draft e-mail response to the project manager for approval. In the e-mail, the Plant Project Engineer confirmed having had *"a series of exploratory meetings with all the potential oxygen suppliers,"* including Potential Supplier B, and that it was *"too early to let you know about our concerns regarding the proposed systems."* [Translation]

For its part, when one of its representatives was met by Office of Inspector General investigators, potential supplier C stated remembering that the company had done a general presentation at the Plant in 2009.

In short, the investigation showed that contact by Plant employees with other potential ozone suppliers was made carefully by ensuring that the information that was shared was public information.

3.3.2 Publication of Request for Qualification Tender 10-11257 and its contents

Upon completion of the drafting process, Request for Qualification Tender 10-11257 was released on June 30, 2010. This subsection deals with the content of the tender documents, in particular the importance granted to the understanding of the Plant's specific environment and the fact that bidders were submitting a solution that suits the existing infrastructure.

As subsection 3.3.2.2 below will reveal, based on the elements that were collected and the witnesses that were interviewed by the Office of Inspector General, the pilot tests carried out by Degrémont from 2005 to 2007 gave the company an edge in this respect, since it had already tested a solution on site that could be implemented at the Plant. Furthermore, subsection 3.3.2.3 deals with the request to disclose the results of the pilot tests carried out from 2005 to 2007 received by the City during the publication period of Request for Qualification Tender 10-11277.

3.3.2.1 Importance granted to knowledge of the Plant's specific environment and to a solution suited to the existing facilities

As mentioned, Request for Qualification Tender 10-11257 attached great importance to knowledge of the Plant's particular environment and to the fact that bidders were proposing a solution suitable to its existing facilities. This is reflected in many ways in the tender documents.

First, section 5.4 of Request for Qualification Tender 10-11257 indicates the assessment criteria that will be evaluated by the selection committee. Several of these criteria require bidders to demonstrate their understanding of the Plant's specific environment and that the solution they are proposing suits the Plant's existing infrastructure, as shown from the description in Appendix 1:

“3.1.1 Understanding of problem area, issues and challenges (5 points)

The Candidate must show its understanding of the problem area, the issues and the challenges associated with the disinfection of the City's wastewater.

3.1.2 Technical and organizational capacity to design an ozone production system (10 points)

Based on the references requested in Section 5.1 of this appendix, the Candidate must show that it has the technical and organizational capacity to design an ozone production system that meets the City's objectives and needs regarding wastewater disinfection.

3.1.3 Technical and organizational capacity to design an ozone contact system (10 points)

Based on the references requested in Section 5.2 of this appendix, the Candidate must show that it has the technical and organizational capacity to design an ozone contact system suited to the Plant's existing

infrastructure and specific operating conditions that meet the City's objectives and needs regarding wastewater disinfection.

3.1.4 Technical and organizational capacity to supply a preliminary technical design for the Plant (15 points)

The Candidate must show that it has the technical and organizational capacity to design an ozone production and contact system that meets the City's objectives and needs regarding wastewater disinfection.

The Candidate must present what it believes constitutes the most suitable and efficient approach for attaining the target results by proposing a preliminary technical design of the complete ozonation system proposed for the Plant. The description of the preliminary technical design should include the information found in Section 4 of this appendix.

The Candidate must show that the complete ozonation system being proposed is suited to existing infrastructure, ensures component durability and ease of maintenance and replacement, and limits storage constraints. [Translation] (Emphasis added)

Therefore, four (4) criteria, representing a possible forty (40) points out of one hundred (100), require bidders to show their understanding of the City's specific needs, along with a solution suited to the Plant's existing installations.

Next, these two (2) requirements are not limited only to criteria that are to be submitted for assessment to the selection committee, as shown by the six (6) following sections of the Request for Qualification Tender 10-11257 documents:

"2.2 Description of ozone wastewater disinfection project

[...] The contact system must be suited to the existing infrastructure and the Plant's specific operating conditions. Furthermore, the system shall be installed while maintaining the integrity and efficient operation of existing infrastructure and equipment. [Translation]

"3. Preliminary technical design

The Candidate shall submit a preliminary technical design for the complete ozonation system tailored to the Plant's existing facilities and not affecting ongoing operation of the Plant. [Translation]

"4. Preliminary technical design

The preliminary technical design must include the following plans, data and specifications (ELIMINATION BASIS):

[...] The justifications confirm that the proposed ozone production and contact design is suitable for the Plant's existing infrastructure and specific operating conditions. The Candidate shall show that the contact design can be installed while maintaining the integrity and efficient operation of existing infrastructure and equipment; [...] [Translation]

"5.1 References for major ozone production system facilities

The Candidate shall provide information on references for existing facilities with components that are similar or identical to the ozone production system planned for the Plant's Ozonation Project. The Candidate shall provide:

[...] The performance reports for the reference facilities showing that the proposed ozonizer is suitable for the Plant; [...]" [Translation]

"5.2 References to ozone contact system facilities

The Candidate shall provide information on the references to existing facilities with the same or similar type of ozone contact components planned for the Ozonation Project at the Plant. The Candidate shall provide the following for each reference:

[...] Performance reports that show that the contact system is suitable for the Plant; [...]" [Translation]

"5. Ozone contact technology

[...] It is also important to facilitate the integration of the designs to the Plant's existing installations without, however, affecting ongoing operation of the Plant during construction. [...]" [Translation] (Emphasis added)

Based on all of the above excerpts from Request for Qualification Tender 10-11257 documents, the City clearly considered it important for bidders to understand the Plant's specific environment as well as propose a solution suited to the Plant's existing infrastructure.

3.3.2.2 Impact of 2005-2007 pilot tests carried out by Degrémont

Note that as described in more detail in section 2.2 above, ozone pilot tests were conducted from 2005 to 2007 at the Plant. Degrémont was the only supplier of the technology to have taken part in the tests. In addition, the results enabled Degrémont to develop and file a patent tailored to the Plant's facilities.

Moreover, the documents that were consulted and the witnesses that were met by the Office of Inspector General maintain that the pilot tests carried out from 2005 to 2007 gave Degrémont an advantage.

In this respect, note that the previously mentioned Degrémont internal memo dated April 10, 2009 stated the following regarding the future request for qualification tender:

"Everyone will benefit from the same level of information as Degrémont. Degrémont has a definite advantage associated with the tests that were previously carried out." [Translation]

The witnesses had the following to say subsequent to their meetings with Office of Inspector General investigators:

- Pierre-André Liechti agreed that conducting the pilot tests in 2007 and obtaining a patent gave Degrémont a “*psychological advantage*” as well as a solution, among many others, that could be actually applied to the Plant’s environment.
- The Plant Project Engineer conceded that the fact that Degrémont was present from the start of the pilot tests gave it an advantage.
- For his part, the Plant Project Manager stated that Degrémont did not have an advantage, since the company had participated in the three (3) pilot tests from 2005 to 2007. However, he also said that the secret for proper disinfection is contact with ozone and that the 2007 pilot tests enabled Degrémont to validate an alternate method for contact with ozone. Degrémont was clearly clairvoyant in carrying out the pilot tests, since at the time there had been no political desire or approved funding for the ozone disinfection project.

Therefore, the evidence that was gathered shows that both Degrémont, Plant employees and Pierre-André Liechti believe that the previously completed pilot tests provided an advantage to Degrémont or, at the very least, allowed it to test a solution that could be implemented at the Plant.

3.3.2.3 *Non-disclosure of results of pilot tests from 2005 to 2007*

Although the Request for Qualification Tender 10-11257 documents present a history of the Plant wastewater disinfection project, there is no mention of the pilot tests that were conducted between 2005 and 2007 by Degrémont at the Plant.

However, it appears from question 15 in Addendum 8 of the Request for Qualification Tender 10-11257, published on September 10, 2010, that a bidder stated having understood that several studies and tests had been conducted over the last few years on the Plant ozonation project. The bidder was asking if the information could be shared with bidders during this phase of the qualification process, or if it would be disclosed during phase 2. The City refused the request for reasons of confidentiality:

“Question 15)

We understand that several studies and tests were carried out over the last few years on the ozonation project at the Jean-R. Marcotte Plant. Is there any information that can be shared with bidders during phase 1? If not, do you intend to disclose this information and the test results during phase 2 of the call for tenders?

Answer:

For confidentiality reasons, we will not be disclosing the results of the prior studies and tests conducted by the City as part of the disinfection project.” [Translation]

Following the refusal, Degrémont was the only bidder to have the results of the pilot tests conducted between 2005 and 2007.

3.3.3 Results of Request for Qualification Tender 10-11257

The City received five (5) bids on October 13, 2010. Four (4) bids were deemed to be administratively compliant and were reviewed by the technical committee, including Degrémont's bid.

Note that the technical committee that was created for the Request for Qualification Tender 10-11257 is made up of five (5) members, including Pierre-André Liechti, the Station Project Manager and Engineer.

Following the bid assessment, the executive committee was notified on August 3, 2011 of the outcome of the deliberations of the selection committee for Request for Qualification Tender 10-11257.

Three (3) bidders qualified following Request for Qualification Tender 10-11257 for the second phase of the contracting process, including Degrémont. In other words, only these three (3) companies could be invited to submit a bid in relation to a future call for tenders for the supply of an ozonation unit.

3.4 The contract resulting from the Call for Tenders 12-12107 "Supply of an Ozone Unit for the Jean-R.-Marcotte Plant"

The third and last call for tenders analyzed as part of this Office of Inspector General investigation, the Call for Tenders to Supply an Ozone Unit 12-12107 is the second phase of the supplier qualification process conducted by the Plant in order to select an ozone system supplier.

Published on July 22, 2013, the Call for Tenders to Supply an Ozone Unit 12-12107 was only open, as mentioned in the preceding section, to the three (3) companies that qualified following the Request for Qualification Tender 10-11257. Ultimately, there were only two (2) bidders, including the eventual winner Degrémont. The contract resulting from this call for tenders is still in force today.

Two aspects of the Call for Tenders to Supply an Ozone Unit 12-12107 process have drawn the attention of the Office of Inspector General: the question and answer exchanges during the tender publication period, and the work of the technical committee in charge of evaluating the received tenders, whose members included Pierre-André Liechti.

3.4.1 The questions and answers exchanged during the publication period of the Call for Tenders to Supply an Ozone Unit 12-12107

Posted between July 22, 2013, and March 10, 2014, the Call for Tenders to Supply an Ozone Unit 12-12107 was the subject of several question and answer exchanges. Two (2) of these drew the attention of the Inspector General.

First, in the February 6, 2014, question and answer exchange, one bidder asked if all information had been provided to the bidders:

Question 02:

“According to the experts and suppliers consulted, the 95% transfer rate required under the specifications cannot be achieved in the East and West wells in low-flow situations and variation in ozone demand of affluent wastewater.

Given that the City requires a solution based on well injection, can it assure us that all studies and/or data have been provided and forwarded to the bidders (pilot studies, expert opinions, etc.)?”

Answer 02:

“[...] The City has scientific studies that have enabled it to make a technological choice and establish the criteria for the transferred Dose. While the City feels that the ozone injection system must aim to create the smallest gas bubbles possible and that the gas solubility system influences bacteria elimination efficiency, the City is of the opinion that the objectives and the results of the pilot tests conducted prior to this Call for Tenders provide no information that will facilitate the design of the Bidder’s ozonation system.”⁶(Emphasis added)

Four (4) days later, on February 10, 2014, in another question and answer exchange, one bidder again asked the City, in Questions 14, 15 and 16, to provide the bidders with any “*study or data report or other information*” held by the City. The City relied on its prior, above-mentioned response to Question 02, and reiterated that it considered it had provided the bidders with all the technical data needed to prepare their bids:

“The City has provided the Bidders with the technical data on the Plant’s current infrastructure and operating conditions that will enable the Bidder to prepare its Bid.”⁷

This same question and answer exchange included another question from a bidder asking the City to declare any information relating to its relationships with the bidders and to certify that it had not been in contact with one or more bidders:

“Question 22:

To ensure transparency and reciprocity, the City is required to declare any information relating to any relationships it has with the Bidders.

In compliance with the intention of the provisions to promote transparency, we request the City to certify to the bidders that it has not had any contacts, relationships, or other discussions with one or more bidders, their agents, representatives or consultants outside of the technology certification procedure and this Call for Tenders.

⁶ Request for Information, Q&A 15, Question 02, February 6, 2014.

⁷ Request for Information, Q&A 16, Question 14, February 10, 2014.

If it cannot, we request the City to disclose to the bidders the nature as well as the scope of the discussions, studies and consultation, whether as part of a contract or not, with any party whatsoever involved in this Call for Tenders, including, without limitation, any bidder, agent, consultant or supplier.

Answer 22:

The process for this call for tenders and the awarding of the Contract comply with the requirements of the Cities and Towns Act and the Contract Management Policy of Ville de Montréal.”⁸(Emphasis added)

Taken together, these questions show that a bidder wished to obtain data that was held by Ville de Montréal and obtained during pilot testing that preceded the call for tenders for the supply of an ozone unit and be reassured concerning possible contacts that may have been established with any bidder. Judging that it had provided all the necessary information to the bidders, Ville de Montréal refused to disclose this information.

3.4.2 The technical committee's work

While the Request for Qualification Tender 10-11257 had already led to qualification of the systems proposed by three (3) suppliers, the decision was made to set up a technical committee to evaluate the two (2) bids received for the Call for Tenders to Supply an Ozone Unit 12-12107. In accordance with his expert consultant contract, Pierre-André Liechti sat on this technical committee, and the investigation has revealed that he played a major role in its evaluations due to the complexity of the committee's analyses.

Upon completion of the evaluations, the technical committee reported instances of non-compliance in both bids concerning one of the requirements, but concluded that Degrémont's non-compliance was minor, while that of the other bidder for the same requirement was deemed major. In addition, it was determined that this second bid was affected by another major non-compliance involving a second requirement.

3.4.2.1 First requirement that led to the rejection of the bids from Degrémont and the other bidder

To start, the first requirement involves the water level rise in the Plant's well. Described in brief, the water level rise in the Plant's well is a specific technical requirement resulting from the fact that injecting ozone into wastewater raises the water level. To ensure well functionality and safety and avoid significant operational disruptions at the Plant including the full shutdown of the ozone unit, the specifications of the Call for Tenders to Supply an Ozone Unit 12-12107 provide that this rise in water level must not exceed 500 mm.

⁸Request for Information, Q&A 16, Question 22, February 10, 2014.

After calculating the water level rise caused by both bidders' proposed systems following the method recommended by Pierre-André Liechti, the technical committee concluded the following, as reproduced in the Decision Summary on the contract award resulting from the Call for Tenders to Supply an Ozone Unit 12-12107:

- On the one hand, Degrémont's failure to comply with *"the 500-mm requirement set out in the technical specifications based on a maximum river level of 9.51 m is a minor defect based on the annual history of the last 50 years, as it would occur once every 5 years, only if the system was operated outside of the summer period indicated in the specifications (May to October), and it would never occur with a maximum river level of 8.66 m based on the summer history of the last 50 years"* (underlining added), and
- On the other hand, *"the contact system proposed by [the other bidder] produces a water-level rise of 2,430 mm at 40 m³/s in the outfall entry wells, based on the calculations of Pierre-André Liechti."* According to the technical committee, this constitutes non-compliance by the other bidder with *"the requirement in the technical specifications determined based on a maximum river level of 9.51 m according to the annual history of the last 50 years is a major defect, as it would occur every year, and up to 5 times a year, even based on a maximum river level of 8.66 m according to the summer history of the last 50 years."* (Emphasis added)

3.4.2.2 Second requirement leading to a defect in the other bidder's bid

According to the Decision Summary, the second requirement leading to a defect in the other bidder's bid concerns the size of the ozone bubbles produced by this bidder's system. Indeed, while the specifications call for a Sauter mean bubble diameter of 3 mm, the diameter proposed by the other bidder was 0.8 mm.

In light of such a finding, the technical committee was of the opinion that *"a diameter of 0.8 mm would encourage the bubbles to coalesce and cause a 700 mm rise in the water level of the entry well. This increase would be in addition to the aforementioned one."*

3.4.2.3 Pierre-André Liechti's calculations

While information on bubble size was included in the bids of both companies, the technical committee report indicates, as mentioned above, that the water-level rise was calculated following Pierre-André Liechti's method.

However, three (3) of the technical committee members met with explained that only Pierre-André Liechti was able to perform the calculations required to evaluate the bids, as they were at such a level that few scientists or engineers in the world could do them. Another

member was less categorical about Pierre-André Liechti's role in trying to explain that the calculations were indeed his area of expertise, but that his team was able to apply them. In this respect, Pierre-André Liechti's highly advanced knowledge and expertise in ozonation were recognized by the witnesses met with during the investigation.

(i) The Plant Project Manager

When the Plant Project Manager was met with, he was divided as to Pierre-André Liechti's impact. He stated he could understand that Pierre-André Liechti accounted for physical phenomena in his calculations. He also added that Mr. Liechti had shown and explained his calculations to his team until they understood his analysis, and that they then worked out "cases" using his figures to see how the calculations reacted in other situations.

At the bid analysis stage, both businesses had their own experts with them to explain their proposals and how they would apply to the Ville de Montréal project. The Plant Project Manager explained that he understood the discussions between the bidders' experts and Pierre-André Liechti, but conceded that he was unable to redo the calculations.

Similarly, he acknowledged that the calculations on the water-level rise in the wells were the expertise of Pierre-André Liechti and that the City team was dependent on him for evaluating the ozone contact system. In short, the Plant Project Manager stated that people could question Pierre-André Liechti, but not contradict him: *"Challenge him, yes. Contradict him, no."*

(ii) The Plant Project Engineer

The engineer assigned to the Plant project stated that City staff members were not skilled enough to dispute Pierre-André Liechti's calculations. This is why they hired an expert, because they did not have the expertise to perform such calculations. He also stated that no one on his team could dispute Pierre-André Liechti's calculations, because they were so complex.

(iii) Another technical committee member

The investigators also met with another member of the technical committee to determine the importance of Pierre-André Liechti's role on it.

This member stated that the spreadsheet prepared by Pierre-André Liechti contained two hundred (200) variables and that this type of calculation was well beyond what is typically required for this kind of evaluation. He added that to his knowledge, there was no one who could validate Pierre-André Liechti's calculations on the rise in the wells or who had the technical or scientific knowledge to argue with Pierre-André Liechti over his calculations. He also stated that the City engineers understood Pierre-André Liechti's calculations, but not every last detail.

(iv) *Pierre-André Liechti*

Pierre-André Liechti himself stated that no one on the Plant Project Manager's team could quantitatively appreciate the technical aspects of his analyses. However, he did state that the team members could qualitatively appreciate his analyses.

He also said he agreed with the statement that there are no more than five (5) people in the world capable of performing the calculations that he did for the Plant project. He added that one of the project aspects that he found difficult was developing his calculations all by himself.

(v) *The Plant Manager*

In reality, only the Plant Manager said he disagreed with the statement that the Plant employees were incapable of disputing Pierre-André Liechti's calculations.

He explained that Pierre-André Liechti was not managing the Plant project and that his role was to make recommendations and respond to any questions asked of him. He also stated that the City engineering group was able to "*validate*" Pierre-André Liechti's calculations, meaning they were "*consistent and sound*."

Note that unlike the four (4) previous witnesses, the Plant Manager did not sit on the technical committee and thus did not participate in its work.

To summarize, the majority of the witnesses met with, including Pierre-André Liechti himself, indicated that Mr. Liechti played a key role in the technical evaluation of the bids due to the complexity of the analysis required by this project.

3.4.3 The result of the Call for Tenders to Supply an Ozone Unit 12-12107

Due to the two (2) major instances of non-compliance detailed above, the technical committee rejected the bid by Degrémont's competitor. Being affected solely by a minor non-compliance, Degrémont's bid was approved by the City, and on March 26, 2015, Degrémont was awarded the contract resulting from the Call for Tenders to Supply an Ozone Unit 12-12107 for a total amount of \$98,950,000 including taxes.

4. Responses to the Notice to Interested Parties

In accordance with her duty to ensure procedural fairness, the Inspector General summarized all the facts detailed above in a Notice to Interested Parties (the "Notice") sent on November 8, 2019. All recipients of the Notice submitted responses from which the Inspector General has retained the following elements.

4.1 Response from Pierre-André Liechti

4.1.1 Concerning his bid and the patented “New U-Tube”

In his response, Pierre-André Liechti puts forth two (2) items concerning the patented “New U-Tube” and its inclusion in his bid.

To begin with, Pierre-André Liechti confirmed that he did not disclose to the Plant employees that he was the inventor of the patented “New U-Tube” and stated that he regretted the situation. However, he indicated that the technical proposal in his submission included a document describing the patent and that he never hid this from the City. While it is true that his bid provides an exhaustive description of the patent, this is not equivalent to an explicit statement of the fact that he was a co-inventor of this patented device.

Then, Pierre-André Liechti slightly modified his statement to the Office of Inspector General investigators to the effect that in November 2009 he believed that the “New U-Tube” was the best disinfection method if one wished to use the Plant’s existing infrastructure. In his response, he maintained that the patented “New U-Tube” was only one of many solutions to diffuse ozone in the wells of the Ville de Montréal plant. He stated that there are other technological means to introduce ozone gas, with the bid from Degrémont’s competitor for the Call for Tenders to Supply an Ozone Unit 12-12107 being a good example.

Note that it was never claimed that the patented “New U-Tube” was the sole solution for the Plant’s wastewater disinfection project. The issue here is of another nature altogether. In presenting this patented device, which he co-invented, as the best way to disinfect Montréal’s wastewater using the Plant’s existing infrastructure, Pierre-André Liechti took a stand in favour of the solution of one potential supplier, Degrémont, when he was being called on to evaluate those of its competitors.

The Inspector General therefore retains from these two elements that even though Pierre-André Liechti provided an exhaustive description of the patented “New U-Tube” in his bid, he did not disclose to Ville de Montréal that he invented the device, and in so doing, he placed himself in a position in which he favoured the solution of one potential bidder.

4.1.2 Concerning any benefit that Degrémont may have obtained by participating alone in the pilot testing conducted at the Plant and the impact of non-disclosure of the results

Pierre-André Liechti also maintained in his response that the Plant’s wastewater flow conditions are very unusual, so much so that he wrote *“never in my activities in the world of ozone”* had he heard talk before the pilot testing done from 2005 to 2007 for diffusing ozone in such an environment. *“This is, therefore, a new situation.”* Pierre-André Liechti said that he had to conduct *“intensive and in-depth bibliographical research [...] in order to feel at ease with this project.”*

Despite the fact that an expert of his calibre, with more than 30 years of experience in the field of ozone treatment, felt that the situation at the Plant was a first in his career and that he had to conduct intensive research to prepare himself for the 2007 pilot testing, Pierre-André Liechti said he believed that conducting it had conferred “*no significant advantage on Degrémont.*”

Moreover, regarding the non-disclosure of the Degrémont pilot test results, Pierre-André Liechti replied that “*the information made available to the qualified competitors to propose a system offering was widely sufficient*” and that the competition was not in “*a situation that limited its engineering design and dimensioning freedom.*” In other words, no disclosure of the pilot test results was necessary in his opinion.

4.1.3 Concerning his relationship with Degrémont

Pierre-André Liechti confirmed that he worked as a consultant for Degrémont from his retirement until the end of 2009. According to his response, he therefore complied with the requirement, provided for in section 8.2.1 of the Request for an Expert Consultant Tender 10-11277, not to be under contract with a supplier of ozone systems at the time of submitting his bid or within the six (6) preceding months.

Yet Pierre-André Liechti also confirmed that he did a design for Degrémont on June 16, 2010. While he explained that he did it “*voluntarily and free of charge to assist a colleague,*” he acknowledges today that this was a mistake. The Inspector General therefore retains that in offering his professional advice to Degrémont, even free of charge, Pierre-André Liechti had a contract with a supplier of ozone systems in June 2010, less than six (6) months before the date on which he submitted his bid.

Moreover, Pierre-André Liechti stated that he never received the July 7, 2010, email from a subcontractor working exclusively for Degrémont informing him that the Request for an Expert Consultant Tender 10-11277 had been published one week earlier. The Inspector General has noted this response, as it is possible that Pierre-André Liechti no longer has this email in his possession. Nevertheless, this situation is surprising as it was Pierre-André Liechti himself who provided the Office of Inspector General’s investigators with this email.

4.1.4 Concerning his involvement in drafting the documents for the Request for an Expert Consultant Tender 10-11277 and Request for Qualification Tender 10-11257

In his response, Pierre-André Liechti confirmed that he participated in drafting the specifications for the Request for an Expert Consultant Tender 10-11277 and that he attempted to draft the specifications to his own benefit. He also repeated that he did this because if he had not, it would have taken two (2) people to replace him. He conceded that this gave him a certain advantage in obtaining the position of expert consultant. He

nevertheless nuanced his response by explaining that other experts could have met the tender requirements if the call had been published internationally.

It is of little importance that, theoretically speaking, other experts could also have met the requirements of the Request for an Expert Consultant Tender 10-11277, or that Pierre-André Liechti stated he was seeking to help the City by enabling it to hire two experts for the price of one. The Inspector General retains that Pierre-André Liechti participated in drafting the call for tenders for which he submitted a bid and that he sought to benefit himself along the way.

Concerning the Request for Qualification Tender 10-11257, Pierre-André Liechti confirmed that he also participated in developing its specifications, while noting that he gave his advice to the Plant free of charge and that the harmonics issues he raised were important for the project. When combined with the finding of the preceding subsection that he admitted to having been a Degrémont consultant until December 2009 and again in the month of June 2010, this shows that Pierre-André Liechti participated in drafting a call for tenders for which Degrémont would submit a bid at the same time that he was working as a consultant for this company.

4.1.5 Concerning the work of the technical committee of the Call for Tenders to Supply an Ozone Unit 12-12107

Concerning the statements to the effect that no members of the technical committee could dispute Pierre-André Liechti's calculations, he responded that the bidders' experts could indeed understand his calculations. He added that he shared an *"immediate mutual technological understanding"* with the expert from Degrémont's competitor. Thus his calculation methods would be validated. Also, Pierre-André Liechti contradicts the statement of the technical committee member to the effect that his spreadsheet contained two hundred (200) variables, stating instead that his method considers five (5) variable parameters that influence, for example, gas retention and load loss through bubbling.

While these statements are not without interest, the Inspector General notes that Pierre-André Liechti's response does not consider the ability of the Plant's team members to dispute and validate the conclusions of his calculations. This supported by the disparity between the understanding of one technical committee member, who estimated that Pierre-André Liechti's spreadsheet contained two hundred (200) variables, and Liechti's rectification that his method actually contained only five (5) variables agree.

4.2 Degrémont's response

4.2.1 Concerning the benefit it may have obtained as sole participant in the 2007 pilot test and in developing the patented "New U-Tube"s

In its response to the Notice, Degrémont explained that it had not received any advantage by conducting the 2005 to 2007 pilot tests and that it is misleading to state

that the patented “New U-Tube” was developed using the results of these pilot tests. This contradicts the statement of Pierre-André Liechti, one of the device’s co-inventors, to the effect that the 2007 pilot test enabled development of the patented “New U-Tube,” the company provided six (6) reasons in support of its position.

Degrémont first points out that while the international patent application was indeed filed on September 5, 2007, the *priority application* was filed on September 8, 2006, before the 2007 pilot test. The Inspector General finds that the initial application was indeed filed on September 8, 2006, but it should be noted that this would in no way prevent the company from continuing development of the patent over the coming months and years.

Second, Degrémont explained that the idea of injecting ozone into the outfalls was not patented as such and that it was possible for any supplier who observed the configuration of the said Plant outfalls to develop its own solution. Of course, the Inspector General acknowledges that the patented “New U-Tube” involves something more complex than the simple injection of ozone into a well. It involves a complex ozone contact process based on existing Degrémont technology perfected by high-level engineers. What is important is that this process was developed as a solution adapted to the Plant’s specific environment.

Third, Degrémont maintains that the “*patentability*” does not relate specifically to the Plant facilities. The Inspector General has never stated the contrary, and it is reasonable to believe that the patented “New U-Tube” can be used elsewhere in the world. Once again, what is important about the patent in this investigation is rather that its development and claims protect a technology that can be used at the Plant.

Fourth, the technology could have been tested and developed elsewhere than in Montréal. While it is true that the patent could have been developed elsewhere in the world, the Inspector General notes that Degrémont does not explain where this technology was developed in its response.

Fifth, Degrémont stressed that the “New U-Tube” had not been tested in the Plant outfalls, in water mains several metres in diameter that receive treated wastewater from the Plant and discharge it into the river. It is true that Degrémont did not test the patent in the outfalls, but that was not the purpose of the pilot tests conducted at the time. They were rather a means to validate certain phenomena in order to ensure control of ozone contact and achieve the desired level of disinfection. They were conducted on a smaller scale that reproduced the outfall configuration.

Moreover, note that the Request for an Expert Consultant Tender 10-11277, for which the contract was awarded to Pierre-André Liechti, included the notion of scaling up as a service required from the expert consultant. Scaling up is used precisely to demonstrate that a pilot test done on a small scale can be adapted to the Plant’s actual dimensions.

Sixth, in its response Degrémont contradicts a statement made in an internal company memo dated April 10, 2009, and reproduced in section 3.3.2.2 above to the effect that it had an advantage because it conducted the pilot tests. According to Degrémont, having conducted these pilot tests could not be considered an unfair advantage, and was rather

a “*legitimate competitive advantage*” resulting from its technology development efforts. Degrémont also points out that the bidders all had access to relevant information about the Plant when preparing their bids and that they were able to conduct their own testing.

No matter how the fact that Degrémont was able to test a solution in the particular Plant environment is described, the Inspector General considers it an advantage for the company. Being the sole supplier of ozone systems on hand during the pilot testing gave Degrémont a head start over the competition, as the following subsection demonstrates.

4.2.2 Concerning the fact that its bid is based on the “New U-Tube” in the Request for Qualification Tender 10-11257 and the Call for Tenders for the Supply of an Ozone Unit 12-12107

In its response to the Notice, Degrémont stated that its bids for the Request for Qualification Tender 10-11257 and the Call for Tenders for the Supply of an Ozone Unit 12-12107 are not based on the “New U-Tube.” It claimed instead that it had developed a new concept (hereinafter “Technology B”) developed using what was state-of-the-art knowledge at that time and the information provided by the City to all bidders. Here is how Degrémont described the Technology B concept in its response:

“Our concept differs from the U-Tube in that:

- *This contactor only uses a partial flow of the wastewater to be treated.*
- *The injection tube (16) includes static mixer elements.*
- *The biphasic flow formed (3a) in the injection tube comes into contact, as a jet (25), with the main wastewater flow (F) with a cocurrent downflow.*
- *Applied to the case of the Montréal Plant, this concept uses the outfalls equipped with the injection tube as contactors.*

Compared to the preliminary configuration subjected to the pilot testing, the basic principle of the contactor proposed here:

- *Maintains the injection of ozonated gas by a partial flow of wastewater into a central tube, this time without a static mixer,*
- *Establishes the transfer and reaction zone in the ring zone of the central tube working against the current as with” conventional ozonation columns.”⁹*

We are therefore to understand that the Technology B, which Degrémont stated it had used, differs from the “New U-Tube” technology. However, the explanations and the excerpt cited in support of this statement take up passages from its own bid precisely detailing the “New U-Tube.”

Indeed, the above-mentioned passage is found nearly word for word in Degrémont’s bid¹⁰ for the Call for Tenders to Supply an Ozone Unit 12-12107. In addition to a detailed explanation of the patent for the “New U-Tube” co-invented by Pierre-André Liechti, this

⁹ Degrémont bid, Call for Tenders 12-12107, section 10.4.4, p. 411–412.

¹⁰ Degrémont bid, Call for Tenders 12-12107, section 10.4.4, pp. 411–412.

section of the Degrémont bid reproduces the representative drawing of the patented “New U-Tube” appearing in documents available from the Canadian Intellectual Property Office.

Moreover, Degrémont’s bid confirms that *“the pilot installation tested in 2007 prefigures an initial design for adapting the U-Tube principle to the outfall configuration. Note: Patent [“New U-Tube” patent number] published on March 13, 2008.”*¹¹ Figure 15 in its bid shows the same diagram that appears in the patent for the “New U-Tube,” specifying that it is a *“schematic representation of the concept tested in 2007.”*¹²

Similarly, section 2.1.1.3 of the Degrémont bid indicates that:

*The injection and contact system installed inside the two outfall entry wells is based on the pilot tests done in 2007 and 2008est basé sur les essais pilotes effectués en 2007/2008 and in several studies conducted since then. [...] In light of the pilot testingsuite aux essais pilotes, this enables us to guarantee mass transfer performance equal to or greater than 98%, even with a very high dosage, river level variations, and the strong flows at this plant.”*¹³(Emphasis added)

Finally, chapter 10.4.4 includes the following passage:

*“In accordance with the prior test program completed in 2007Conformément au programme d’essais antérieurement réalisé en 2007, we chose a U-tube-type system, which is the only one that meets the technical design specifications summarized in the preceding paragraph.”*¹⁴(Emphasis added)

Therefore, without excluding the possibility that the company continued developing its technology after Pierre-André Liechti’s departure, the Inspector General retains that Degrémont’s explanations stating that its bid was based solely on “Technology B” and in no way on the patented “New U-Tube” are contradicted by its own bid submitted in the Call for Tenders to Supply an Ozone Unit 12-12107.

4.2.3 Concerning the inclusion of its comments in the Request for Qualification Tender 10-11257 documents

Concerning the integration of its comments in the Request for Qualification Tender 10-11257 documents, Degrémont responded that it had noted that not all the suggestions had been included. It pointed out that the changes proposed by its application engineer did not lead to a contract and do not refer to any particular technological specifications. As evidence, the company points out, as did the Plant Manager and project manager, that three (3) suppliers were qualified at the close of the Request for Qualification Tender 10-11257 and that this figure is representative of the number of players in the limited field of ozonation.

¹¹ Degrémont bid, Call for Tenders 12-12107, section 10.4.4, p. 410.

¹² Degrémont bid, Call for Tenders 12-12107, section 10.4.4, p. 411.

¹³ Degrémont bid, Call for Tenders 12-12107, section 2.1.1.3, p. 411.

¹⁴ Degrémont bid, Call for Tenders 12-12107, section 10.4.4, p. 411.

The facts that the Plant employees retained only some of the changes proposed by Degrémont and that their inclusion in the tender documents did not lead to the rejection of the other suppliers do not in themselves invalidate the fact that Degrémont had obtained the tender documents in advance and had the opportunity to suggest changes to them. The Inspector General therefore retains that Degrémont received an advantage in the Request for Qualification Tender 10-11257.

4.2.4 Concerning its relationship with Pierre-André Liechti

In its response, Degrémont confirmed that due to the important position held by Pierre-André Liechti in the company while still an employee, he was retained as a consultant after his retirement to *“enable the transfer of his ozone treatment knowledge to the company.”*

The company indicated that a single payment, in February 2010, had been traced for his consulting work, but specified that this payment was not related to the Ville de Montréal project. Similarly, concerning the June 16, 2010, emails in which Pierre-André Liechti provided a preliminary design at the request of the Vice-President of Degrémont, the company responded that the project involved a different entity than Ville de Montréal. Whatever the case may be, Degrémont stated that there was no longer any contractual relationship between itself and Pierre-André Liechti when the latter submitted a bid in the Request for an Expert Consultant Tender 10-11277.

The Inspector General therefore finds that Degrémont's last payment to Pierre-André Liechti for his consulting work was made in February 2010. Furthermore, it is of little importance that the professional advice provided by Pierre-André Liechti in June 2010 involved a different project than the one for Ville de Montréal. The Inspector General therefore retains that he worked for Degrémont, free of charge, less than six (6) months before filing his bid in the Request for an Expert Consultant Tender 10-11277.

4.3 Response from the Plant Manager

4.3.1 Concerning Degrémont's completion, on its own, of the 2007 pilot test and the non-disclosure of the results

Concerning the presence of a single ozone supplier, Degrémont, in the 2007 pilot test, the Plant Manager stated in his response that he *“would not have objected to another company doing the testing, had a request to that effect been made.”* He maintained that it was Degrémont that had proposed carrying out these additional tests to the Plant, and that it was a research and development exercise for the company that would enable it to evaluate the injection methods with wastewater rather than simply with drinking water.

Concerning the non-disclosure of the pilot test results, the Plant Manager continued stating that the prospective bidders had access to all the information needed to prepare their bids for the Request for Qualification Tender 10-11257. He explained that the data *“concerning the Plant facilities, the quality and quantity of the effluent, and all historical data involving*

the quantities, load and flows had been shared with all suppliers” in the tender documents and their addenda. The only items not shared were the ecotoxicology laboratory results, the LuminoTox test results, and the processes belonging to Degrémont.

Yet the main recommendation of the Tripartite Committee report, which was specifically addressed to it, was to the effect that it was necessary that all ozone system suppliers be able to validate, at the Plant, the performance of their proposed possible injection systems. Accordingly, it clearly appears insufficient to say that no one would have objected to such tests being done, if indeed the potential suppliers even knew that there was such a possibility.

On the other hand, by reducing the 2007 pilot testing to a *“research ad development exercise,”* as the Plant Manager did, the issue of the advantage conferred on Degrémont by testing a solution in the Plant’s special conditions and environment, is left out completely.

4.3.2 Concerning the drafting of the Request for an Expert Consultant Tender 10-11277

The Plant Manager wrote in his response that before proceeding with the call for tenders, suggestions for candidates or firms had been proposed to the Procurement Department and that Pierre-André Liechti was included on this list of potential candidates. While the Plant Manager did not include this list with his response, the Plant Project Manager did so with his own. It will therefore be addressed in subsection 4.4.3.

The Plant Manager then explained that initially there was to be a committee of experts from various specialities to assist the project team. This committee never saw the light of day, as the technology was unanimously chosen. It was planned that Pierre-André Liechti would be part of this committee along with other potential experts from various disciplines.

That the decision to retain a committee of experts or a single expert changed during the process is one thing. It is, however, an entirely different matter to engage in a significant number of exchanges with a potential expert consultant bidder when the preliminary amounts show that a public call for tenders will be necessary before any contract is awarded.

4.3.3 Concerning the relationship between Pierre-André Liechti and Degrémont

The Plant Manager responded that it was the responsibility of Pierre-André Liechti to comply with the rules and conditions set out in the tender documents. He added that the latter’s bid was deemed compliant by the Procurement Department and that he had no reason to believe that Liechti had not complied with the conditions of the call for tenders.

He added that throughout the performance of his contract, he never received any information to the effect that Pierre-André Liechti favoured Degrémont's bid. He stated that his actions were, on the contrary, in the best interests of the City. He concluded by adding that it had been reported to him that Pierre-André Liechti answered questions clearly and shared both his reference and calculation notes.

4.3.4 Concerning the drafting of the Request for Qualification Tender 10-11257

The Plant Manager stated that he never authorized any member of his team to disclose strategic information about the call for tenders to any potential bidders. Information relating to strategic decisions was to remain confidential. The microbiologist assigned to the project was aware of these instructions and the Director never authorized him to contact Degrémont or any other bidder.

The Plant Manager then responded that Degrémont's suggestions were not fully included in the Request or Qualification Tender documents and that the microbiologist was not empowered to make final decisions on the specifications, which were the responsibility of the project manager and project engineer. The Plant Manager pointed out that these changes did not lead to the elimination of suppliers since three (3) firms had qualified at the close of the Request for Qualification Tender 10-11257.

Finally, the Plant Manager explained that the decision was indeed made to meet each of the potential ozone system suppliers before the start of the supplier qualification process. Each firm showed interest in this process, but none asked the Plant team about conducting additional testing in view of the call for tenders.

Beyond the issue of suppliers other than Degrémont asking to do testing at the Plant, a point already covered, the Plant Manager, like his ex-employees, attempted in his responses to minimize the advantage received by Degrémont in being able to suggest requirements to be included in the tender documents. Indeed, in order to conclude that Degrémont had received an advantage, it is not necessary that all its competitors also be excluded at the close of the call for tenders.

4.3.5 Concerning the work of the technical committee on the Call for Tenders to Supply an Ozone Unit 12-12107

According to the Plant Manager's response, the technical committee was composed of engineers specializing in various fields who had between them more than one hundred (100) years of engineering experience. The Plant Manager thus maintained his position on his team's skills, that the professionals *"were able to understand the calculation principles and models used by Pierre-André Liechti."* He added that the decisions on the evaluation of the two bidders were made in accordance with the instructions of a Ville de Montréal lawyer assigned to the case.

Recall at this point that unlike the Plant Manager, the majority of the witnesses who personally took part in the technical committee work, including Pierre-André Liechti himself, indicated that Liechti had played a preponderant role in the technical evaluation of the bids due to the complexity of the analysis to be done for this project.

The Plant Manager concluded by stating that his supervisors were informed throughout the Plant project of the “*ins and outs of the case.*”

4.4 Response of the Plant Project Manager

4.4.1 Concerning the drafting of the Request for an Expert Consultant Tender 10-11277

To begin with, the Plant Project Manager explained that the purpose of the June 5, 2009, email was to make contact with Pierre-André Liechti, as “*making contacts*” with experts from various fields who may have an interest in the project was one of his duties as the project manager.

He added that it was always clear the professional services contract would be awarded through a call for tenders and that the initial name of the document, “Mandate Know-how,” was incidental and would be changed by the Procurement Department.

In addition, the definition of the ozone expert’s mandate included particular and unique challenges, as it is a highly specialized field with little to compare to at the Plant. This is why he requested the assistance of Pierre-André Liechti to “*enhance*” the specifications by sharing the preliminary version of the technical specifications with him. The Plant Project Manager stated in his response that Pierre-André Liechti had proposed two (2) additional requirements: the expertise relating to oxygen production and that relating to electrical harmonics. He explained that any ozone expert must have this knowledge and that these additions did not favour his selection.

He added that “19 other versions” of the specifications were then produced before the final version was created. He also explained that consulting with potential bidders during the drafting of technical specifications for unique projects this was a typical way of doing things in the private sector.

This response demonstrates flagrant ignorance of the rules for awarding public sector contracts. To start with, since the Plant Project Manager was working for Ville de Montréal, not a private business, the awarding of the contract had to comply with the legal requirements of the *Cities and Towns Act*. The Inspector General further retains that the Plant Project Manager confirmed that Pierre-André Liechti had indeed assisted the City in drafting the specifications of the Request for an Expert Consultant Tender, which is forbidden in the *Instructions for Bidders*.

Concerning the harmonics requirements, there is no disputing the fact that these requirements are justified for ozone experts, but the Plant Project Manager nevertheless admitted that they were added following a suggestion from Pierre-André Liechti. The

Inspector General thus retains that a preliminary version of the specifications were sent to Pierre-André Liechti, that he proposed two additional requirements for the expert consultancy mandate, and that he did indeed participate in drafting the Request for an Expert Consultant Tender 10-11277.

4.4.2 Concerning the relationship between Pierre-André Liechti and Degrémont

The Plant Project Manager stated that he was unaware of the existing relationship between Pierre-André Liechti and Degrémont after the former's retirement. In this regard he stated that Liechti told him he had had no further business relationship with Degrémont after his retirement in 2008.

4.4.3 Concerning international publication

The Plant Project Manager made a significant distinction concerning the international publication of the Request for an Expert Consultant Tender 10-11277 which the Inspector General must point out. He explained that he had proposed publishing the Request for an Expert Consultant Tender 10-11277 in two international ozonation publications in order to ensure that the call for tenders had a broad reach. He supported his statement by attaching to his response to the Notice a copy of the email to this effect that he sent on June 30, 2010, to an employee of the Procurement Department. A list of eleven (11) potential experts to be solicited for this call for tenders and including Pierre-André Liechti was attached to the same email

Upon reading the email ,the Inspector General finds that the Plant Project Manager made an attempt to broaden, outside of Québec, the reach of the Request for an Expert Consultant Tender 10-11277. While only three (3) of the eleven (11) experts had their place of business outside of Québec (Pierre-André Liechti and two Americans), two publications were indicated for publishing the call for tenders outside of Québec.

4.4.4 Concerning the drafting of the Request for Qualification Tender 10-11257

To start with, the Plant Project Manager explained that he never knew that the microbiologist assigned to the Plant project had shared a preliminary version of the specifications and that he had never authorized any such sending of documents to Degrémont.

This position is at the very least surprising as the microbiologist forwarded the email received from the Degrémont application engineer to which were attached the three documents with the filenames "[...]a_Revision DGT." Moreover, it was the Plant Project Manager himself who again forwarded this email and the attachments to the Plant Project Engineer on February 19, 2009.

The Plant Project Manager then added that the harmonics requirements did not favour Degrémont, as all ozone system suppliers are familiar with this phenomenon and have developed measures to attenuate them. While not questioning the relevance of this requirement, the Inspector General nevertheless finds that the addition was made after the email sent by the Degrémont application engineer within the company.

Continuing on the topic of including Degrémont's comments in the tender documents, the Plant Project Manager added that *"[the engineer assigned to the Plant project] and I did not fully and blindly include the comments in question in the specifications."* He explained that the drafting was done with discernment and fairness in order to comply with the legal requirements. He pointed out, just like the Plant Manager, that this caused no prejudice to the other suppliers, as five (5) bids were received and three (3) were deemed compliant.

The Inspector General thus finds that Degrémont had indeed been able to comment on the qualification specifications by proposing requirements to be included in the specifications. The sole fact of receiving a copy of the specifications before the other bidders, even if only in a preliminary form, gave it an advantage over the other three (3) potential suppliers. It was not necessary for all of Degrémont's competitors to be rejected.

Finally, the Plant Project Manager disputed the possibility that any negative inference can be drawn from the fact that he referred the potential supplier A to the Ville de Montréal website to obtain information on the Plant project. He stated that this link provided the most relevant and most recent project information. He explained that all the major ozone system suppliers had been met with in 2009, but that none had asked to perform prior testing.

First of all, no matter how complete the Ville de Montréal website may be, it can in no way be considered as offering an equivalent of Degrémont's receipt of preliminary versions of the tender documents and the opportunity to comment on them. Second, the Inspector General repeats the same statement made earlier, that it is peculiar to claim that none of the other suppliers had requested prior testing when they were perhaps unaware that such an opportunity even existed.

Furthermore, the Plant Project Manager specifically discussed Degrémont's April 10, 2009, memo on several occasions, stating that he had never told any supplier the expected results of the Request for Qualification Tender 10-11257. He added that he had never stated that Degrémont received an advantage relating to carrying out prior testing at the Plant. The Inspector General specifies that the memo is a summary, produced by Degrémont, of meetings and a Plant visit and does not state that it is a quote attributed to him.

4.4.5 Concerning Pierre-André Liechti's involvement in the Request for Qualification Tender 10-11257 process

Concerning Pierre-André Liechti's involvement in preparing the Request for Qualification Tender 10-11257, the Plant Project Manager offered the following response: *"Mr. Liechti*

played a limited role in preparing the Request for Qualification Tender. His role was to respond to technical questions asked by [the Plant Project Engineer] and myself when drafting the technical specifications of the Request for Qualification Tender.”

The Inspector General therefore finds, as with the expert specifications, that Pierre-André Liechti also participated in drafting the Request for Qualification Tender 10-11257 specifications when he was yet to be under contract with the City.

4.4.6 Concerning the refusal to disclose the pilot test results during the Call for Tenders to Supply an Ozone Unit 12-12107

The project manager wrote in his response that in his opinion all documents deemed necessary to prepare a bid for the supply of an ozone unit were provided to the bidders.

4.5 Response of the Plant Project Engineer

4.5.1 Concerning the 2005 pilot test

In his response to the Notice, the Plant Project Engineer stated that the pilot test design requirements were established by a Québec engineering firm and that the pilot test results led to the selection of ozone technology and the establishment of the required ozone dose in the tender document specification. He added that in 2007, the Plant Manager accepted Degrémont's offer to demonstrate the feasibility of ozone contact in order to evaluate the possibility of reducing the required dosage.

4.5.2 Concerning the 2007 pilot test, Degrémont's involvement, and non-disclosure of the results to the bidders

Concerning the 2007 pilot test, the Plant Project Engineer explained that the purpose of the 2007 pilot test was to confirm the results previously obtained in the 2005 pilot test. He maintained that he had always supported an open tendering process and wished that all ozone system suppliers could come to validate the ozone injection or diffusion system. In support of his statements, he cites the Tripartite Committee's final letter of November 2007, of which he was one of the signatories, which included a recommendation to this effect.

However, returning to his June 19, 2007, email in which he writes in particular that he hopes that two (2) potential suppliers will not claim the same opportunity as Degrémont to conduct pilot tests at the Plant, the Plant Project Engineer maintains that he had a “*legitimate concern*” about the feasibility of conducting a pilot test in summer 2007 if other suppliers came forward to participate in them. According to his response, his concerns mainly involved the logistics of organizing such pilot tests with several suppliers and the consequences that would have on what was already a very tight

timetable for the testing. The Plant Project Engineer concluded with an explanation that his role at the time, while important, was not to make decisions, and that he informed Plant management about the progress of the work and ensured that it met expectations.

This is therefore to say that he wished that all suppliers could perform testing, but had concerns about the feasibility of pilot testing if this were to occur. The Inspector General notes the ambiguity of his response about openness to having businesses other than Degrémont perform pilot testing in 2007, but agrees that his power to decide on this issue was limited.

Concerning the impact of Degrémont's sole participation in the pilot tests, the Plant Project Engineer conceded, in a meeting with the Office of Inspector General investigators, that the fact that Degrémont was present from the start of the pilot tests gave it an advantage. On the other hand, in his response he de-emphasizes this statement by explaining that the suppliers had the specifications that would enable them to bid in the Request for Qualification Tender 10-11257. He added that the City had received five (5) bids and that three (3) companies qualified for the Call for Tenders to Supply an Ozone Unit 12-12107.

Once again, the Inspector General recalls that the qualification of suppliers other than Degrémont at the close of the Request for Qualification Tender 10-11257 did not in fact exclude the possibility that Degrémont nevertheless received an advantage from the Plant along the way.

4.5.3 Concerning the drafting of the Request for an Expert Consultant Tender 10-11277

Concerning the preliminary version of the specifications entitled "Know-how Mandate" in June 2009, the Plant Project Engineer explained that the versions of the technical specifications were validated by his supervisor and further to numerous work meetings.

He continued stating that the exchanges with Pierre-André Liechti concerning the development of specifications took place by telephone or Skype and that he was in the presence of either the Plant Project Manager or other City engineers. The purpose of these exchanges was to validate the technical aspects of the specifications.

Consequently, the Inspector General retains from this response that he agrees that Pierre-André Liechti participated in drafting the specifications of the Request for an Expert Consultant Tender 10-11277.

4.5.4 Concerning the participation in an external technical meeting with Degrémont

Concerning the mention, in an internal Degrémont memo, of his presence at an external technical meeting held on March 19, 2009, the Plant Project Engineer stated he had no memory of such a meeting and found no invitation to it in his archives.

Considering the date on which this meeting was held, it is understandable that he no longer remembers a specific meeting. Nevertheless, the internal Degrémont memo indeed states that he attended this meeting with the company in addition to a conference held the following day.

4.5.5 Concerning the documents for the Call for Tenders to Supply an Ozone Unit 12-12107

The Plant Project Engineer specified in his response that the specifications for this call for tenders was signed by engineers from an external consulting firm and validated by an American expert in the field. The Inspector General does not dispute these facts in her investigation.

4.6 Response of the Water Department

In its response, the Water Department qualifies the facts alleged in the Notice as “*concerning*” and added that it wants to establish mechanisms to reduce the risk that this type of behaviour will reoccur in the future. It indicates that in the future similar large-scale projects will be subject to review by independent expert committees during control steps. The goal is to ensure the circulation of information, compliance with project management rules and, for major projects like this one, a technical review of some of their main aspects, if required.

Finally, the Water Department explains that it has set up a recovery plan intended to ensure the continuity of the Plant project. Among other things, two committees of independent experts have been established to review the project’s technical aspects along with a project monitoring committee consisting of three (3) directors, including the Water Department Director herself. More information on the recovery plan is provided in section 6.3 below.

5. Findings and Analysis

The facts detailed above have led the Inspector General to the following findings at the close of the investigation of the Request for an Expert Consultant Tender 10-11277, Request for Qualification Tender 10-11257, and Call for Tenders to Supply an Ozone Unit 12-12107.

5.1 Findings concerning the Request for an Expert Consultant Tender 10-11277

Two (2) main findings have emerged concerning the Request for an Expert Consultant Tender 10-11277. The first is that it was directed in favour of Pierre-André Liechti, both by his own actions and those of the Plant employees.

The second, which results from the first, is that Pierre-André Liechti failed several requirements of the tender documents, in particular those relating to participation in developing tender documents, guarantees of independence, and the prevention of conflicts of interest.

5.1.1 The Request for an Expert Consultant Tender 10-11277 was directed in favour of Pierre-André Liechti

The Inspector General finds, first of all, that the Plant employees involved in the project favoured the selection of Pierre-André Liechti in the Request for an Expert Consultant Tender 10-11277. As the overall facts demonstrate, this call for tenders was designed for Pierre-André Liechti, by both the Plant employees and Mr. Liechti himself.

5.1.1.1 The bid evaluation grid and the other requirements required of experts

The six (6) criteria for evaluating expert qualifications and their respective scoring, included in the Request for an Expert Consultant Tender 10-11277, were the following: /

- Ozone contact (25 points),
- Ozone and oxygen production (25 points),
- Dimensional analysis (10 points),
- Interface with the electrical network (10 points),
- Practical experience and pilot testing (20 points), and
- International reputation and applied research (10 points).

All these criteria correspond with fields of expertise that the Plant employees knew Pierre-André Liechti possessed, or which he himself had proposed to the Plant Project Manager and the Plant Project Engineer.

To begin with, he clearly met the “*practical experience and pilot testing*” criterion due to the Plant pilot tests he participated in 1992 and from 2005 to 2007. Similarly, Pierre-André Liechti’s international reputation has not been disputed by any of the witnesses met with during the investigation, as he is a leader in his field.

When the Office of Inspector General investigators met with him, Pierre-André Liechti stated that it was he who had proposed the requirements relating to “*ozone contact*” and the “*interface with the electrical network*.” Similarly, in his response to the Notice, the Plant Project Manager and Plant Project Engineer confirmed that the control of electrical harmonics requirements came from Pierre-André Liechti, as did the oxygen production qualification. Recall that the latter stated that at least two (2) experts would be needed to provide all of his knowledge, as in addition to his ozonation and hydraulics knowledge, he had knowledge of electrical phenomena.

Pierre-André Liechti also proposed a specification item that does not appear in the bidder evaluation grid, but is included in the specifications. He stated that he also proposed that scale-up knowledge be included in the services required of the expert consultant. Scaling up is used to demonstrate that pilot testing conducted on a small scale accurately reflects reality. The pilot test design dimensions are then analyzed to ensure that the parameters are all compliant and established at the proper scale.

In his response to the Notice, the Plant Project Manager explained that the criteria proposed by Pierre-André Liechti are requirements that an ozonation expert should have and that this did not unduly favour him. We must, however, keep in mind that it was Pierre-André Liechti himself who indicated that he had included these criteria, because he knew he was able to meet them and, on the other hand, it is possible to seek to advance one’s own selection without attempting to explicitly exclude that of other experts at the same time.

Finally, recall that Pierre-André Liechti’s influence on the tender documents was so significant that an ex-colleague from Degrémont, not involved in drafting the Request for an Expert Consultant Tender 10-11277, sent him the notice of the call for tenders, having smiled and thought of him because “*the job seems so well suited to you.*”

In short, the Inspector General finds that in collaborating with Pierre-André Liechti himself, the Plant employees drafted an evaluation grid that corresponded nearly perfectly with his professional skills, and all of this happened after months of exchanges on the subject. Moreover, in his response to the Notice, Pierre-André Liechti confirmed that he attempted to draft the specifications to his own advantage so as to favour his selection by proposing requirements that he was able to meet.

5.1.1.2 The exchanges between Plant employees and Pierre-André Liechti

The numerous exchanges between the Plant employees and Pierre-André Liechti during the development of the documents for the Request for an Expert Consultant Tender 10-11277 do indeed demonstrate that they wanted him as expert.

Starting in early June 2009, Pierre-André Liechti was identified internally as a potential expert to be included on the expert committee then being planned and he was contacted to discuss his possible involvement in the project.

At the same time, a preliminary version of the specifications produced by the Plant employees was entitled “Know-how Mandate,” which is the exact pseudonym that Pierre-André Liechti had been using as a consultant since April 2008. This same preliminary version includes a comment from the Plant Project Engineer indicating that one provision had to be changed to take into account the geographic location of Pierre-André Liechti, meaning that he resided in Switzerland and that it would be impractical to require him to travel personally to pick up a physical copy of the tender documents. On its own, such a change does not present any problem, but when considered with the facts as a whole, the Inspector General notes that it is part of a desire by the Plant employees to ensure that Pierre-André Liechti’s services would be retained.

Pierre-André Liechti also acted with City employees as if he was already the retained expert well before he was awarded his contract. For example, the emails exchanged between November 7 and 24, 2009, demonstrate not only that Pierre-André Liechti submitted the report he was preparing on the “New U-Tube” to the Plant Project Manager, but also indicate that he had modified it based on requests subsequently expressed by the Plant Project Manager.

In this respect, it is at the very least ironic to note that due to what he expresses as his desire to avoid the appearance of a conflict of interest with a potential supplier that the Plant Project Manager was in contact with this same potential supplier and suggested modifications to be made to a report on a patent that he himself had developed at the Plant for the same wastewater disinfection project following the 2007 pilot testing.

Finally, it should be noted that Pierre-André Liechti was solicited to draft the specifications for the Request for Qualification Tender 10-11257 that would also be published in June 2010. He maintains that he collaborated free of charge, not being under any contract at the time.

5.1.1.3 International reputation

Finally, the international reputation requirement also favoured Pierre-André Liechti. First and foremost, the Inspector General notes that it is legitimate to solicit bids from world-class experts. A high-technology project with such a major scope as this one obviously requires highly qualified experts to ensure that the project is carried out properly.

However, this objective does not agree with the fact that the call for tenders was only published on the SEAO and not reproduced on any other platform with an international reach. Insofar as this requirement counted for ten (10) points out of one hundred (100) in the bid evaluation, seeking an expert internationally might have further favoured free competition and the receipt of more than one bid. The desire to have an expert of an international calibre should logically be accompanied by measures intended to solicit the international market and not just Québec.

It is true that the Plant Project Manager had suggested two (2) publications to disseminate the call for tenders outside Québec. However, this never happened, and

while it was an attempt at openness by the latter, Pierre-André Liechti's exchanges just before and after the publication of the call for tenders still remain. Over a few weeks in June and July 2010, three (3) individuals, including the Plant Project Manager, contacted Pierre-André Liechti to share with him the progress of the project or point out the publication of the Request for an Expert Consultant Tender 10-11277. Thus while residing in Switzerland, Pierre-André Liechti had to be notified on three (3) occasions that a call for tenders matching his profile had been published in Québec.

Objective criteria favouring the receipt of bids from highly qualified experts for high technology projects can be included in tender documents. The Inspector General acknowledges that Pierre-André Liechti is an expert whose skills in the field of ozonization are not in dispute.

However, this in no way justifies favouring a bidder in a public call for tenders. The search for leading expertise must comply with contractual integrity and always aim to foster free competition. It is unacceptable to favour a bidder in such a manner to the detriment of process integrity, no matter what the quality of the desired resume.

5.1.2 Breaches of the tender document requirements

The Office of Inspector General's investigation demonstrates serious breaches of the Request for an Expert Consultant Tender 10-11277 documents, in particular those concerning transparency, the expert's independence, and the absence of conflicts of interest.

5.1.2.1 Participation in developing the call for tenders

In light of the findings in section 5.1.1 above, it is undeniable that Pierre-André Liechti collaborated in drafting the documents for the Request for an Expert Consultant Tender 10-11277 with the Plant Project Manager and Plant Project Engineer.

Recall that sections 5.2.1.3 and 5.2.1.4 of the Instructions to Bidders require that bidders solemnly declare they did not assist the City in developing the tender documents and undertake, if awarded the contract, not to retain the services of any individual who took part in such a process:

“5.2.1.3 Participation in developing this call for tenders within the six (6) months preceding it

In submitting its bid, the signatory solemnly declares that to its own knowledge, and after careful control,

- *Neither the bidder, nor any of its directors or its shareholders holding at least 10% of the voting shares, in the case of a corporation, or, in the case of a partnership, any partner or individual who was employed by the bidder within*

the six (6) months preceding the call for tenders, or any of its subcontractors or consultants;

- *Nor any company that is related to it or any of its directors, or any individual who was employed by the related company within the six (6) months preceding the call for tenders, or any of its subcontractors or consultants,*

Assisted the City in developing this call for tenders.

5.2.1.4 Prohibition on retaining the services of any individual who participated in developing this call for tenders

In submitting its bid, the signatory solemnly declares and undertakes that:

- *Neither the bidder, nor any of its directors or its shareholders holding at least 10% of the voting shares, in the case of a corporation, or, in the case of a partnership, any partner or any of its subcontractors or consultants;*
- *Nor any related company or any of its directors, or any of its subcontractors or consultants;*

Will hire, in the six (6) months following this call for tenders, any individual who accompanied the City in its development for any purpose whatsoever; and

If awarded the contract, the bidder further undertakes:

- *Not to retain the services of any individual who participated in developing this call for tenders to perform the contract referred to herein; and*

To ensure that its subcontractors or consultants do not retain the services of any individual who participated in developing this call for tenders to support it in performing the contract referred to herein.” (Emphasis added)

The purpose of these provisions is to prevent a bidder from receiving an advantage over potential competitors due to prior knowledge of the tender requirements as well as to prevent a bidder in such an advantageous position from attempting to influence the specifications in its favour.

However, the solicitation of Pierre-André Liechti by the Plant employees and Mr. Liechti's subsequent participation in developing the tender documents have both been abundantly established, and Mr. Liechti himself acknowledges that he thus promoted his selection.

The Inspector General therefore finds that Pierre-André Liechti's solemn declaration upon submitting his bid did not reflect reality and thus constitutes false information provided in the contract award process. Furthermore, in retaining his own services to perform the contract, Pierre-André Liechti did not comply with the solemn declaration by which the winning bidder confirms it has not retained the services of any individual who participated in developing the call for tenders.

5.1.2.2 *The expert's independence*

Second, the Inspector General considers that Pierre-André Liechti cannot be truly objective and independent in this project considering that in his bid as expert, he expressed the opinion that the “New U-Tube” was the best way to disinfect water at the Plant using the existing infrastructure, and that Degrémont’s bid in the Call for Tenders to Supply an Ozone Unit is indeed based on use of the “New U-Tube.” Here is why.

Let us first point out that according to the tender documents, the expert’s “*main obligations*” include the provision of independent and objective advice on the project:

“3.5 MAIN OBLIGATIONS AND RESPONSIBILITIES OF THE FIRM

The firm is responsible for providing independent and objective advice relating to the Project.

The firm also has the following responsibilities:

- *Be available to attend meetings*
- *Be available to participate in activities calling on the Plant's internal staff members*
- *Inform the City of any changes in its affiliations and interests relevant to the Mandate. (Emphasis added)*

Then, as mentioned in subsection 2.2.3.6, recall that Pierre-André Liechti is the main inventor of the patented “New U-Tube,” which was developed thanks to the pilot tests conducted at the Plant between 2005 and 2007. This same “New U-Tube” was the subject of the report prepared by Pierre-André Liechti in November 2009 and submitted for approval to the Plant Project Manager and Plant Project Engineer. Similarly, in the bid Pierre-André Liechti submitted in the call for tenders for an expert 10-11277, he included a document that described how the “New U-Tube” works without mentioning that he was the device’s inventor and that it was a patented solution.

However, beyond a technical proposal demonstrating the correspondence between their professional path and experiences with the Plant project, the bidders were not asked to discuss what, in their opinion, would be the most preferable solution for the Plant. Indeed, when the Office of Inspector General investigators met with Pierre-André Liechti, he acknowledged that he believed, at the time he submitted his bid, that the patent was the best way to disinfect water at the Plant if using the existing infrastructure was desired. He also adds in his technical proposal that the document in question “*presents, in a somewhat condensed manner, my way of handling this problem,*” referring to the issue of disinfection at the Montréal Plant. This means that at the time of evaluating the two bidders, Pierre-André Liechti was already convinced of the feasibility of the proposal making use of his own invention.

The Inspector General therefore finds that even before starting his expert consultancy mandate or evaluating the bids of potential suppliers in the Request for Qualification Tender 10-11257 and the Call for Tenders to Supply an Ozone Unit 12-12107, Pierre-

André Liechti was prejudiced in favour of the “New U-Tube” as a solution that could be implemented at the Plant.

But there is more. As pointed out in section 3.3.2.1, several provisions of the Request for Qualification Tender 10-11257 strongly insisted that the solutions proposed by the bidders had to be adapted to the Plant’s existing facilities. As holder of the patent for the “New U-Tube,” the solution proposed in the Degrémont bid is based on it, having already been subjected to smaller-scale testing at the Plant.

This means that as a member of the technical committee working on the Call for Tenders to Supply an Ozone Unit 12-12107, Pierre-André Liechti had to review the bid of his former employer and consulting client, when Degrémont was proposing a solution based on his own invention. In other words, if Pierre-André Liechti had to issue a negative opinion on Degrémont’s bid or report a major non-compliance therein, this would have amounted to disavowing in part the work he had done during the pilot tests and the invention he had patented several years earlier.

It is of course true that the technical committee’s analysis, based on Pierre-André Liechti’s calculations, had also found what was deemed a minor non-compliance in Degrémont’s bid. In addition, Pierre-André Liechti stated that he had received no financial compensation from Degrémont for this patent.

However, one must ask how the City could be certain under the circumstances that the expert was indeed providing the expected *“independent and objective advice.”* This is the very essence of a call for tenders for professional services, and the Inspector General is of the opinion that making an expert retained to advise Ville de Montréal examine his own invention when comparing bids from other competitors cannot be tolerated. Accordingly, she concludes that Pierre-André Liechti breached his obligation of independence.

5.1.2.3 *The conflict of interest*

Third, section 8.2.1 of the specifications indicates that the expert is deemed to be in a conflict of interest if he or she has been directly or indirectly under contract with an ozone system supplier in the six (6) months preceding the submission of their bid.

“In signing this Bid, the Bidder declares that it is not in any conflict of interest with Ville de Montréal, in particular with regard to the cases set out below.

Without limiting the generality of the foregoing, the Firm (and/or its expert) shall be deemed to be in a conflict of interest in the following cases:

8.2.1 *It is currently under Contract, directly or indirectly, with a Supplier of ozone systems, or has been in the six (6) months preceding the effective date of submitting its bid. (Emphasis added)*

The Civil Code provides that “a contract is an agreement of wills by which one or several persons obligate themselves to one or several other persons to perform a prestation.”¹⁵ This agreement of wills may take several forms, be onerous or gratuitous, and written or verbal. However, the June 16, 2010, email reproduced in subsection 3.2.6.4 demonstrates that Pierre-André Liechti provided, at the request of a Degrémont vice-president, professional technical advice on the feasibility of a method by a design calculation for a project in a city on Montréal's South Shore. In addition, Pierre-André Liechti added that *“in principle, there is nothing that opposes a new U-tube.”*

Moreover, in his email Pierre-André Liechti requested, in bold type, *“full discretion concerning myself”* and *“that my name not be mentioned outside of Degrémont in this matter.”* Although he was at this time still an independent ozone consultant and thus had no obligations toward Ville de Montréal, he had in his possession preliminary versions of the tender documents. In this respect, in the email dated November 17, 2009, and reproduced in subsection 3.2.4.8, Pierre-André Liechti wrote to the Plant Project Manager that he had *“indeed noted your comments made during our last phone call, to the effect that I must show my independence from any firm delivering ozone systems.”* In requesting Degrémont's discretion concerning this technical advice, he wished to ensure that a fact that could publicly compromise his independence from an ozone system supplier would not be disclosed. In his response to the Notice, he explained that he had done it *voluntarily and free of charge to assist a colleague,* but continued stating that *“I now recognize that this was an error on my part.”*

In short, this work constitutes a contract between Pierre-André Liechti and Degrémont in the six (6) months preceding the effective date of submitting the bid. Consequently, the Inspector General concludes that the solemn declaration he made pursuant to the above-mentioned section 8.2.1 contains false information provided as part of the contract award process.

5.2 Findings concerning the Request for Qualification Tender 10-11257

The Inspector General retains the following three (3) main findings concerning the Request for Qualification Tender 10-11257: the advantages conferred on Degrémont, mainly by the Plant employees, by allowing it to participate in drafting the tender documents, allowing it to be the sole participant in the pilot tests of 2005 to 2007, and the appearance of favouritism resulting from the non-disclosure of the pilot test results to the other bidders.

¹⁵ Section 1378, Civil Code of Québec

5.2.1 Advantage conferred on Degrémont by allowing it to participate in drafting the tender documents

To start with, the facts set out in subsection 3.3.1.1 clearly show that the Plant project microbiologist sent a preliminary version of the tender documents to Degrémont along with a wealth of internal information throughout the process of drafting the qualification tender documents. The frequency of the contacts was such that even a company employee who was not the company's usual point of contact wrote on April 7, 2009, that one had to contact "as usual" the Plant Project Microbiologist.

It is equally clear that Degrémont's comments were included by Plant employees in the tender documents as well as the final versions of these documents published on June 30, 2010.

We cannot necessarily infer from these documents that the Plant employees accepted all the requirements proposed by Degrémont, or that these requirements were devoid of meaning. As previously mentioned, both the Plant Project Engineer and Plant Project Manager pointed out in their responses to the Notice that they acted with discernment and in the interest of the City when drafting the criteria and that at the close of the Request for Qualification Tender 10-11257, three (3) bidders had successfully qualified. The Inspector General does not dispute the results of the process, but this is not the issue that led to this investigation.

Indeed, it was not required that Degrémont be the sole qualified bidder, to the exclusion of all others, to conclude that it had received an advantage. Accordingly, it is simply inconceivable and unacceptable that a bidder be allowed to access tender documents during their drafting and be able to comment on them, and also that these comments be included in the tender documents.

The Inspector General thus retains that in first forwarding preliminary versions of the tender documents and then including the comments from Degrémont, the Plant allowed this company to participate in drafting the Request for Qualification Tender 10-11257, thereby giving it an advantage in preparing its bid.

5.2.2 Advantage conferred on Degrémont by allowing it to be the sole participant in the 2005 to 2007 pilot tests

The second finding is that in allowing Degrémont to conduct, on its own, the 2005 to 2007 pilot tests, the Plant conferred an advantage on the company when it was preparing its bid for the Request for Qualification Tender 10-11257.

Whether they are described as a psychological advantage as Pierre-André Liechti does, or one accepts Degrémont's suggestion in its response to the Notice that they constitute a simple "*legitimate competitive advantage*," the 2005 to 2007 pilot tests were an opportunity for Degrémont to test out a solution in the Plant's special conditions and environment.

Moreover, recall that as demonstrated in subsection 3.3.2.1, the Request for Qualification Tender 10-11257 documents placed great importance on the Plant's own knowledge of the situation and proposing a solution that could be adapted to the Plant's existing facilities.

These requirements are not, of course, without foundation in and of themselves. On the contrary, it is normal and prudent to require bidders to make such a demonstration. However, in inviting just one business to conduct testing on site, albeit at a smaller scale and not specifically using the Plant outfall, the Plant gave Degrémont a competitive edge that consequently was not limited to proposing a theoretical concept.

What is more, it is at the very least peculiar that the Plant Manager and project manager turned to the fact that no other potential supplier had asked to conduct pilot tests, even though the Decision Summaries presented to elected officials after the 2007 pilot testing indicate that all ozone system suppliers would be allowed to validate the performance of any proposed injection systems.

In short, while the situation once again depended on decisions made by the Plant, the fact still remains, in the opinion of the Inspector General, that an advantage had been conferred on Degrémont by allowing it alone to conduct the 2005 to 2007 pilot tests.

5.2.3 The appearance of favouritism resulting from the non-disclosure of the 2005 to 2007 pilot test results to the other bidders

The Inspector General's third and last finding regarding the Request for Qualification Tender 10-11257 concerns the Plant's refusal to disclose the results of the 2005 to 2007 pilot tests to the other bidders.

This non-disclosure reveals a lack of transparency toward the other bidders, all the more so given that the Office of Inspector General's investigation found no document in support of the "*confidentiality reasons*" invoked by the Plant in response to the request to share the results of the pilot tests in Addendum 8. In its response to the Notice, Degrémont also confirmed that it was unable to trace any signed confidentiality agreement.

Paradoxically, at the later stage of the question and answer exchanges in the Call for Tenders to Supply an Ozone Unit 12-12107, it was no longer on the basis of confidentiality that the Plant would again refuse the disclosure requested by a bidder. This time it was because, according to the Plant, this information provided nothing that would facilitate the design of the ozone system.

The Inspector General therefore considers the non-disclosure of the 2005 to 2007 pilot test results to be part of an apparent advantage in favour of Degrémont, which had exclusive possession of them.

5.3 Findings concerning the Call for Tenders to Supply an Ozone Unit 12-12107

The Inspector General retains two (2) main findings concerning the Call for Tenders to Supply an Ozone Unit 12-12107: the questions raised by Pierre-André Liechti's lack of independence in his role as a consultant in evaluating Degrémont's bid, and the appearance of favouritism resulting from multiple refusals by the Plant to disclose the results of pilot testing.

5.3.1 *Pierre-André Liechti's lack of independence*

The Inspector General finds that the evaluation of bidders in the Call for Tenders to Supply an Ozone Unit 12-12107 was largely dependent on Pierre-André Liechti's expertise given the complexity of the proposed solutions. The testimonies show that the Plant project team did not possess the advanced skills needed to validate and verify Pierre-André Liechti's highly complex quantitative analyses. The Inspector General therefore finds that Pierre-André Liechti played a preponderant role with regard to the other team members and that his calculations were decisive in evaluating the bidders' compliance.

However, none of the information obtained in the course of the investigation leads us to conclude that the highly complex analyses conducted by Pierre-André Liechti during the technical committee work was incorrect or false. It should be recalled that the purpose of the investigation was not to conduct a second technical or scientific assessment, but to ensure the integrity of the public contract award and performance process. There is no question that the Plant project uses complex technology mastered only by high-level scientists and engineers.

Nevertheless, due to the preponderant role played by Pierre-André Liechti in the Call for Tenders to Supply an Ozone Unit 12-12107, there remains a doubt concerning the contract award process. His knowledge and skill are not in question, but the facts that he is not the independent expert sought for this contract and that he invented the "New U-Tube" raise questions about the objectivity and independence of his analysis of the Degrémont bid.

5.3.2 *The appearance of favouritism resulting from the responses to the bidders*

During the formal question and answer exchanges with the bidders, especially those of February 2014, a significant number of questions were raised about the forwarding of information and results about the previously conducted pilot tests held by the Plant. Just like in 2010, this request was refused, but this time for a different reason. It was no longer the confidentiality of the desired information that was invoked; it was rather its irrelevance, as the Plant deemed that it offered nothing that would facilitate the ozone system design.

But if the Plant now considered the information irrelevant rather than confidential, why not demonstrate the greatest transparency by sharing it with the bidders so that they could evaluate its usefulness themselves?

The February 2014 question and answer exchanges also included a surprising and very specific question on the relationship that the Plant may have had with one of the bidders. The Plant was specifically asked to certify that it had not had contact with any bidder or its representative outside of the contractual process that was underway or, failing that, to disclose any discussions, studies or consultations that may have taken place. The Plant avoided answering the question and stuck to the statement according to which there had been compliance with the law and contract management policy.

The closed attitude again shown here by the Plant toward bidders other than Degrémont can only support the appearance of favouritism toward the latter by the Plant employees, conduct which the Inspector General deplores.

6. Conclusions and Recommendations

6.1 The contract resulting from the Request for an Expert Consultant Tender 10-11277 must be rescinded

Section 57.1.10 of the Charter sets out two (2) cumulative criteria allowing the Inspector General to intervene to rescind a contract awarded by the City:

1. She must find a breach of one of the call for tender or contract document requirements, or that some of the information provided as part of the contract-awarding process is false;
2. She must be of the opinion that the seriousness of the breach observed justifies rescinding the contract.

In the case at hand, the Inspector General found in the investigation a breach of a requirement in the expert consultancy contract and the transmission of two (2) items of false information by Pierre-André Liechti as part of the contract award process.

To begin with, Pierre-André Liechti's solemn declaration made when submitting his bid, to the effect that he did not participate in developing the Request for an Expert Consultant Tender 10-11277 documents, is clearly false. A similar finding emerges regarding his declaration that there was no conflict of interest with any potential supplier of ozone systems when he provided his professional advice to Degrémont less than two (2) weeks before the publication of the Request for an Expert Consultant Tender 10-11277.

Pierre-André Liechti then breached his obligation of independence, in particular by reviewing the Degrémont bid based on his own patent and regarding which he demonstrated that he was prejudiced in favour of his own bid for expert services.

The Inspector General is of the opinion that the seriousness of these breaches has been established beyond a shadow of a doubt. The very essence of a request for an expert consultant as part of project involving the complexity of ozone disinfection is to acquire the certainty that one can rely on the retained expert's advice without fear. The point here is not to question the validity or accuracy of the extremely complex calculations previously carried out by Pierre-André Liechti, but rather to recognize that his actions, revealed by the present investigation, foster a lingering doubt as to how far he can be trusted.

For these reasons, the Inspector General concludes that the conditions set out in section 57.1.10 of the *Charter of Ville de Montréal, metropolis of Québec* have been met and the Expert Consultant Contract 10-11277 must be rescinded.

In addition, the Inspector General strongly denounces the conduct of the Plant employees assigned to the project. Their actions demonstrate a clear will to favour Pierre-André Liechti and demonstrate gross disregard in applying the rules for awarding public contracts in the Request for an Expert Consultant Tender 10-11277.

6.2 Several breaches of integrity in the Request for Qualification Tender 10-11257 process

One fundamental point must be noted at the outset: The Request for Qualification Tender 10-11257 was but a preliminary step in the process to award the Call for Tenders to Supply an Ozone Unit 12-12107. Accordingly, there is no further tender or contract process in which the Inspector General may intervene under section 57.1.10 of the *Charter of Ville de Montréal, metropolis of Québec*.

However, this finding cannot justify ignoring the seriousness of the breaches of conduct of the employees assigned to the Plant project. Admittedly, it should be noted that Degrémont readily took advantage of the Plant employees' largesse, but we simply cannot tolerate the latter allowing the potential bidder the opportunity to read and comment on draft versions of the tender documents, and agreeing to modify the documents accordingly even less so.

Moreover, while all the decision-making files produced following the 2007 pilot tests appeared to indicate to elected officials that all suppliers could validate the performances of any injection systems to be proposed, this was never the case. The Inspector General deplores the fact that these same Plant representatives did not act with full transparency at the very least in providing the bidders with the data and results from the 2005 to 2007 pilot tests.

In short, the fact that the tender process did not favour Degrémont to the exclusion of any other supplier and led to the qualification of three (3) bidders in no way excuses the unacceptable carelessness shown by the Plant employees concerning the integrity of the rules for awarding public contracts.

6.3 *The recovery plan presented by senior City management*

When the Office of Inspector General's investigation revealed certain preliminary findings, the wastewater ozone disinfection project was well underway and considerable amounts of money had already been invested in it.

In the case of contract 12-12107, the work entrusted to Degrémont was eighty per cent (80%) completed. In addition to this work, several other contracts relating to the supply of an ozone system, including for the construction of an electrical substation, equipment installation buildings and related services, had been awarded to other suppliers and are also underway. The total value of these contracts is nearly five hundred million dollars (\$500 million), of which one hundred sixty-five million dollars (\$165 million) have already been invested.

The Inspector General therefore met with senior City management to enquire about the impacts of these preliminary findings on the continuation of the wastewater disinfection project. She was eventually informed that the Comptroller General had been asked to develop supervisory and recovery measures with the Water Department.

In its response to the Notice, the City confirmed to the Inspector General the implementation of a recovery plan and assured her that the project was still viable. At this time she also learned that preventive measures had already been implemented by senior Water Department management, including the close of the work order resulting from the Request for Qualification Tender 10-11257 awarded to Pierre-André Liechti. Note that this procedure prevents the payment of additional funds to the co-contractor, without constituting a formal rescission of its contract.

It was confirmed to the Inspector General that the recovery plan was developed with the Comptroller General of Ville de Montréal.

To begin with, in order to dispel any uncertainties created by Pierre-André Liechti's involvement up to this point and eliminate the risk of subordination to the expertise of his co-contractor Degrémont in such a highly specialized field as ozonation, the City has indicated that it is seeking the services of new independent experts. They will be asked to review the technical aspects of the project in two separate committees:

- The first committee consists of four (4) different experts and is dedicated to the ozonation process for treating wastewater;
- The second committee also has four (4) members, who do not sit on the first, and is dedicated to advising the City on hydrodynamics (gas and liquid mixtures).

The mandate of these committees is to review the project's main technical aspects and advise the City accordingly.

Then, with a view to tightening governance and accountability rules, measures have been announced that will strengthen the control and monitoring of the ozonation project

by senior City management with the assistance of the Comptroller General. The main recovery plan guidelines are the following:

- Create a new project manager position dedicated to managing the commissioning of the ozone disinfection system;
- Adopt and establish a governance structure inspired by practices in managing projects that are comparable in scope;
- Establish a director's committee including at least the Water Department Director, the director of the wastewater treatment branch and the project manager;
- Review, by the directors' committee, on a statutory basis, of the progress of contract work, monitoring of deadlines, and continuous risk management; and
- Assign a lawyer specializing in contract management to the project.

The Comptroller General has been mandated to monitor the work progress and ozonation project budget at the Plant and must report to City Executive Management.

Senior Water Department management has also indicated that it wants to take measures to prevent the situation revealed by the Office of Inspector General's investigation from reoccurring. With the goal of decompartmentalizing the control of information on such large-scale projects and ensuring compliance with project contract management rules, Water Department management plans to call on a committee of independent external experts, from other Water Department branches, to conduct technical reviews during steps to control the progress of such important projects.

It should also be noted that apart from the Plant's deceased project microbiologist, the other Plant employees investigated by the Office of Inspector General—the Plant Manager, the project manager and the project engineer—are now retired.

6.4 The Contract to Supply an Ozone Unit 12-12107 must be subject to strict supervision and constant monitoring

After the close of the investigation and an in-depth analysis of each of the elements that emerged, one finding regarding the Call for Tenders to Supply an Ozone Unit 12-12107 is apparent. The Inspector General's investigation did not identify, on the part of Degrémont, any failure to comply with the specific provisions of the tender documents as such.

This is not to say that the Call for Tenders to Supply an Ozone Unit 12-12107 was not itself affected by breaches of integrity. They were, however, caused by other actors. On the one hand, the withholding of information on the 2005 to 2007 pilot tests and Degrémont's involvement in them is the work of the City. On the other, the repercussions of the questioning about Pierre-André Liechti's independence in his role as expert consultant are attributed to him.

While the facts preceding the award of the Contract for the Supply of an Ozone Unit 12-12107 revealed by the investigation raise questions likely to have an impact on the relationship of trust with Degrémont, they do not as such constitute breaches of the tender document requirements and the Inspector General therefore cannot directly intervene under section 57.1.10 of the *Charter of Ville de Montréal*.

When all is said and done, the Inspector General says she is deeply concerned by the picture that has emerged from all the facts brought to light and is of the opinion that failing certainty as to the solidity of this relationship of trust, the company must at the very least be subject to strict monitoring. Accordingly, development of the capacity by internal City teams to verify compliance with contractual requirements is essential. The preservation of the integrity of contractual performance and the sound management of public funds, in particular those invested in the numerous contracts related to the project and awarded to other contractors, are at stake.

As such, the Inspector General takes note of the recovery plan submitted to her by the City. It shows a clear desire by senior City management to regain control of the project and make the necessary change of course.

However, the Inspector General reiterates that a rigorous and continuous application of the measures set out in the recovery plan is necessary and to this end she will thoroughly verify their implementation.

FOR THESE REASONS,

The Inspector General

RESCINDS the professional services contract for technical ozonation expertise relating to the ozone wastewater disinfection project at the Jean-R.-Marcotte wastewater treatment plant awarded to Pierre-André Liechti, following the Call for Tenders 10-11277, by the Agglomeration Council of Ville de Montréal on October 28, 2010, by virtue of resolution CG10 0362.

RECOMMENDS that Ville de Montréal adopt strict control measures and monitor, on a sustained and continuous basis, the performance of the contract resulting from the Call for Tenders 12-12107, particularly in implementing its recovery plan.



TRANSMITS a copy of this decision to the Mayor and the City Clerk for forwarding to the City Councils concerned, pursuant to section 57.1.10 of the Charter of Ville de Montréal.

TRANSMITS the relevant information gathered to the Autorité des marchés publics with regard to their mandate pursuant to Chapter V.2 of the Act Respecting Contracting by Public Bodies, pursuant to section 57.1.18 of the Charter of Ville de Montréal.

The Inspector General,

Ms. Brigitte Bishop

ORIGINAL SIGNED

ANNEXE – CHRONOLOGIE SOMMAIRE DES ÉVÈNEMENTS

Historique du projet

Juillet à septembre 2005 : 1er pilote à l'ozone, auquel prennent part Degrémont et Pierre-André Liechti.

8 septembre 2006 : Dépôt d'une demande de brevet par Degrémont pour le « Nouveau Tube en U », duquel Pierre-André Liechti est le co-inventeur.

Septembre à octobre 2007 : 3e pilote à l'ozone, auquel prennent part Degrémont et Pierre-André Liechti.

9 novembre 2007 : Le Comité tripartite clôt son mandat en recommandant la désinfection à l'ozone pour la Station. Bien que le Comité souligne qu'il est nécessaire de permettre à tous les fournisseurs de tester leur système d'ozone, de tels tests n'auront jamais lieu.

Processus contractuel menant à l'appel d'offres d'expert 10-11277

Mars 2008 : Pierre-André Liechti prend sa retraite de Degrémont et devient consultant pour l'entreprise jusqu'en décembre 2009. Il offre également ses conseils professionnels à Degrémont le 16 juin 2010.

20 février 2009 : Échange entre le directeur de la Station et Pierre-André Liechti au cours duquel il est indiqué qu'ils auront à discuter de la participation de ce dernier au projet de la Station.

Décembre 2001 : Le Comité tripartite décide de retenir deux modes de désinfection pour réaliser des pilotes, soit l'ozone et l'irradiation ultraviolet.

Août à octobre 2006 : 2e pilote à l'ozone, auquel prennent part Degrémont et Pierre-André Liechti.

6 juin 2007 : Courriel interne de Degrémont dans lequel il est question du fait que la Station leur demande de financer la réalisation d'un 3^e pilote en 2007 et les presse de confirmer leur intérêt à cet effet. En contrepartie, la Station les « assure de son soutien dans les phases ultérieures ».

Processus contractuel menant à l'appel d'offres de qualification 10-11257

3 novembre 2008 : L'ingénieur d'application de Degrémont informe des cadres de l'entreprise que le microbiologiste affecté au projet de la Station demande de « fournir toutes informations [sur les paramètres à retenir pour évaluer la performance] susceptibles de donner un avantage à Degrémont pour les essais pilotes de l'année prochaine ». [Essais qui ne se seront pas réalisés]

5 février 2009 : L'ingénieur d'application de Degrémont informe des cadres de l'entreprise que le devis de préqualification est presque terminé d'être rédigé et que le microbiologiste affecté au projet de la Station suggère une rencontre pour en discuter.

11 février 2009 : à partir de son adresse courriel personnelle, l'ingénieur d'application de Degrémont retourne une copie annotée des documents de l'appel d'offres à l'adresse courriel personnelle du microbiologiste affecté au projet de la Station qui à son tour les transférera au chef de projet et à l'ingénieur affecté au projet de la Station. Les documents joints comprennent tous « [...]a_Revision DGT » dans leur intitulé. Le lendemain, l'ingénieur d'application de Degrémont informe des cadres de l'entreprise des démarches de la veille.

18 mars 2009 : Selon une note interne de Degrémont, Pierre-André Liechti est inscrit comme participant à une réunion technique interne de l'entreprise portant spécifiquement sur le projet de désinfection à l'ozone de la Station.

19 mars 2009 : Selon une note interne de Degrémont, Pierre-André Liechti est inscrit comme participant à une réunion technique externe portant spécifiquement sur le projet de désinfection à l'ozone de la Station et à laquelle prennent part notamment des employés de la Station et de Degrémont.

5 juin 2009 : Le financement du projet de la Station ayant été approuvé, le chef de projet sollicite Pierre-André Liechti pour discuter avec lui de son implication à titre d'expert-conseil.

11-22 juin 2009 : L'ingénieur affecté au projet de la Station et le chef de projet s'échangent des copies des documents de l'appel d'offres d'expert dont l'intitulé « Mandat KNOWHOW.doc » reprend le pseudonyme utilisé par Pierre-André Liechti comme consultant. Le chef de projet demande également de modifier un paragraphe de l'appel d'offres pour tenir compte de l'éloignement géographique de Pierre-André Liechti.

30 juin-6 juillet 2009 : Après que le chef de projet de la Station ait sollicité une rencontre téléphonique avec Pierre-André Liechti puisque ses « commentaires aideront à définir l'envergure et les activités associées au mandat », le chef de projet lui fait parvenir une copie des documents de l'appel d'offres d'expert. Quelques jours plus tard, Pierre-André Liechti fournit ses commentaires, de même que son curriculum vitae, sans que cela n'ait été demandé.

20 juillet 2009 : Pierre-André Liechti envoie un autre courriel au chef de projet dans lequel il résume les exigences du mandat, dont le temps de travail requis, tout en demandant des précisions quant aux prescriptions en termes d'exclusivité et de confidentialité.

23 février 2009 : L'ingénieur affecté au projet de la Station informe ses collègues, le chef de projet et le microbiologiste qu'il a intégré les commentaires transmis le 11 février 2009. Plutôt que « [...]a_Revision DGT », l'intitulé des documents a été remplacé par « [...]b ».

20 mars 2009 : Selon une note interne de Degrémont, ils ont effectué une visite de la Station au cours de laquelle ils ont appris certaines informations, dont le taux de concentration d'ozone annoncé par la compétition et la séquence des appels d'offres à venir. La note indique que « tous bénéficieront du même niveau d'information que Degrémont. Degrémont bénéficie d'un avantage certain lié à la réalisation

7 avril 2009 : L'ingénieur d'application de Degrémont relate à plusieurs employés et cadres de l'entreprise une nouvelle conversation qu'il a eue avec le microbiologiste affecté au projet de la Station. Ce dernier l'a informé de certaines spécifications techniques mises de l'avant par des compétiteurs lors d'une visite de la Station et lui a dit qu'il aurait besoin de certaines informations « pour intervenir en notre faveur à l'interne ». Un autre employé de Degrémont écrit qu'ils construisent un argumentaire fort et étayé et qu'il faudra communiquer « comme d'hab » avec le microbiologiste affecté au projet de la Station.

29 avril 2009 : L'ingénieur d'application de Degrémont informe des cadres de l'entreprise d'une conversation récente qu'il a eue avec le microbiologiste affecté au projet de la Station, au cours de laquelle ce dernier a sollicité l'aide de Degrémont pour définir « les paramètres et méthodes de mesure de la performance des ozoneurs ». Une autre rencontre est planifiée.

11 mai 2009 : En prévision de cette rencontre avec le microbiologiste affecté au projet de la Station, l'ingénieur d'application de Degrémont sollicite des cadres de l'entreprise pour définir des paramètres de performance à inclure dans l'appel d'offres de qualification. Un des paramètres discutés dans le courriel interne de Degrémont se retrouvera dans les documents d'appel d'offres.

7-24 novembre 2009 : Alors qu'il n'est pas sous contrat avec la Ville, Pierre-André Liechti demande au chef de projet de la Station son approbation au sujet d'un exposé traitant du brevet du « Nouveau Tube en U ». Celui-ci l'avise que « *nous demeurons concernés par toute apparence de conflits d'intérêts entre la Ville de Montréal et un fournisseur potentiel qui pourraient affecter la bonne conduite du projet de désinfection* » et lui suggère de ne pas « *faire référence directement à la Ville de Montréal* ». Pierre-André Liechti écrit qu'il apportera les changements demandés et demande si son « *éventuelle fonction comme expert* » demeure d'actualité.

2 juin 2010 : Échanges courriel entre le chef de projet et Pierre André Liechti pour mettre ce dernier au courant des « *dernières nouvelles concernant le projet* ».

16-17 juin 2010 : En réponse au vice-président de Degrémont qui demande son avis à Pierre-André Liechti sur un projet dans une ville sur la Rive-Sud de Montréal, ce dernier offre ses conseils professionnels, mais demande « *toute discrétion* » et que son « *nom ne soit pas mentionné en dehors de Degrémont pour cette affaire* ».

30 juin 2010 : Publication de l'appel d'offres d'expert 10-11277.

2 juillet 2010 : Un ex-collègue de Degrémont transmet l'avis d'appel d'offres d'expert 10-11277 à Pierre-André Liechti, estimant que le mandat semble lui « *coller assez bien* ».

11 août 2010 : Date limite de réception des soumissions pour l'appel d'offres d'expert 10-11277.

28 octobre 2010 : Octroi du contrat d'expert à Pierre-André Liechti.

20 novembre 2012 : Brevet délivré à l'international pour le « Nouveau Tube en U »

30 juin 2010 : Publication de l'appel d'offres de qualification 10-11257.

10 septembre 2010 : En réponse à une question reçue des soumissionnaires, la Ville refuse de « *divulguer les résultats des études et des essais réalisés antérieurement par la Ville dans le cadre du projet de désinfection* » en invoquant leur

13 octobre 2010 : Date limite de dépôt des soumissions pour l'appel d'offres de qualification 10-

3 août 2011 : Résultat des délibérations du comité de sélection au terme desquelles trois (3) soumissionnaires sont qualifiés pour la prochaine étape.

Processus contractuel menant à l'appel d'offres de fourniture d'unité d'ozonation 12-12107

22 juillet 2013 : Publication de l'appel d'offres de fourniture d'unité d'ozonation 12-12107.

10 février 2014 : En réponse à trois autres questions reçues des soumissionnaires au même effet, la Ville refuse une 2^e fois de publier les résultats des pilotes de 2005 à 2007 réalisés par Degremont et refuse de répondre à une question au sujet de sa relation antérieure avec un soumissionnaire, en écrivant que l'appel d'offres respecte les diverses exigences légales.

6 février 2014 : En réponse à une question reçue des soumissionnaires demandant la divulgation des résultats des pilotes réalisés antérieurement, la Ville refuse une 1^{ère} fois, les jugeant inutiles pour la conception du système.

16 janvier 2015 : Rapport final du comité technique sur la conformité des soumissions reçues.

26 mars 2015 : Octroi du contrat de fourniture d'unité d'ozonation à Degremont.