



## **STAFF REPORT ACTION REQUIRED**

### **Ashbridges Bay Treatment Plant Pelletizer Facility – Proposed Contract Amendments**

<b>Date:</b>	May 20, 2009
<b>To:</b>	Public Works and Infrastructure Committee
<b>From:</b>	General Manager of Toronto Water
<b>Wards:</b>	All Wards
<b>Reference Number:</b>	P:\2009\Cluster B\TW\pw09019

#### **SUMMARY**

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The purpose of this report is to seek Council approval and authority to enter into and execute any necessary amending agreement(s) with Veolia Water Canada, Inc. on the terms and conditions outlined in this report. The full time operation of the Pelletizer Facility located at the Ashbridges Bay Treatment Plant (the “ABTP”) has been hindered by recent developments detailed in this report.

Secondary Testing of the Pelletizer Facility was completed on December 19, 2008. The results indicate that the facility does not at this time process the 25,000 dry tonnes per year of pellets that is required under the City’s Services Agreement with Veolia for the design and construction of the Pelletizer Facility.

The Pelletizer Facility is now in production and, despite several equipment malfunctions, appears capable of processing biosolids at a rate of between 15,000 and 18,000 dry tonnes per year. Toronto Water has put in place alternative plans to beneficially use and/or dispose of the biosolids that the Pelletizer Facility is unable to process.

Toronto Water has been in negotiations with Veolia to amend certain business terms within the Services Agreement for the design and construction of the Pelletizer Facility and the Operations, Maintenance and Pellet Marketing Agreement (the “OM&M Agreement”). Negotiations have produced tentative agreement amendments, subject to Council approval, to allow for the full time operation of the facility to commence on a reduced production rate basis under the OM&M Agreement.

## **RECOMMENDATIONS**

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1. The General Manager, Toronto Water be authorized to finalize negotiations with, enter into and execute any necessary amending agreement(s) with Veolia Water Canada, Inc. (“Veolia”), on terms and conditions based on the Term Sheet outlined in Attachment 1 of this report and otherwise on terms and conditions satisfactory to the General Manager, Toronto Water and in a form satisfactory to the City Solicitor in relation to the following agreements between the parties:
  - a. The Operation, Maintenance and Pellet Marketing Services Agreement made on September 27, 2007 (the “OM&M Agreement”);
  - b. The Services Agreement for the design and construction of the Pelletizer Facility located at the Ashbridges Bay Treatment Plant (the “Services Agreement”); and/or,
  - c. The Amendment to the Services Agreement effective August 21, 2003 (the “Amendment”).
2. Subject to the adoption of Recommendation 1, Council authorize the General Manager, Toronto Water to pay a Per Tonne Price amount, as defined in the OM&M Agreement, for the pellet production generated by Veolia at the Pelletizer Facility for the period commencing December 20, 2008 and ending on the effective date of the amending agreement(s) cited in Recommendation 1.
3. Subject to the adoption of Recommendation 2, Council authorize the General Manager, Toronto Water to enter into and execute a Letter Amendment to the OM&M Agreement with Veolia, if necessary, to give effect to Recommendation 2 on terms and conditions satisfactory to him and in a form satisfactory to the City Solicitor.

### **Implementation Points**

In the event Council adopts Recommendation 1 above, the City Solicitor will retain, on a sole source basis, the services of external legal counsel to assist in the final negotiations and preparation of the necessary amending agreement(s), within the financial limits of her delegated authority.

During the time period required to finalize negotiations, prepare and execute the necessary amending agreement(s), it is recommended that the Pelletizer Facility remain in the commissioning phase, as that term is defined under the Services Agreement, so to allow for the processing of the City’s biosolids from the ABTP into pellets by Veolia. Since there is no current mechanism in the existing agreements with Veolia to allow for payment to it, as explained later in this report, it is proposed that Veolia be paid by the City for the pellets produced on the basis of the Per Tonne Price, as defined in the OM&M Agreement.

### **Financial Impact**

The financial implications of this report on the ABTP operating costs will depend on the cost of alternate arrangements that the City will have to put in place to beneficially use

and/or dispose of the biosolids that otherwise would have been processed by the Pelletizer Facility. However, at present, there are no anticipated financial impacts as operating budgets for the ABTP facility contain sufficient funds for the beneficial use and/or disposal of biosolids through any combination of the City's existing service providers. Within the budget for biosolids beneficial use and/or disposal, cost savings from lower Pelletizer Facility operating costs will be applied to the additional cost of utilizing other service providers.

If additional funds over and above the approved amounts are required, this can be accommodated from the 2009 Toronto Water operating budget in Cost Centre WW100 (Wastewater Treatment) and will be made available in the 2010 Toronto Water operating budget under the same account. This Cost Centre will also be used to pay for external legal services required to prepare the Amending Agreement.

The proposed amendments to the Services Agreement will ensure a savings to the City of \$799,932. These funds will remain in the capital program and become available for re-allocation within the Toronto Water capital program.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

In March 1999, City Council authorized the negotiation and execution of the Services Agreement with USF Canada Inc. (now known as Veolia) for the design, construction and commissioning of the Pelletizer Facility capable of processing 25,000 dry tonnes of biosolids per year. Authority was also given to negotiate and sign a 15 year marketing agreement with USF Canada Inc. to transport, store and market the biosolids pellets to be generated by the Pelletizer Facility. Based on the negotiations, it was intended by the parties that, upon final commissioning of the Pelletizer Facility, City staff would be responsible for the daily operation and maintenance of the Pelletizer Facility.

<http://www.toronto.ca/legdocs/1999/minutes/council/cc990302.htm>

At its May 21, 22 and 23, 2003 meeting, City Council authorized staff to enter into an agreement with USF Canada Inc. for a five-year term to transport, store and market up to 32,500 dry tonnes of biosolids pellets from the Ashbridges Bay Treatment Plant.

<http://www.toronto.ca/legdocs/2003/agendas/council/cc030521/wks4rpt/cl002.pdf>

On August 21, 2003, prior to the finalization and execution of the marketing agreement, and before the City's acceptance of the Pelletizer Facility, a fire severely damaged the Pelletizer Facility. As a result, a marketing agreement between the City and USF Canada Inc. was never entered into at that time.

As a result of the fire, at its July 20, 21 and 22, 2004 meeting, City Council authorized staff to begin the negotiation of a claim settlement agreement between the City and Factory Mutual Insurance Company ("FM Global") arising from the fire at the Pelletizer Facility and to further negotiate a rebuild agreement of the Pelletizer Facility with Veolia.

At its meeting on February 1, 2 and 3, 2005, City Council granted authority to enter into negotiated agreements with FM Global for the claim settlement and with Veolia to allow the rebuilding of the Pelletizer Facility to its condition the day before the August 2003 fire with the addition of several enhancements to the Pelletizer Facility as requested by the City.

Authorization was also given to allow staff to begin negotiations with Veolia regarding a 20 year operations, maintenance and marketing agreement, and to report back to the Works Committee with the proposed final terms and conditions once negotiated, for final approval by City Council.

<http://www.toronto.ca/legdocs/2005/minutes/council/cc050201.pdf>

At its meeting of July 16, 17, 18 and 19 2007, City Council authorized the finalization and execution of the OM &M Agreement with Veolia whereby Veolia agreed to provide all the staff and resources necessary to process and market 25,000 dry tonnes per year of biosolids generated at the ABTP.

<http://www.toronto.ca/legdocs/mmis/2007/pw/reports/2007-06-27-pw07-cr.pdf>

## **ISSUE BACKGROUND**

Veolia began the design and construction of the Pelletizer Facility in 1999. On August 21, 2003, a fire severely damaged the Pelletizer Facility. The fire occurred during the final testing and commissioning of the Pelletizer Facility; however, successful Secondary Testing had not yet been achieved at the time.

Following the fire, and after completing various structural and mechanical inspections and receiving the necessary Council authority, the City entered into settlement agreements with FM Global and Veolia to rebuild the Pelletizer Facility to its condition the day before the fire. The rebuild agreement with Veolia took the form of the Amendment and authorized Veolia to complete all remediation work required to commission the Pelletizer Facility, at no additional expense to the City beyond those amounts owed to Veolia prior to the fire. The Amendment with Veolia was executed based on the following:

- The rebuild would be funded by the insurer (FM Global);
- The City would pay outstanding invoices and change orders associated with the original design build Service Agreement;
- The City and Veolia would enter into best efforts negotiation for a 10 year (plus 10 year option) Operation, Maintenance and Marketing agreement; and
- A set of enhancements (the “Enhancements”) would be made to the facility totalling approximately \$3 million. The Enhancements provide additional operating flexibility, upgrade fire safety systems, improve working conditions and enhance quality control of final pellet size specifications.

The rebuild of the Pelletizer Facility began during the summer of 2005.

At the time the OM&M agreement was entered into, it was anticipated that final commissioning was near complete and Secondary Testing of the Pelletizer Facility (continuous operation of the Pelletizer Facility for a period of 66 days) was imminent. However, Secondary Testing was subsequently delayed by a number of equipment malfunctions and facility performance issues. During commissioning, the Pelletizer Facility was operated at between one third and two thirds capacity and the pellets produced were marketed by Veolia. Secondary Testing commenced on October 7, 2008 and ended, without successful completion, on December 19, 2008.

## **COMMENTS**

### **Secondary Testing**

Under the Services Agreement and the Amendment, Veolia is required to successfully complete Secondary Testing. In the event that Veolia does not successfully complete Secondary Testing as required in the Services Agreement and the Amendment, under the OM&M Agreement, the City has the right, in its sole discretion, to terminate the OM&M Agreement.

Veolia commenced Secondary Testing on October 7, 2008 but failed to achieve successful completion of Secondary Testing. In fact, Veolia ceased all efforts to achieve successful completion of Secondary Testing on December 19, 2008 and has advised the City that any further attempts, at this time, to do so would be futile.

The difficulty in achieving successful completion of Secondary Testing appears to lie in the Pelletizer Facility's inability to meet the throughput requirements under the Services Agreement and the Amendment.

In addition, the City's consultant (the "Consultant") has reported on the performance of the Pelletizer Facility during Secondary Testing and concluded that the Pelletizer Facility does not currently meet all the requirements of the Services Agreement and the Amendment. The Consultant noted the following:

- The Pelletizer Facility is not able to achieve the specified average and peak production rates;
- There were a number of equipment malfunctions during Secondary Testing that indicate potential difficulty in achieving a reasonable degree of reliability;
- Odour and noise issues were reported; and
- Each of the two dryers fall short of the required production rate by approximately 30%. Preliminary assessment indicates the Pelletizer Facility is likely capable of producing between 15,000 and 18,500 dry tonnes of pellets per year.

The Pelletizer Facility was shut down by Veolia on December 19, 2008 and was restarted on February 9, 2009 after Veolia completed some repairs. Various equipment issues continue to cause temporary shutdowns, each of which has been dealt with by Veolia.

### **Other Incidents**

Outside of the Secondary Testing period, three incidents occurred during the past 16 months necessitating prolonged shut down of the Pelletizer Facility and repair of related equipment. The details of these incidents, as provided by Veolia to City staff, are as follows:

- On December 4, 2007, a mechanical failure in the conveying system (bucket elevator) led to an abnormal shutdown of Dryer Train 'A' and subsequent high temperatures in the system due to pellet re-heating. The Fire Department was called to spray water down the stack and air exhaust duct to cool the Dryer Train. Veolia repaired the damaged area and subsequently made equipment modifications to mitigate the risk of a reoccurrence.
- On April 3, 2008, internal combustion and over pressurization occurred in Dryer Train 'A' which caused a sealed hatch door to be blown open. Veolia retained the services of a forensic engineering company to assess the incident and develop recommendations to protect against a further reoccurrence. Veolia implemented those recommendations and installed additional sensors and made programming modifications.
- On March 20, 2009, an overheating incident again occurred in Dryer Train 'A'. The cause of the incident was a mechanical failure of the bucket elevator belt that led to an abnormal shut down of Dryer Train 'A'. This caused high temperatures in the system due to pellets re-heating. As an immediate measure, Veolia operators injected nitrogen into the bucket elevator and dryer but were unable to correct the overheating problem. As a result, a Veolia operator called the Fire Department for assistance to cool down the affected equipment. Repairs and further equipment enhancements have since been implemented by Veolia.

### **Options**

As indicated earlier in this report, the City has the right to terminate the OM&M Agreement. In the event the City terminates the OM&M Agreement, Veolia is not entitled to receive any further payments under the OM&M Agreement except for any payments set forth in the Termination Payment Schedule of the OM&M Agreement. This is provided that Veolia takes all steps as directed by the City to allow for an effective transition of the Pelletizer Facility and the obligations of Veolia under this Agreement to a new operator. However, for various reasons, as outlined below, it is recommended that the OM&M not be terminated at this time:

- Termination will result in the indefinite shut down of the Pelletizer Facility due to loss of Veolia as the operator of the Pelletizer Facility and marketer of pellets;

- The City would have to identify and retain alternate service providers with expertise to operate this type of facility and market the pellets generated. The specialized nature of the Pelletizer Facility is such that the expertise may be difficult to locate;
- There would be an increased cost to manage unprocessed biosolids through various other service providers;
- There would be the loss of a Beneficial Use option – most of the biosolids intended for the Pelletizer would need to be redirected to landfill while the City searches for new Beneficial Use alternatives; and
- From the information available to staff, the Pelletizer Facility, while not being able to process the 25,000 dry tonnes of biosolids per year as required by contract, appears able to process a reduced amount which still serves to beneficially manage a significant amount of the City's biosolids.

In addition to the OM&M Agreement, there is the matter of the Services Agreement and Amendment which would be impacted. However, if the OM&M Agreement was terminated as a result of Veolia's inability to successfully complete Secondary Testing, the City would likely also be in a position to declare Veolia in default of its contractual obligations to the City under the Service Agreement and Amendment. If such a declaration of default occurred the City would then have to consider exercising the rights and remedies available to it under the Service Agreement and Amendment including making demand under the performance bond delivered by Veolia.

For these reasons, Toronto Water's assessment, at this time, is that the cost and impact of terminating the OM&M Agreement and declaring Veolia in default on the Services Agreement and the Amendment exceeds the cost and impact of allowing Veolia to continue to operate as proposed in this report. As the Pelletizer Facility has produced pellets through the Commissioning and Secondary Testing periods, Veolia believes that operation under the OM&M Agreement can commence on a limited basis while Veolia continues to work on their outstanding obligations under the Services Agreement and the Amendment.

### **Proposed Changes**

Toronto Water has been engaged in without prejudice discussions with Veolia on how to start full time operation under the OM&M Agreement while Veolia continues to complete its remaining obligations under the Services Agreement and the Amendment. Tentative agreement, based on the Term Sheet between Toronto Water and Veolia included as Attachment 1 to this report, subject to Council approval, has been reached. These terms include:

- The City will waive the requirements to successfully pass Secondary Testing and Veolia will forfeit its final \$799,932 payment under the Services Agreement. The City also accepts a reduced production level while both parties explore and implement continuous improvements aimed at increasing production levels. Specific initiatives and targets remain to be negotiated.

- Successful completion of Secondary Testing under the Services Agreement is a precondition to the start of full-time operation under the OM&M Agreement. The parties agree to remove the precondition and use the date of the Amending Agreement as the “Effective Date” under the OM&M Agreement. Full time operation of the Pelletizer Facility will then commence under the OM&M Agreement.
- The design build Services Agreement will continue to remain in place while Veolia works to resolve its remaining outstanding obligations.
- The OM&M Agreement will be amended to reduce minimum annual pellet production from 25,000 to 15,000 dry tonnes per year (The “Performance Guarantee”). The target annual production rate will be reduced from 25,000 to 18,000 dry tonnes per year. Monthly production targets are to be modified accordingly. As Veolia’s fees under the OM&M Agreement are based on actual production quantities, Veolia’s total estimated revenues will decrease proportionately subject to an adjustment in the Per Tonne Price as detailed below.
- Under the OM&M Agreement, Veolia is responsible for the first \$20,000 of any incident of repair and replacement or corrective maintenance and the City pays for costs that exceed this cap (“R&R Cap”). The R&R Cap will be increased to \$60,000. More specifically, Veolia will be responsible for the first \$60,000 of costs related to any incident of repair and replacement.
- The parties will negotiate extended warranties under the design build Services Agreement on key pieces of equipment. In addition, the application of the R&R Cap will be deferred to the later of eighteen (18) months or pellet production of 20,000 dry tonnes from the December 19, 2008.
- In order to fund Veolia’s fixed cost labour requirements based on an annual production target of 18,000 dry tonnes rather than the original 25,000 dry tonnes, the Per Tonne Price for annual production up to 18,000 dry tonnes will be increased by \$18 per dry tonne retroactive to the start of Secondary Testing – to be referred to as the “Per Dry Tonne Surcharge.” Any Veolia revenue shortfalls required to cover other fixed costs will be the responsibility of Veolia.
- Should Veolia be successful in increasing annual production beyond 18,000 dry tonnes, the Per Dry Tonne Surcharge will be reduced on a linear basis from \$18.00 to zero for production from 18,000 dry tonnes to 25,000 dry tonnes and above.
- Veolia will represent and warrant that the Pelletizer Facility is ready for full time operation and that the throughput reduction does not affect the reliability of the facility.
- The OM&M Agreement requires Veolia to maintain at all times a minimum on site inventory of spare parts. Under the Amending Agreement, the minimum spare parts



inventory will be expanded at no cost to the City by approximately \$100,000 in order to ensure that replacement parts are readily available to commence repairs on a timely basis when an equipment failure occurs. The expanded spare parts inventory will evolve depending on the maintenance history of the facility and may be drawn down in the final two years of the OM&M Agreement.

- The first annual inflation adjustments under the OM&M Agreement will take effect on October 1, 2009, approximately one year after the start of Secondary Testing.
- The City will investigate, measure and document the odour and noise issues that have been identified by the City's consultant. If either or both these issues are determined to constitute an Occupational Health and Safety issue and/or a contravention of the Air Certificate of Approval for the ABTP facility, the amending agreement will include a process and protocols by which the two Parties jointly develop and implement measures to resolve the issues.

### Cost Impact

The financial implications with respect to the OM&M Agreement are as follows.

Description	Various Scenarios (excluding capital improvement option)			
	Existing Agreement -Assuming 25,000 DT Production	Proposed Amended Agreement		
		Assume 15,000 DT Production	Assume 18,000 DT Production	Assume 22,000 DT Production
(A) Production quantities	25,000 DT	15,000 DT	18,000 DT	22,000 DT
(B) Per Dry Tonne Price (1 <sup>st</sup> Year)	\$159.54	\$159.54	\$159.54	\$159.54
(C) Per Dry Tonne Surcharge		\$18.00	\$18.00	\$7.71
<b>Estimated annual payment to Veolia under OM&amp;M</b> <b>(D) = (B+C) X (A)</b>	<b>\$3,988,500</b>	<b>\$2,663,100</b>	<b>\$3,195,720</b>	<b>\$3,679,594</b>
Remaining Pelletizer Dry Tonnes to be disposed <b>(E) = 25,000 – (C)</b>	0	10,000 DT	7,000 DT	3,000 DT
Equivalent wet tonnes <b>(F) = (E) / 0.28</b>	0	35,714	25,000	10,714
Cost of redirecting excess to Green Lane (assume	0	\$3,249,974	\$2,275,000	\$974,974

\$91/wet tonne) (G) = (F) X \$91				
(H) Estimated Natural Gas Costs	\$2,000,000	\$1,200,000	\$1,440,000	\$1,760,000
Estimated Total (I) = (D) + (G) + (H)	\$5,988,500	\$7,113,074	\$6,910,720	\$6,414,568
<b>Estimated Cost Per Wet Tonne</b> (I) X 0.28 / 25,000	<b>\$67.07</b>	<b>\$79.67</b>	<b>\$77.40</b>	<b>\$71.84</b>

In summary, the total cost of Veolia services under the OM&M Agreement will range from \$2,663,100 based on 15,000 dry tonne production of pellets per year to \$3,988,500 based on 25,000 dry tonne production of pellets per year. The unit cost of beneficially using and/or disposing of the 25,000 dry tonnes of biosolids originally assigned to the Pelletizer Facility will range from \$67.07 per wet tonne to \$79.84 per wet tonne which is below the 2008 overall average unit cost of biosolids beneficial use and/or disposal (excluding the Pelletizer) of \$106.60 per wet tonne.

The proposed amending agreement(s) will allow the Pelletizer Facility to be put into full time operation thereby increasing the beneficial use of biosolids and proportionately decreasing the amount directed to various landfill sites.

## CONTACT

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## SIGNATURE

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Lou Di Gironimo  
General Manager, Toronto Water

## ATTACHMENTS

Term Sheet for Negotiations between Toronto Water and Veolia: Version dated May 14, 2009