



GENIVAR

8570G (081-12493-00)

May 25, 2011

Tesfaye Gebrezghi, Director
Ministry of Environment
Environment Assessment and Approvals Branch
12th Floor
2 St. Clair Avenue West
Toronto ON M4V 1L5

**Re: Application for Approval of Industrial Sewage Works
Amendment to C of A No. 5268-7E8LJW
Waste Management of Canada – Richmond Landfill Site
Town of Greater Napanee, County of Lennox and Addington**

Dear Mr. Gebrezghi:

Please find attached our Application for Approval of Industrial Sewage Works, complete with supporting information and payment, for the Waste Management (WM) Richmond Landfill Site. We have provided this document after discussions with Waste Management, and provide this on their behalf.

The stormwater management facilities at the Richmond Landfill were originally approved and operated under Certificate of Approval (Municipal Sewage) No. 3-0975-90-916, issued October 29, 1991. In 2008, WM applied to the Ministry of Environment (MOE) to replace the existing stormwater pond #3, located south of the approved landfill footprint. Certificate of Approval (Industrial Sewage Works) No. 5268-7E8LJW was issued to the Richmond Landfill on August 19, 2008. The Certificate of Approval (C of A), which revoked and replaced C of A No. 3-0975-90-916, permits the operation of the leachate collection and disposal facility at the site, along with the stormwater management facilities.

As part of the approval which permits the operation of the stormwater management ponds, the following Conditions are listed:

- *Condition 8(2) – The Owner shall collect stormwater grab samples from the following designated sampling location **prior to each planned discharge event** and analyse for the parameters listed in Table 2;*
- *Condition 9(3) – The Owner shall keep the outlet gate valves of SWM Pond No. 1, SWM Pond No. 2, and SWM Pond No. 3 in **closed** position during normal operation periods; and*
- *Condition 9(4) – Prior to any planned discharge of stormwater from any of the SWM Ponds to the natural environment, the Owner shall collect stormwater grab sample from a designated sampling location at the SWM Pond and conduct acute lethality testing for *Daphnia magna* and Rainbow Trout. The Owner shall ensure that the stormwater runoff collected in the SWM Pond is not acutely lethal to*

Daphnia magna and Rainbow Trout before allowing any discharge of stormwater from the SWM Pond.

WM is proposing to amend the C of A to remove the three (3) aforementioned conditions. This will allow the ponds to be free flowing, as initially designed. The following supporting documentation has been included with this letter, as listed below:

- A completed "Application for Approval of Sewage Works" form;
- **Appendix A** – associated application processing fee form;
- **Appendix B** – Water Quality Results: Stormwater Ponds No. 1, No. 2, and No. 3 for sampling events occurring from December 2009 to March 2011.

The request to allow for continuous discharge of water from the ponds is based, in part, on the results of the historical analysis of samples collected from the ponds. For the period of December 2009 through March 2011, a total of five (5) sampling events have taken place on Stormwater Pond No. 1, 11 sampling events at Stormwater Pond No. 2, and 18 sampling events at Stormwater Pond No. 3. **Appendix B** provides summaries of the analytical and acute lethality testing results required by the current Industrial Sewage Works C of A.

The analytical results for each pond show that generally the only constituents that are consistently above Provincial Water Quality Objectives (PWQOs) are iron and total phosphorus. In reviewing the historical analytical data collected and reported as part of the routine monitoring programs, one notes that these two constituents have also been identified above PWQOs in background surface water quality samples, although the total phosphorus is more consistently above its PWQO.

The lethality testing results for each pond show that even with the above exceedances of PWQOs, the risk to aquatic life is insignificant, as every test (three (3) for Pond No. 1, six (6) for Pond No. 2, and 13 for Pond No. 3) indicated a passing mortality rate. In fact, in all the lethality testing events conducted (22 in total); the passing rate has been 0 percent mortality, with the exception of one fish during one test.

To ensure that continuous discharging of the ponds will continue to have little effect on the surrounding environment, WM is proposing a monitoring program which will involve the performance of sampling events on the ponds quarterly for two (2) years. Samples will be analyzed for the Table 2 parameters listed in the Industrial Sewage Works C of A. Upon review of the data, and with approval from the MOE, the sampling program would then be reduced to a semi-annual frequency.

We trust that the enclosed information meets your requirements and will facilitate your approval. Should you have any questions regarding this application, please do not hesitate to contact the undersigned.

Yours truly,

GENIVAR Inc.



Jeff E. Armstrong, P. Eng.
Designated Consulting Engineer,
Director – Solid Waste Management
JEA/BDL/bdl
Encl.

cc: Mr. Trevor Dagalil, District Manager, MOE, Kingston District
Mr. David Arnott, MOE, Kingston District
Mr. Randy Harris, Landfill Manager, Waste Management of Canada
Mr. Wayne Jenken, Area Landfill Engineer, Waste Management of Canada
Mr. Reid Cleland, Director of Disposal Operations – Ontario, Waste Management of Canada
Mr. Chris Prucha, Director, Groundwater Protection Program, Waste Management
Public Liaison Committee
Mayor Gordon Schermerhorn, Town of Greater Napanee
Rebecca Murphy, Town of Greater Napanee
Reeve Rick Phillips, Township of Tyendinaga
Chief Don Maracle, Mohawks of the Bay of Quinte

General Information and Instructions

General:

Information requested in this form is collected under the authority of the *Ontario Water Resources Act*, R.S.O. 1990 (OWRA) and the *Environmental Bill of Rights, 1993*, S.O. 1993 (EBR) and will be used to evaluate applications for approval of sewage works under section 53, OWRA. Questions about this collection of information should be directed to: Information Unit Supervisor, Environmental Assessment and Approvals Branch, 2 St. Clair Ave. W, Floor 12A, Toronto ON M4V 1L5. Telephone outside Toronto 1-800-461-6290 or in Toronto 416-314-8001.

Instructions:

1. Applicants are responsible for ensuring that they complete the most recent application form. When completing this form, please refer to the following guidance material: "Guide for Applying for Approval of Sewage Works, Sections 53, 54, 55 and 56, OWRA" (referred to as the Guide) and "Guide - Application Costs for Sewage Works, s.53, OWRA." Application forms and supporting documentation are available from the Environmental Assessment and Approvals Branch toll free at 1-800-461-6290 (in Toronto 416-314-8001), from your local District Office of the Ministry of the Environment, and in the publications section of the Ministry of the Environment website at www.ene.gov.on.ca/en/publications/forms/index.php.

2. Questions regarding completion and submission of this application should be directed to the Environmental Assessment and Approvals Branch, 2 St. Clair Avenue West, Floor 12A, Toronto, Ontario, M4V 1L5, telephone outside Toronto 1-800-461-6290 or in Toronto 416-314-8001, or to your local District Office of the Ministry of the Environment.

3. A complete application consists of:

- 1) a completed and signed application form;
- 2) all required supporting information identified in this form and the Guide; and
- 3) a certified cheque, money order, or credit card payment in Canadian funds, made payable to the *Ontario Minister of Finance* for the applicable application fee.

This form must be completed with respect to all requirements identified in the guidance material in order for it to be considered an application for approval.

INCOMPLETE APPLICATIONS WILL BE RETURNED TO THE APPLICANT. The Ministry may require additional information during the technical review of any application initially accepted as complete.

4. The original application, along with the supporting information and the application fee, must be sent to:

Director, Section 53, OWRA
Ministry of the Environment
Environmental Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario, M4V 1L5

A copy of the application and the supporting information must be sent to the Ministry local District Office which has jurisdiction over the area where the facilities are located. To locate the appropriate Ministry District Office, please visit the Ministry of the Environment website at www.ene.gov.on.ca/envision/org/op.htm#Reg/Dist.

A cover letter addressed to the Director, Section 53, OWRA at the Environmental Assessment and Approvals Branch should accompany both submissions and indicate that a copy of the complete submission has been sent to the Ministry local District Office.

5. Information contained in this application is not considered confidential and will be made available to the public upon request. Information submitted as supporting information may be claimed as confidential but will be subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA) and EBR. If you do not claim confidentiality at the time of submitting the information, the Ministry may make the information available to the public without further notice to you.

6. It is an offence under the OWRA to provide false or misleading information in this application and/or accompanying documents.

Cette publication hautement spécialisée n'est disponible qu'en anglais en vertu du Règlement 411/97 qui en exempte l'application de la Loi sur les services en français. Pour obtenir de l'aide en français, veuillez communiquer avec la Direction des évaluations et des autorisations environnementales au ministère de l'Environnement au 416-314-8001 (sans frais : 1-800-461-6290).

For Office Use Only			
Reference Number	Payment Received	Date (y/m/d)	Initials
	\$		

Application Summary

Applicant Name *(legal name of individual or organization as evidenced by legal documents)*
Waste Management of Canada Corporation

Project Name *(Project identifier to be used as a reference in correspondence)*
Application to Amend Certificate of Approval (Industrial Sewage Works) No. 5268-7E8LJW

Type of Sewage Works

Industrial Sewage Works Municipal Sewage Works Private Sewage Works

Project Description Summary *(If EBR is applicable, this summary will be used in the EBR posting notice)*

This application is for an amendment to Certificate of Approval (Industrial Sewage Works) No. 5268-7E8LJW. Condition 8(2) of the C of A states that stormwater grab samples must be collected from designated sampling locations prior to each planned discharge event and analyzed for parameters listed in Table 2. Condition 9(3) states that the outlet gate valves of SWM Pond No. 1, SWM Pond No. 2 and SWM Pond No. 3 must be kept in closed position during normal operation periods. Condition 9(4) states that prior to any planned discharge from the ponds to the natural environment, stormwater grab samples must be collected and analyzed for acute lethality testing for Daphnia magna and Rainbow Trout.

A total of five (5), 11 and 18 sampling events have taken place at Pond No. 1, Pond No. 2 and Pond No. 3 respectively since the inception of the C of A, and analytical results indicate there have been no adverse effects on the aforementioned species or the receiving watercourse. Waste Management is proposing that Conditions 8(2), 9(3) and 9(4) be removed from the C of A, and allow the ponds to be free flowing as initially designed. Waste Management also proposes to monitor the ponds for the Table 2 parameters listed in the Industrial Sewage Works C of A quarterly for two (2) years, then reduce monitoring to a semi-annual frequency upon review of data and approval from the MOE.

Please Note:

This form replaces:

- PIBS 4063e01: Application for Approval of Municipal and Private Sewage Works
- PIBS 3070e03: Application for Approval of Industrial Sewage Works
- PIBS 6238e: Pipe Data Form: Watermain, Storm Sewer, Sanitary Sewer and Forcemain Design – Supplement to Application for Approval of Water and Sewage Works.

Additional instructions and information have been included at the end of this form. You are not required to include the instructions when you submit your application for approval.

Section 1: Applicant Information

1.1 Applicant Information (owner of works/facility)

Applicant Name (legal name of individual or organization as evidenced by legal documents) Waste Management of Canada Corporation		Business Identification Number 876 294 844
Business Name (the name under which the entity is operating or trading - also referred to as trade name)		<input checked="" type="checkbox"/> same as Applicant Name
Applicant Type: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Federal Government <input type="checkbox"/> Individual <input type="checkbox"/> Municipal Government <input type="checkbox"/> Partnership <input type="checkbox"/> Provincial Government <input type="checkbox"/> Sole Proprietor <input type="checkbox"/> Other (describe): _____	North American Industry Classification System (NAICS) Code 562210	
Business Activity Description (a description of the business endeavour, this may include products sold, services provided or machinery/equipment used, etc.) Waste Management owns and operates collection and solid waste disposal facilities.		
Is the Applicant a Municipal / Industry Strategy for Abatement (MISA) Discharger? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Industrial Activities (select all that apply)		
<input type="checkbox"/> Petroleum	<input type="checkbox"/> Iron and Steel	<input type="checkbox"/> Winery
<input type="checkbox"/> Organic Chemicals	<input type="checkbox"/> Pulp and Paper	<input type="checkbox"/> Other Beverages
<input type="checkbox"/> Inorganic Chemicals	<input type="checkbox"/> General Industrial	<input type="checkbox"/> Dairy Products
<input type="checkbox"/> Industrial Minerals	<input type="checkbox"/> Electric Power Generation	<input type="checkbox"/> Meat Processing
<input type="checkbox"/> Cement and Minerals	<input type="checkbox"/> Power Plant	<input type="checkbox"/> Other (Specify):
<input type="checkbox"/> Metal Mining	<input type="checkbox"/> Vegetable Washing	
<input type="checkbox"/> Metal Casting	<input type="checkbox"/> Brewery	


1.2 Applicant Physical Address

Civic Address - Street Information (includes street number, name, type and direction) 1271 Beechwood Road				Unit Identifier (i.e. apartment number)	
Survey Address (Not required if Street Information is provided)		Lot	Conc.	Part	Reference Plan
Municipality /Unorganized Township Town of Greater Napanee	County/District Lennox and Addington	Province/State Ontario	Country Canada	Postal Code/Zip Code K7R 3L1	
Telephone Number (include area code & ext.) 613-388-1057 ext.	Mobile Number (include area code)	Fax Number (include area code) 613-388-2785	E-mail Address		
Geo Reference (optional) (southwest corner of property)					
Map Datum	Zone	Accuracy Estimate	Geo Referencing Method	UTM Easting	UTM Northing

1.3 Applicant Mailing Address

Same as Applicant Physical Address? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If no, please provide site address information below)					
Civic Address - Street information (includes street number, name, type and direction)				Unit Identifier (i.e. apartment number)	
Delivery Designator		Delivery Identifier	Postal Station		
Municipality /Unorganized Township	Province/State	Country	Postal Code/Zip Code		

1.4 Statement of Applicant

<p>I, the undersigned hereby declare that, to the best of my knowledge:</p> <ul style="list-style-type: none"> The information contained herein and the information submitted in support of this application is complete and accurate in every way and I am aware of the penalties for providing false information as per section 98 (2) of the <i>Ontario Water Resources Act</i> (OWRA). The Project Technical Information Contact identified in this form is authorized to act on my behalf for the purpose of obtaining approval under section 53 of the OWRA for the sewage works identified herein. I have used the most recent application form, as obtained from the Ministry of the Environment website at www.ene.gov.on.ca/en/publications/forms/index.php or the Environmental Assessment and Approvals Branch at 1-800-461-6290. 			
Name of Signing Authority (please print)		Title	
Reid Cleland		Director of Disposal Operations	
Telephone Number (include area code & ext.)	Mobile Number (include area code)	Fax Number (include area code)	E-mail Address
519-849-5810 ext.		519-849-5811	rcleland@wm.com
Signature		Date (yyyy/mm/dd)	
		2011/05/19	

1.5 Statement of Municipality

<p>I, the undersigned hereby declare on behalf of the Municipality, that the Municipality has no objection to the construction of the works in the Municipality.</p>	
Name and Title (please print)	Name of Municipality
Signature	Date (yyyy/mm/dd)

Section 2: Project Information

2.1 Application Type

Type of Application:			
<input type="checkbox"/> New Certificate of Approval	<input type="checkbox"/> New Comprehensive Certificate of Approval		
<input checked="" type="checkbox"/> Amendment to Current Certificate of Approval	<input type="checkbox"/> Convert Existing Approval to Comprehensive Certificate of Approval		
<input type="checkbox"/> Administrative Amendment to Current Certificate of Approval	<input type="checkbox"/> Revocation		
<input type="checkbox"/> Compliance with Conditions of the Existing Approval	<input type="checkbox"/> Transfer of Review Program		
Application Initiated by:			
<input checked="" type="checkbox"/> Applicant	<input type="checkbox"/> Environmental Assessment and Approvals Branch	<input type="checkbox"/> Provincial Officer Order (attach copy)	<input type="checkbox"/> Other (specify): _____
Current Certificate of Approval			
Certificate of Approval Number		Certificate of Approval Date of Issue (yyyy/mm/dd)	
5268-7E8LJW		2008/08/19	
Project Schedule			
Estimated date for start of construction/installation (yyyy/mm/dd)		Estimated date for start of operation (yyyy/mm/dd)	
As soon as possible		As soon as possible	
Comprehensive Certificate of Approval Eligibility Screening Questionnaire			
1. Does the sewage works that is the subject of this application meet all of the requirements for eligibility specified in the most current version of the Ministry document titled "Guide for Applying for Approval of Sewage Works" found on the Ministry website at www.ene.gov.on.ca/en/publications/forms/index.php ?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Does the application being submitted include all of the information that is required for a comprehensive certificate of approval as specified in the most current version of the Ministry document entitled, "Guide for Applying for Approval of Sewage Works" found on the Ministry website at www.ene.gov.on.ca/en/publications/forms/index.php ?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Does the sewage works for which this proposal is made have any outstanding environmental issues or complaints?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

2.2 Project Technical Information Contact

				<input type="checkbox"/> same as Applicant Information
Name of Project Technical Information Contact		Company		
Jeff Armstrong, P.Eng.		GENIVAR Inc.		
Telephone Number (include area code & ext.)	Mobile Number (include area code)	Fax Number (include area code)	E-mail Address	
519-376-7612 ext. 13232		519-376-8008	jeff.armstrong@genivar.com	
Address Information:				
Same as Applicant Mailing Address? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If no, please provide technical information contact address information below)				
Civic Address - Street Information (includes street number, name, type and direction)				Unit Identifier (i.e. apartment number)
1450 1st Avenue West				Suite 101
Delivery Designator	Delivery Identifier	Postal Station		
Municipality /Unorganized Township	Province/State	Country	Postal Code/Zip Code	
Owen Sound	ON	Canada	N4K 6W2	

Section 3: Site Information

3.1 Site Address (location where activity/works applied for is to take place)

Same as Applicant Physical Address? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If no, please provide site address information below)					
Civic Address - Street Information (includes street number, name, type and direction)					Unit Identifier (i.e. apartment number)
Survey Address (Legal description of the site)	Lot	Conc.	Part	Reference Plan	
Municipality /Unorganized Township		County/District		Postal Code	
Non-Address Information (includes any additional information to clarify Applicant physical location)					
Map Datum	Zone	Geo Reference (required) (southwest corner of property) Accuracy Estimate		Geo Referencing Method	UTM Easting
					UTM Northing

3.2 Site Information (location where activity/works applied for is to take place)

Site Name Richmond Landfill Site	Ministry of the Environment District Office Kingston
Is the site (property) that is the subject of this application owned by the Applicant? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please attach the owner's name, address and a signed letter granting consent for the installation and operation of the facilities	
Is the Applicant the operating authority of the site that is the subject of this application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please attach the operating authority name, address and phone number	
Is the site located in an area of development control as defined by the Niagara Escarpment Planning and Development Act (NEPDA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please attach a copy of the NEPDA permit for proposed activity/work	
Is the site located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (ORMCP), a regulation made under the Oak Ridges Moraine Conservation Act, 2001 (ORMCA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please attach proof of Municipal planning approval for the proposed activity/work (e.g., zoning by-law, letter from municipality, etc.)	

3.3 Site Zoning and Classification

Present Land Use Landfill	Present Official Plan Designation Waste Management	Present Zoning Category Waste Management
Adjacent Land Use (select all that apply) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Recreational <input type="checkbox"/> Other (specify): _____		
Does the site currently have proper zoning for the proposed facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Has this facility been identified as part of the Official Plan? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Has the Applicant received municipal zoning confirmation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please attach correspondence from the municipality		

3.4 Source Protection/Drinking Water Threats

List the Source Protection Area(s) where the sewage works is/will be located:

Is the sewage works located or planned to be located in a vulnerable area identified in the local Assessment Report (AR)/Source Protection Plan (SPP) under the *Clean Water Act, 2006*?

Yes No

If yes, what is/are the vulnerable area(s)/zone(s)?

- Wellhead Protection Areas (WHPA) Surface Water Intake Protection Zones (IPZ)
 Highly Vulnerable Aquifers (HVA) Significant Recharge Areas (SGRA)

As per the local Assessment Report (AR)/Source Protection Plan (SPP), please list all drinking water threat activities (prescribed under O. Reg. 287/07 under the *Clean Water Act, 2006*) that are/will be taking place at the sewage works. For each drinking water threat activity that is/will be taking place at the sewage works, please list the circumstance(s) and reference number(s) as per the Tables of Drinking Water Threats, *Clean Water Act, 2006*. Based on the list of drinking water threat activity(ies) and circumstance(s) and as per the local Assessment Report/Source Protection Plan, please list the type(s) of threat(s) associated with the sewage works.

(If needed, please attach a separate sheet to provide the full list of activity(ies), reference number(s), circumstance(s) and type(s) of threat(s).)

Drinking Water Threat Activity(ies)	Reference Number(s)	Circumstance(s)	Type(s) of Threat(s) (i.e. significant, moderate or low)

Section 4: Facility Information

4.1 Facility Type

Select the type of facility that is the subject of the application <i>(select all that apply)</i>	
<input type="checkbox"/> Sewage Treatment Plant	<input type="checkbox"/> Primary <input type="checkbox"/> Secondary <input type="checkbox"/> Tertiary <input type="checkbox"/> Receives Septage <input type="checkbox"/> Constructed/Engineered Wetlands
<input type="checkbox"/> Stormwater Management Facility	<input type="checkbox"/> On-Site System <input type="checkbox"/> Lagoons <input type="checkbox"/> Septage <input type="checkbox"/> Municipal <input type="checkbox"/> Other
<input checked="" type="checkbox"/> Storm Sewers	<input checked="" type="checkbox"/> Wet Pond <input type="checkbox"/> Dry Pond <input type="checkbox"/> Other
<input type="checkbox"/> Ditches	
<input type="checkbox"/> Sanitary Sewers	
<input type="checkbox"/> Force mains	
<input type="checkbox"/> Pumping Station	
Receiver of Effluent Discharge	
Receiver Name Tributary of Marysville Creek	Watershed Name Quinte
Type of Effluent Receiver	
<input checked="" type="checkbox"/> Surface Water	<input type="checkbox"/> Groundwater <input type="checkbox"/> Spray Irrigation <input type="checkbox"/> Other

4.2 Critical Receivers

Will the works discharge to any of the following critical receivers?						
<input type="checkbox"/> Lake Simcoe	<input type="checkbox"/> Rideau River	<input type="checkbox"/> Detroit River	<input type="checkbox"/> Other (specify) _____			
<input type="checkbox"/> Great Lakes	<input type="checkbox"/> Rouge River	<input type="checkbox"/> Bay of Quinte				
Is the receiver a policy 2 receiver?						
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A				
Do you have a policy 2 deviation approval from the Directors?						
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<i>If yes, please attach a copy of the Director's Approval</i>				
UTM Coordinates for Final Discharge Location(s) <i>(from the proposed sewage works) (required)</i>						
Location	Map Datum	Zone	Accuracy Estimate	Geo Referencing Method	UTM Easting	UTM Northing

4.3 Servicing

The works will provide sewage servicing for: *(select all that apply)*

<input type="checkbox"/> Residential	<input type="checkbox"/> Subdivision	Is there a Municipal Responsibility Agreement in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <i>If yes, please attach a copy of the Municipal Responsibility Agreement</i>
<input type="checkbox"/> Commercial	<input type="checkbox"/> Condominium	
<input type="checkbox"/> Industrial	<input type="checkbox"/> Institutional	
<input type="checkbox"/> Hotel, Motel, Inn	<input type="checkbox"/> Other <i>(specify)</i>	
<input type="checkbox"/> Resort	<input type="checkbox"/> Campground, Park	
<input type="checkbox"/> Restaurant	<input type="checkbox"/> Shopping Malls	
<input type="checkbox"/> Rental Cabins	<input type="checkbox"/> Highway Service Station/Gas Bars	
<input type="checkbox"/> Other <i>(specify)</i>	<input type="checkbox"/> Other <i>(specify)</i>	

Industrial Describe:

4.4 Sewage Servicing for Waste Disposal / Landfill Sites

Does / will the sewage treatment facility receive waste disposal / landfill site leachate?

Yes No *If yes, please identify the site(s) below.*

Name(s) of Site Contributing Leachate	EPA Part V Certificate of Approval Number	OWRA Certificate of Approval Number	Volume (m ³)
1.			
2.			
3.			
4.			
5.			

4.5 Pipe Data Form

Do the works involve Storm Sewers, Ditches, Sanitary Sewers, Forcemains and/or Pumping Station?

Yes No *If yes, please identify the type(s) of works below.*

Identify the Type of Works *(select all that apply)*

Storm Sewers / Ditches *(You must complete and attach Schedule A – Sections 1 and 2)*

Sanitary Sewers *(You must complete and attach Schedule A – Sections 1 and 3)*

Forcemains *(You must complete and attach Schedule A – Sections 1 and 4)*

Pumping Station *(You must complete and attach Schedule A – Sections 1 and 4 and/or 5 (Tables 1 and 2))*

Section 5: Regulatory Requirements

5.1 Other Approvals / Permits for Facility *(Please attach a separate list if more space is required)* Separate list attached? Yes No

List all other environmental approvals/permits applied for related to this project or received in relation to this project under the *Environmental Protection Act* (discharges to air, waste management, etc.), the *Ontario Water Resources Act* (sewage works, permit to take water) and the *Safe Drinking Water Act, 2002* (water works).

Approval Type	Approval Number	Approval or Application Date (yyyy/mm/dd)	Approval Type	Approval Number	Approval or Application Date (yyyy/mm/dd)
Waste	A371203	1988/03/30	Waste (Soil Recycling)	A710003	1993/12/20
Air	8-4078-99-006	1999/12/21			

Has the facility received local Conservation Authority clearance?
 Yes No *If yes, please include a copy of the Conservation Authority clearance.*

5.2 Environmental Bill of Rights (EBR) Requirements

Is this a proposal for a prescribed instrument under EBR? Yes No

If yes, is this proposal exempted from EBR requirements? Yes No

If yes, please check one of the following

This proposal has been considered in a substantially equivalent process of public participation. *(Please provide supporting information)*

This proposal is for an emergency situation. *(Please provide supporting information)*

This proposal is for an amendment to or revocation of an existing Certificate of Approval that is not environmentally significant. *(Please provide supporting information)*

This proposal has been subject to or exempted from EAA Requirements or considered in a decision of a tribunal. *(Please provide supporting information)*

5.3 Environmental Assessment Act (EAA) Requirements

Are the works for which this proposal is made subject to (or exempted from) the requirements of the EAA? Yes No

If yes, please check one of the following

The works for which this application is made are exempt from the requirements of the EAA under:

Section _____ of Ontario Regulation No. _____ or

Declaration/Exemption Order Number _____

If Regulation, Declaration Order or Exemption Order does not refer directly to this facility, state in a covering letter or other document why it does apply to this facility. (Please provide supporting information)

The works for which this application is made have fulfilled all of the requirements of the EAA through the completion of the requirements of the Municipal Class EA process for Municipal Water and Wastewater Projects in accordance with the procedure set out in:

Schedule A Schedule A+ Schedule B Schedule C

From the Schedule identified above, please identify Project Type and associated Schedule/Paragraph No. which applies to the proposed project

Project Type	Schedule / Paragraph No.
--------------	--------------------------

If applicable, please submit a copy of the Notice of Completion documents.

Were Part II Order (i.e. "Bump-up") requests received for this project? Yes No *If yes, please submit a copy of the Minister's decision letter.*

Were Part II Order requests resolved? Yes No *If yes, please provide details.*

Has an Environmental Study Report (ESR) for Schedule B and/or C undertaking been completed? Yes No *If yes, please include ESR Cover page with this submission.*

The works for which this application is made have fulfilled all of the requirements for the EAA through completion of an Environmental Assessment *(Please submit a copy of the signed Notice of Approval)*

The works are not subject to EAA for the reason(s) specified below:

5.4 Hearing under the Ontario Water Resources Act (OWRA)

Is this application subject to a requirement for a mandatory hearing under s.54 of the *Ontario Water Resources Act*?

Yes No

5.5 Additional Public Consultation/Notification

Is there any additional public consultation/notification, related to this project, that is in the process of being completed or that has previously been completed (such as public hearings or notification of First Nations)?

Yes No

If yes, please
1) *describe the public consultation/notification below; and*
2) *attach a separate list describing each of these consultation activities, the results achieved, and planned future consultation activities.*

In accordance with Condition 103 of Certificate of Approval (Waste) No. A371203, a copy of this application has been sent to the Public Liaison Committee, the Town of Greater Napanee, Township of Tyendinaga, and the Mohawks of the Bay of Quinte.

Section 6: Supporting Information

6.1 Supporting Information Checklist *(This is a list of all supporting information to this application and is subject to the FOIPPA and EBR)*

General Supporting Information				
	Attachment	Attached	Reference	Confidential* (√)
	Pre-application consultation record	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Proof of Legal Name of Applicant	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Copy of NEPDA Permit	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Copy/Proof of Municipal Planning Approval (ORMCA, general)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Name, Address and Phone Number of the Operating Authority	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Name, address and consent of land/site owner for the installation/construction and operation of the works/facility	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Documentation in support of EBR Exception	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Proof of Compliance with EAA Requirements	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Signed Municipal Responsibility Agreement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	List of the activity(ies), reference number(s), circumstance(s) and type(s) of drinking water threat(s) that are/will be taking place at the sewage works	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Proof of Public Consultation/Notification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Financial Assurance Estimate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Conservation Authority Clearance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Application Fee	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Appendix A	<input type="checkbox"/>
	A copy of this application has been sent to the Ministry local District Office	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/>
Technical Supporting Information				
	Attachment	Attached	Reference	Confidential* (√)
	Description of the Industrial Processes (sources of sewage)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Detailed Description of the Proposed Works	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Environmental Study Report (ESR)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Preliminary Engineering Report	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Engineering Drawings and Specifications	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Design Brief/Report	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Site Plan	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Hydraulic and Process Calculations	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Final Plans and Specifications	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Influent Sewage Quantity and Quality Characteristics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Process Sludge Handling Program	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Process /Effluent Monitoring Program	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Environmental Impact Analysis (surface water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Environmental Impact Analysis (groundwater)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Environmental Impact Analysis (odour and noise)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Final Effluent Criteria Accepted by Regional Office of the Ministry	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Site and Soil Assessment Report	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Stormwater Management Report	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Sewage Works Comprehensive Requirements 1. Engineer's Report 2. Declarations	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
	Pipe Design Data Form	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/>
Other Attachments				
	Title	Reference	Reference	Confidential* (√)
	Water Quality Results - Stormwater	Appendix B		<input type="checkbox"/>
	Ponds No. 1, No. 2 & No. 3, December 2009 - March 2011			<input type="checkbox"/>
	Are you attaching an additional list of attachments? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If there is not enough space to list all of the attachments included in this application package, please include an additional listing of these attachments.		<input type="checkbox"/>

*Please note: The release of information contained in application forms and documentation submitted in support of applications for approval is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This Act defines what may and may not be disclosed to the public, and is used to assess all requests for information contained in the documents on file with an application for approval. The information submitted with an application for approval may also be subject to the *Environmental Bill of Rights, 1993*. In those situations, the application and the associated non-confidential supporting documentation is made available for review by members of the public. Applicants should therefore identify all documents as noted above which are to be considered confidential and must provide detailed evidence in support of this claim. This evidence will be one of the factors the Ministry would consider when making a decision regarding disclosure of specific documents on file.

BU-689

40689 008 4281

\$ 3100.00



For Office Use Only			
Reference Number	Payment Received	Date (y/m/d)	Initials
	\$		

Payment Information: Application for Approval of Sewage Works

Please Note:

1. You must complete and attach a copy of the form entitled, "Costs for OWRA s.53 Applications – Supplement to Application for Approval" (PIBS 4107e).
2. The Ministry may require additional information during the review of your application that could impact the total fee required.
3. All fees should be paid in Canadian funds, payable to the Ontario Minister of Finance.
4. Credit card payments are accepted for payments under \$10,000 only.
5. If you are paying by certified cheque or money order, please staple your payment to this page.
6. Do not include this page in the copies of your application that are being provided to the Ministry local District Office.
7. The information collected in this section of the form is considered confidential and will only be used to process your application fee.

Amount Enclosed	Method of Payment		
\$ 3100.00	<input type="checkbox"/> Certified Cheque	<input type="checkbox"/> Money Order	<input type="checkbox"/> Journal Entry
	<input checked="" type="checkbox"/> Visa	<input type="checkbox"/> MasterCard	<input type="checkbox"/> American Express

Credit Card Information (if paying by VISA, MasterCard or American Express)

Name on Card (please print)	Credit Card Number	Expiry Date (mm/yyyy)
Sandra Mitchell	4715 1600 0236 9361	07/14
Cardholder Signature	Date (yyyy/mm/dd)	
<i>Sandra Mitchell</i>	2011/05/04	

If paying by certified cheque or money order, please attach it here.

Appendix A

Costs for OWRA s.53 Applications

COSTS FOR OWRA s.53 APPLICATIONS SUPPLEMENT TO APPLICATION FOR APPROVAL

This form is to be completed for all applications under the Ontario Water Resources Act, s.53 received by the Environmental Assessment & Approvals Branch. Please submit this form with your completed application form. For instructions/assistance completing this form, please refer to publication number 4180 titled: "Guide: Application Costs for Sewage Works, s.53 OWRA". This form and associated publications are available on the Ministry of the Environment web site at www.ene.gov.on.ca or by contacting the Environmental Assessment and Approvals Branch at 1-800-461-6290.

Company Name: Waste Management of Canada Corporation	Application/Certificate of Approval Number (if known) C of A No. 5268-7E8LJW
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Application Cost: *Indicate the applicable aspect(s) of the application and complete the corresponding section(s) of this form.*

<input type="checkbox"/> Administrative amendment of an existing approval (Section 1) <input type="checkbox"/> Fee exempted amendment or revocation of an existing approval (Section 2) <input checked="" type="checkbox"/> Approval, amendment or revocation requiring technical review (Section 3)	Total Cost \$ 3,100 <hr style="width: 80%; margin: 0 auto;"/>
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SECTION 1: Administrative Amendment of an Existing Approval

Description	Cost	(✓)
Administrative amendments (no technical review involved)	\$ 100	<input type="checkbox"/>
TOTAL COST:	\$	

SECTION 2: Fee Exempted Amendment or Revocation of an Existing Approval

Description	Cost	(✓)
Administrative revocation (no technical review involved)	\$ 0	<input type="checkbox"/>
Any revocation requested as a result of requirements imposed by conditions of an existing approval	\$ 0	<input type="checkbox"/>
Any amendment requested as a result of requirements imposed by conditions of an existing approval	\$ 0	<input type="checkbox"/>
TOTAL COST:	\$	

SECTION 3: Complete tables 1, 2 & 3 and enter your information in the summary table below.

Description	Cost	(✓)
Administrative processing	\$ 200	✓
Wastewater Treatment and Disposal (Table 1)	\$ 600	<input checked="" type="checkbox"/>
Wastewater Disposal (Table 2)	\$ 900	<input checked="" type="checkbox"/>
Review (Table 3)	\$1,400	<input checked="" type="checkbox"/>
Hearing (if required)	\$ 18,000	<input type="checkbox"/>
TOTAL COST:	\$ 3,100	

Table 1: Wastewater Treatment and Disposal

When completing this table, please note the following:

Category 1 Amendment:

The application relates to an amendment to an existing treatment plant approval to include additional facilities to increase the approved rated capacity of the plant, including the expansion, re-rating, or upgrading of an existing facility.

Category 2 Amendment:

The application relates to an amendment to an existing treatment plant approval to include additional facilities that do not increase the approved rated capacity of the plant, including new tertiary treatment facilities, plant process waste stream treatment and disposal facilities, new treatment facilities to replace deteriorated facilities and the establishment, alteration, expansion or replacement of an outfall.

Category 3 Amendment:

If the application relates to the alteration, extension or replacement of treatment plant equipment or processes that do not involve the addition of new facilities, including:

- A. the alteration, extension or replacement of a pumping system, an aeration system, a chemical storage or application system, filter media or a standby power supply system,
- B. the provision of additional points of process chemical application, and
- C. the provision of odour control equipment facilities.

Category 4 Amendment:

Any other case of amendment requiring technical review.

Description	Maximum Design Capacity	Application Type	Amendment Category	Cost	(✓)	Ref.
A municipal or private facility for the treatment and disposal of sewage including a lagoon or stabilization pond or a sewage treatment plant	≤ 4,550 m ³ /day	Approval or Revocation*	N/A	\$ 5,000	<input type="checkbox"/>	1.1.1
		Amendment	Category 1	\$ 5,000	<input type="checkbox"/>	1.1.2
			Category 2	\$ 3,600	<input type="checkbox"/>	1.1.3
			Category 3	\$ 1,800	<input type="checkbox"/>	1.1.4
			Category 4	\$ 600	<input type="checkbox"/>	1.1.5
	> 4,550 m ³ /day	Approval or Revocation*	N/A	\$ 10,000	<input type="checkbox"/>	1.1.6
		Amendment	Category 1	\$ 10,000	<input type="checkbox"/>	1.1.7
			Category 2	\$ 3,600	<input type="checkbox"/>	1.1.8
			Category 3	\$ 1,800	<input type="checkbox"/>	1.1.9
			Category 4	\$ 600	<input type="checkbox"/>	1.1.10
A facility for attenuating stormwater runoff peak flow rate or volume or for managing stormwater runoff quality such as detention or retention ponds, underground chambers, oversized sewers, rooftop storage, parking lot storage, oil, grit and silt separators, flow control outlet structures, infiltration wells, perforated sewers, and trenches or outfalls	N/A	Approval or Revocation*	N/A	\$ 2,000	<input type="checkbox"/>	1.2.1
		Amendment	Category 1	\$ 2,000	<input type="checkbox"/>	1.2.2
			Category 2			
			Category 3			
Category 4	\$ 600	<input checked="" type="checkbox"/>	1.2.3			
A facility for the treatment and disposal of leachate	N/A	Approval or Revocation*	N/A	\$ 6,000	<input type="checkbox"/>	1.3.1
		Amendment	Category 1	\$ 6,000	<input type="checkbox"/>	1.3.2
			Category 2	\$ 3,600	<input type="checkbox"/>	1.3.3
			Category 3	\$ 1,800	<input type="checkbox"/>	1.3.4
			Category 4	\$ 600	<input type="checkbox"/>	1.3.5
A facility for the treatment and disposal of industrial process wastewater, including contact cooling water.	N/A	Approval or Revocation*	N/A	\$ 6,000	<input type="checkbox"/>	1.4.1
		Amendment	Category 1	\$ 6,000	<input type="checkbox"/>	1.4.2
			Category 2	\$ 3,600	<input type="checkbox"/>	1.4.3
			Category 3	\$ 1,800	<input type="checkbox"/>	1.4.4
			Category 4	\$ 600	<input type="checkbox"/>	1.4.5
TOTAL COST:				\$ 600		

* revocation requiring technical review

Table 2: Wastewater Disposal

Description	Design Capacity	Application Type	Increase in Design Capacity?	Cost	(✓)	Ref.
A subsurface disposal facility	≤ 15 m ³ /day	Approval or Revocation*	N/A	\$ 600	<input type="checkbox"/>	2.1.1
		Amendment	Yes	\$ 600	<input type="checkbox"/>	2.1.2
	> 15 m ³ /day, ≤ 50 m ³ /day	Approval or Revocation*	N/A	\$ 1,500	<input type="checkbox"/>	2.1.3
		Amendment	Yes	\$ 1,500	<input type="checkbox"/>	2.1.4
	> 50 m ³ /day	Approval or Revocation*	N/A	\$ 3,000	<input type="checkbox"/>	2.1.5
		Amendment	Yes	\$ 3,000	<input type="checkbox"/>	2.1.6
A facility for the disposal of spent water from a non-contact industrial cooling process.	N/A	Approval or Revocation*	N/A	\$ 1,000	<input type="checkbox"/>	2.2.1
		Amendment	Yes	\$ 1,000	<input type="checkbox"/>	2.2.2
Storm and sanitary sewers and appurtenances	N/A	Approval or Revocation*	N/A	\$ 900	<input checked="" type="checkbox"/>	2.3.1
		Amendment	Yes**	\$ 900	<input type="checkbox"/>	2.3.2
Storm and sanitary pump stations, force mains, and sanitary sewage detention chambers or oversized sewers.	N/A	Approval or Revocation*	N/A	\$ 1,800	<input type="checkbox"/>	2.4.1
		Amendment	Yes	\$ 1,800	<input type="checkbox"/>	2.4.2
TOTAL COST:				\$ 900		

* revocation requiring technical review

** expansion of existing sewers

Table 3: Review

Description	Cost	(✓)
Review of Hydrogeological Assessment	\$ 3,000	<input type="checkbox"/>
Review of effluent quality criteria assessment for stormwater management, cooling water or soil remediation facilities	\$ 1,400	<input checked="" type="checkbox"/>
Review of effluent quality criteria assessment for municipal or private sewage, industrial process wastewater or leachate treatment plant	\$ 6,000	<input type="checkbox"/>
TOTAL COST:		\$ 1,400

Appendix B

Water Quality Results
Stormwater Pond No. 1, No. 2 & No. 3
December 2009 - March 2011

WM - Richmond Landfill
Water Quality Results
Storm Water Management Pond 3
December 2009 to March 2011

Parameter	Units	PWQO	2009-12-04	2010-01-25	2010-02-09	3/10/2010	3/25/2010	2010-06-23	2010-08-12	2010-09-02	2010-10-26	2010-12-06	2011-01-18	2011-01-18	2011-01-18	2011-02-10	2011-02-28	2011-03-07	2011-03-14	4/4/2011
Alkalinity	mg/L		172	102	277	78	170	164	166	178	169	178	207	220	242	246	107	97	192	
Aluminum (0.2u)	mg/L	0.075	0.011	0.032	<0.005	<0.005	0.011	<0.15	<0.15	<0.15	<0.15	<0.15	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	0.035	<0.005
Ammonia	mg/L		<0.15	0.56	0.45	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	0.2	0.27	0.17	<0.15	
Arsenic	mg/L	0.1	<0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	<0.001	<0.001	0.001
Barium	mg/L					0.038	0.029	0.031	0.029	0.031	0.046	0.06	0.067	0.072	0.089	0.079	0.043	0.032	0.085	
Benzene	mg/L	0.1	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Beryllium	mg/L	0.2	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.11	0.086	0.1	0.1	0.082	0.086	0.085	0.077	0.076	0.03	0.03	0.05	
Boron	mg/L	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cadmium	mg/L																			
Carbonaceous BOD	mg/L																			
Chemical Oxygen Demand	mg/L																			
Chloride	mg/L		97	18	94	13	47	64	63	76	85	67	48	43	56	79	21	16	46	
Chromium (total)	mg/L	0.0009	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Field Conductivity	µS/cm		459	293	938	210	505	525	560	611	630	NA	571	604	630	976	281	291	822	
Cobalt	mg/L	0.0009																		
Conductivity	µS/cm		745	278	927	211	536	569	540	605	625	582	625	618	733	787	292	256	581	
Copper	mg/L	0.005	0.004	0.011	0.004	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	0.005	<0.002	0.004	<0.002	0.005	0.006	0.006	<0.002	
Ethylbenzene	mg/L	0.008																		
Field Temperature	°C		4.5	5.1	3.5	3.1	8	26.4	27.8	27.3	12.1	NA	1.6	2.7	1.6	2.1	1.7	0.5	7.6	
Hardness	mg/L		220	100	300	76	190	170	170	170	190	200	200	230	260	260	110	100	220	
Iron	mg/L	0.3	0.27	4.2	0.76	0.15	0.73	<0.1	0.15	<0.1	<0.1	0.55	0.27	0.34	0.4	0.4	1.7	0.92	0.17	
m,p-Xylene	mg/L	0.02																		
Mercury	mg/L	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel	mg/L	0.025	0.003	0.006	0.007	<0.001	0.003	<0.001	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.004	0.003	0.002	0.002	
Nitrate	mg/L		<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.3	0.2	<0.1	
Nitrate + Nitrite	mg/L		<0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.3	0.2	<0.1	
Nitrite	mg/L		<0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01	<0.01	
o-Xylene	mg/L	0.04																		
pH (field)	-	6.5-6.5	7.61	8.66	7.5	8.22	8.15	8.04	7.62	8	8.17	8.02	7.65	7.46	7.51	7.65	7.95	8.03	8.08	
pH (lab)	-	6.5-6.5	8	7.9	8.1	8	8.1	8	8.1	8.2	8.4	8.02	7.78	7.84	7.8	7.94	7.89	7.74	8.17	
Phenols	mg/L	0.007	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Phosphorus (total)	mg/L	0.02	0.03	0.23	0.1	0.086	0.085	0.025	0.02	0.015	0.014	0.092	0.043	0.073	0.055	0.077	0.14	0.06	0.038	
Potassium	mg/L																			
Selenium	mg/L	0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Silver	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium	mg/L																			
Toluene	mg/L	0.0008																		
Total Dissolved Solids	mg/L		475	182	600	132	350	360	350	400	382	422	380	388	436	484	180	152	382	
Total Kjeldahl Nitrogen	mg/L		0.9	<10	2.5	1.1	1.4	1	0.9	0.9	1	<4	0.9	1.3	0.8	1.4	1.1	0.9	0.7	
Total Organic Carbon	mg/L		8.3	12.4	15.9	8.8	9.2	11.9	10.8	9.7	9.3	8.2	7.2	9.5	8	8.2	6.4	5.2	5.1	
Total Suspended Solids	mg/L		6	100	9	5	32	2	6	1	<1	18	7	7	4	6	45	9	6	
Total Xylenes	mg/L		<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Unfiltered Ammonia	mg/L	0.02	0.038	0.031	0.038	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	0.012	0.018	<0.01	<0.01	0.012	0.012	0.012	<0.02	
Zinc	mg/L	0.03	0.038	0.031	0.038	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	0.012	0.018	<0.01	<0.01	0.012	0.012	0.012	<0.02	
RBT Acute Lethality Test	-		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
DM Acute Lethality Test	-		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Shaded values indicated PWQO exceeded
06/12/2010 Field temperature pH and conductivity readings were not collected because of field instrument problems.
Estimated field temperature to allow for un-ionized ammonia calculation using lab pH. Water surface was frozen with skim
- (RBT) Rainbow Trout 96-hour 100% effluent concentration Acute Lethality Test
- (DM) Daphnia Magna 48-hour 100% effluent concentration Acute Lethality Test
Pass = no more than 50% effluent concentration.



WM - Richmond Landfill
Water Quality Results
Storm Water Management Pond 2
December 2009 to March 2011

Parameter	Units	PLVCO	2009-12-04	2010-01-25	2010-02-09	3/10/2010	3/25/2010	2010-10-26	2011-02-23	2011-03-07	2011-03-14	2011-03-25	4/4/2011
Alkalinity	mg/L		254	86	318	90	289	193	153	99	43	196	197
Aluminum (0.2u)	mg/L	0.075	0.017	0.057	< 0.005	0.007	0.013	< 0.15	< 0.005	0.009	0.048	< 0.005	0.007
Ammonia	mg/L		0.87	1.82	4.84	1.1	1.29	< 0.15	1.39	0.94	0.21	0.26	< 0.15
Arsenic	mg/L	0.1	0.001	0.001	0.004	0.001	0.002	0.078	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Barium	mg/L								0.065	0.068	0.018	0.064	0.089
Benzene	mg/L	0.1						< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0003	< 0.0001
Beryllium	mg/L	1.1						< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Boron	mg/L	0.2						0.16	0.055	0.036	< 0.02	0.057	0.093
Cadmium	mg/L	0.002	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Carbonaceous BOD	mg/L							< 2	4	5	< 2	2	3
Chemical Oxygen Demand	mg/L							34	37	40	16	46	42
Chloride	mg/L		86	16	58	17	88	98	60	27	9	59	100
Chromium (total)	mg/L	0.009	< 0.005	0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Field Conductivity	µS/cm		517	411	832	270	875	718	568	297	114	632	842
Cobalt	mg/L	0.009						< 0.0005	< 0.0005	0.0014	< 0.0005	0.0005	0.0006
Conductivity	µS/cm		840	238	831	253	852		558	300	120	623	834
Copper	mg/L	0.05	0.008	0.011	0.005	0.003	0.01	0.003	0.006	0.007	0.003	0.005	0.004
Ethylbenzene	mg/L	0.009						< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Field Temperature	°C		4.8	2.3	2.5	5	7.1	12.3	2.1	2.2	0.8	2.6	5.8
Hardness	mg/L		270	79	290	84	290	190	160	93	43	210	280
Iron	mg/L	0.3	2.9	4.4	1.9	0.48	0.71	0.29	0.37	3.2	0.43	0.33	0.46
m+p-Xylene	mg/L	0.002						< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0003	< 0.0001
Mercury	mg/L	0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Nickel	mg/L	0.025	0.008	0.005	0.006	0.002	0.008	0.006	0.004	0.004	0.001	0.004	0.005
Nitrate	mg/L		1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	0.9	0.3	0.2	0.2	0.7
Nitrate + Nitrite	mg/L		1	0.4	< 0.1	< 0.1	< 0.1	< 0.1	0.9	0.3	0.2	0.2	0.7
Nitrite	mg/L		0.04	0.02	< 0.01	< 0.01	0.02		0.05	0.01	< 0.01	0.02	0.02
o-Xylene	mg/L	0.04						< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0003	< 0.0001
pH (Field)	-		7.09	8.43	7.65	7.76	8	7.98	7.67	8.25	7.9	7.74	8.11
pH (Lab)	-		8	7.8	7.8	7.7	8.2	8.26	7.86	7.83	7.07	7.85	8.1
Phenols	mg/L	0.001	< 0.001	0.002	0.011	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phosphorus (total)	mg/L	0.02	0.19	0.17	0.22	0.097	0.11	0.025	0.16	0.23	0.076	0.087	0.081
Potassium	mg/L							11	11	8.1	3.3	8	8.9
Selenium	mg/L	0.1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.002	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	mg/L	0.0007	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Sodium	mg/L							71	37	18	6.6	49	69
Toluene	mg/L	0.009						< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0006	< 0.0002
Total Dissolved Solids	mg/L		540	154	526	160	562	478	350	180	78	402	514
Total Kjeldahl Nitrogen	mg/L		< 7	< 7	8	2.5	3.8	1.3	3.3	2.4	0.9	1.6	2
Total Organic Carbon	mg/L		13.7	13.4	27.9	11.1	15.9	11.8	11.2	10.3	5	10.5	13.2
Total Suspended Solids	mg/L		49	68	27	2	9	5	6	34	5	4	13
Total Xylenes	mg/L							< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0003	< 0.0001
Unionized Ammonia	mg/L	0.02	< 0.02	0.05	0.03	< 0.02	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	mg/L	0.03	0.02	0.023	0.011	< 0.01	< 0.01	< 0.01	< 0.01	0.015	< 0.01	< 0.01	< 0.01
RBT Acute Lethality Test	-		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
DM Acute Lethality Test	-		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

- (RBT) Rainbow Trout 96-hour 100% effluent concentration Acute Lethality Test
 - (DM) *Daphnia Magna* 48-hour 100% effluent concentration Acute Lethality Test
 Pass = no more than 50% effluent concentration.

WM - Richmond Landfill
 Water Quality Results
 Storm Water Management Pond 1
 December 2009 to March 2011

Parameter	Units	FWQO	3/10/2010	3/28/2010	2011-03-08	2011-03-25	4/4/2011
Alkalinity	mg/L		146	392	111	332	313
Aluminum (0.2u)	mg/L	0.025	0.011	0.009	< 0.005	< 0.005	< 0.005
Ammonia	mg/L		1.34	< 0.15	1.03	0.2	< 0.15
Arsonic	mg/L	0.1	< 0.001	0.001	0.002	0.002	< 0.001
Barium	mg/L				0.038	0.088	0.068
Benzene	mg/L	0.1			< 0.0001	< 0.0003	< 0.0001
Beryllium	mg/L	1.1	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Boron	mg/L	0.2			0.054	0.11	0.095
Cadmium	mg/L	0.0022	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Carbonaceous BOD	mg/L				5	4	4
Chloride	mg/L		29	110	42	50	43
Chemical Oxygen Demand	mg/L				23	76	49
Chromium (total)	mg/L	0.0099	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Field Conductivity	µS/cm		371	1072	336	910	657
Cobalt	mg/L	0.0029			0.0006	0.0011	0.0006
Conductivity	µS/cm		378	1060	323	891	778
Copper	mg/L	0.005	0.003	0.006	0.008	0.006	0.004
Ethylbenzene	mg/L	0.008			< 0.0001	< 0.0003	< 0.0001
Field Temperature	°C		10.1	6.4	0.8	2.2	5.3
Hardness	mg/L		120	360	110	310	320
Iron	mg/L	0.3	0.42	0.7	0.76	0.68	0.67
m+p-Xylene	mg/L	0.002			< 0.0001	< 0.0003	< 0.0001
Mercury	mg/L	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Nickel	mg/L	0.0025	0.004	0.011	0.003	0.006	0.003
Nitrate	mg/L		< 0.1	0.1	0.9	< 0.1	< 0.1
Nitrate + Nitrite	mg/L		< 0.1	0.2	1	< 0.1	< 0.1
Nitrite	mg/L		0.01	0.03	0.02	< 0.01	< 0.01
o-Xylene	mg/L	0.04			< 0.0001	< 0.0003	< 0.0001
pH (Field)	-	6.5-6.5	8.14	7.68	7.78	7.81	7.88
pH (Lab)	-	6.5-8.5	7.8	8.2	7.84	8	7.99
Phenols	mg/L	0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
Phosphorus (total)	mg/L	0.02	0.075	0.07	0.21	0.11	0.10
Potassium	mg/L				7.8	8.5	6.6
Selenium	mg/L	0.1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	mg/L	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Sodium	mg/L				20	63	47
Toluene	mg/L	0.0009			< 0.0002	< 0.0006	< 0.0002
Total Dissolved Solids	mg/L		250	670	174	536	488
Total Kjeldahl Nitrogen	mg/L		3.1	2.4	2.4	1.8	1.5
Total Organic Carbon	mg/L		13.8	19.5	10.9	12.3	13.1
Total Suspended Solids	mg/L		3	8	9	9	6
Total Xylenes	mg/L				< 0.0001	< 0.0003	< 0.0001
Un-ionized Ammonia	mg/L	0.02	0.04	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	mg/L	0.03	< 0.01	< 0.01	0.012	< 0.01	< 0.01
RBT Acute Lethality Test	-		Pass	Pass	Pass	Pass	Pass
DM Acute Lethality Test	-		Pass	Pass	Pass	Pass	Pass

- (RBT) Rainbow Trout 96-hour 100% effluent concentration Acute Lethality Test
 - (DM) *Daphnia Magna* 48-hour 100% effluent concentration Acute Lethality Test
 Pass = no more than 50% mortality at 100% effluent concentration.