



City of
Peterborough

TO: Members of the Waste Management Steering Committee

FROM: W. H. Jackson, Director of Utility Services

MEETING DATE: September 9, 2013

SUBJECT: Report WMC13-018
TSSA Inspection of Peterborough County/City Waste
Management Facility - Update

PURPOSE

To update the Waste Management Committee on the TSSA Inspection of the Peterborough County/City Waste Management Facility.

RECOMMENDATIONS

That the Waste Management Committee endorse the recommendations as outlined in Report WMC13-018 dated September 9, 2013 of the Director of Utility Services as follows:

- a) That Report WMC13-018 dated September 9, 2013 providing updated information on the inspection of the Peterborough County/City Waste Management Facility undertaken by a representative of the Technical Standards and Safety Authority be received for information; and
- b) That Staff be requested to further update Committee as necessary on the matter of the TSSA Inspection of the Peterborough County/City Waste Management Facility.

BUDGET AND FINANCIAL IMPLICATIONS

The estimated cost to undertake the improvements/adjustments required by TSSA is \$50,000. More accurate information will be available after the completion of the proposed Request for Quotations.

BACKGROUND

The Waste Management Committee at its meeting of June 24, 2013 received a report (Report WMC13-012 attached as Appendix A) on a May 29, 2013 unscheduled inspection of the Waste Management Facility by a representative of the Technical Standards and Safety Authority (TSSA).

Since that time, the Waste Management Facility Consultant assisted by staff has prepared and submitted a response (Appendix B). The TSSA Inspection Report required a compliance date of August 30, 2013 however, due to the City of Peterborough's internal process for contractor procurement; an extension of the compliance to December 15, 2013 has been requested.

Beyond the extension, the response provides a full explanation of the situation as it exists in the field citing specifics about equipment installation and the applicable jurisdiction at the time of installation. In some instances, a request for "grandfathering" has been made. This has been accompanied by a completed "Request for Variance" which is the formal TSSA procedure for grandfathering.

In other instances, a commitment has been made to repair/update specific items identified by TSSA. In this regard, the next step is to request quotes from qualified firms to undertake these works and to then proceed to complete the work. Staff has suggested to TSSA that this aspect of the inspection requirements can be completed by December 15, 2013.

Submitted by,

W. H. Jackson
Director, Utility Services

Contact Name:

W. H. Jackson

Director, Utility Services

Phone: 705-742-7777 Ext 1894

Fax: 705-876-4621

E-Mail: wjackson@peterborough.ca

Attachments:

Appendix A - Report WMC13-012 Technical Standards and Safety Authority Inspection of
Peterborough County/City Waste Management Facility

Appendix B - Response to Peterborough TSSA Inspection Report of May 29, 2013

Appendix A – Technical Standards and Safety Authority Inspection Report completed May 29, 2013.



TECHNICAL STANDARDS
and SAFETY AUTHORITY

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s): Facility Type:	Inspection Completion Date: MAY 29, 2013 Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

Orders Issued To: Peterborough County / City Waste Management Facility and Craig Simmons

Line	Reference and Order(s)	Compliance Date
65108 3-1	<p>Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).</p> <p>1) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 16.1.1, within the specified compliance date and ensure that the Waste Gas Burner (John Zink, Model ZTOF5 X 40; Serial 924763) has been approved by the authority having jurisdiction, as per code requirements (Subsequently reference B105 M93 Code, Section-15.1.1)</p> <p>There is no evidence to indicate that the John Zink Waste Gas Burner, Model ZTOF5 X 40; Serial 924763, has any approval as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 16.1.1)</p> <p>16.1.1 An appliance utilizing landfill gas only, dual fired, or in combination with natural gas, propane, or fuel oil shall be approved by the authority having jurisdiction for the application.</p>	AUG 30, 2013
65108 3-2	<p>Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).</p> <p>2) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 22, (22.1.1) within the specified compliance date and ensure all of the sub sections related to Section 22 have been updated and are in compliance with code requirements (Subsequently reference B105 M93 Code, section 21.1.1)</p> <p>Evidence indicates that subsections of Section 22 for the Code for Digester Gas and Landfill Gas Installations (B149.6.11) are not in compliance.</p> <p>22.1.1 The owner of an operating landfill gas system shall develop a set of operating and maintenance procedures based on experience and knowledge of the system and the conditions under which it is operated. The procedures shall be acceptable to the authority having jurisdiction.</p>	AUG 30, 2013
65108 3-3	<p>Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).</p> <p>3) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 16.4.1.7, within the specified compliance date and ensure the</p>	AUG 30, 2013
Customer Signature & Position / Date:		Inspector Name: Janes, Anthony
		Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org
		Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First


**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682 8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORD RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s):	Inspection Completion Date: MAY 29, 2013
	Facility Type:	Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect	
	The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

	distance from the Waste Gas Burner to the fence being utilized is within code requirements. (Subsequently reference B105 M93 Code, Section 15.4.7) Evidence indicates that the Waste Gas Burner is located inside a fence with less than 7.5 meters from the fence as indicated in the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 16.4.1.7) Note: The public enter the facility to dispose of waste. 16.4.1.7 When a waste gas burner stack is accessible to the public, safety fencing shall be provided not less than 7.5 m horizontally from the stack	
65108 3-4	CAN/CSA-B149.1-10 Natural Gas and Propane Installation Code, 5.2.2.3 A regulator installed outdoors or in an unheated area shall be positioned so that the bonnet vent opening discharges vertically downward, except that (a) when installed within a container dome, the vent opening shall be positioned downward not less than 15" from the horizontal; and (b) a single-stage regulator of a capacity not exceeding 150 000 Btu h (45 kW) may be installed in a horizontal position, provided that it is protected from inclement weather. 4) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.1 10, Natural Gas and Propane Installation Code, section 5.2.2.3, within the specified compliance date and ensure that the vent termination for the pilot regulator terminates in a location as per code requirements.	AUG 30, 2013
65108 3-5	Evidence indicates that the Waste Gas Burner Pilot regulator vent line does not terminate in a downward direction as per the Natural Gas and Propane Installation Code (B149.1 10; section 5.2.2.3) CAN/CSA-B149.2-10 Propane Storage and Handling Code, 6.7.2 Except as permitted in Clauses 6.5, 6.7.3, 10, and 11.9(b) of this Code and Clause 5.2.2 of CAN/CSA-B149.5, a cylinder shall be installed outside a building, with the discharge from the cylinder relief valve not less than (a) 3 ft (1 m) on a horizontal plane from any building opening when the opening is below the level of the relief valve discharge; (b) 10 ft (3 m) on a horizontal plane from the air intake of any appliance or air-moving equipment; and (c) 10 ft (3 m) on a horizontal plane from any source of ignition. Items (b) and (c) shall not apply to an appliance when the cylinder retention means is incorporated and certified as part of the appliance. 5) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.2 10, Propane Storage and handling Code, section 6.7.2, within the specified compliance date and ensure that the distances from a source of ignition to the propane cylinders, being utilized for the Waste Gas Burner pilot, is compliant as per code requirements.	AUG 30, 2013

Customer Signature & Position / Date:		Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org	Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First



**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s): Facility Type: Inspection Completion Date: MAY 29, 2013 Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.

	Evidence indicates that the Waste Gas Burner is utilizing Propane cylinders for the pilot which, are located less than 10 feet (3m) from an electrical panel disconnect / transformer, reference the Propane Storage and Handling Code (B149.2 10; section 6.7.2)	
65108 3-6	Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1). 6) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.3.1.1, within the specified compliance date and supply supporting documentation to ensure the Stainless Steel piping being utilized is 316L or replace the Stainless Steel with material which meets code requirements (Subsequently reference B105 M93 Code; section 17.3.1.1) Evidence indicates that there is Stainless Steel welded piping being utilized above ground to the Waste Gas Burner with no evidence of the piping being 316L stainless steel as required by the Code for Digester Gas and Landfill Gas Installations (B149.6. 11; section 18.3.1.1) 18.3.1.1 When stainless steel pipe and fittings are used, they shall be made of Type 316 stainless steel, except that when field welding is required, Type 316L shall be used.	AUG 30, 2013
65108 3-7	Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1). 7) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.8.4, within the specified compliance date and supply supporting documentation with reference to the two manual valves being utilized on the Landfill Gas Piping System or replace the valve with valves which meet code requirements (Subsequently reference B105 M93 Code, Section 17.8.3) Evidence indicates that there are two Manual valves being utilized on the Landfill Gas Piping to the Waste Gas Burner with no evidence of certification or suitability for use (B149.6 11; section 18.8.4) 18.8.4 Non-lubricated valves up to 6 NPS (152 mm) in diameter shall be approved to CGA 3.16. Larger valves shall be gear operated.	AUG 30, 2013
65108 3-8	Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).	AUG 30, 2013

Customer Signature & Position / Date:	Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org
		Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First


**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s): 	Inspection Completion Date: MAY 29, 2013
	Facility Type:	Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

	<p>8) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 16.2.2.1, within the specified compliance date and ensure that the Automatic SSOV being utilized for the Landfill Gas System has a positioning indicator and a manual re set function as required by code. (Subsequently reference B105 M93 Code; Section 15.2.2.1)</p> <p>Evidence indicates that the System is utilizing only one (1) Automatic SSOV with no evidence of positioning indicator or manual re set function as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 16.2.2.1)</p> <p>16.2.2.1 An automatic safety shut-off valve certified to ANSI Z21.21/CSA 6.5 and marked C/I and suitable for use with landfill gas shall be provided to shut off the gas supply to the appliance when the pressure drops below the setting of the low-gas-pressure safety cut-off switch. The valve shall be installed so that the invert does not allow accumulation of moisture and debris and shall be:</p> <p>(a) Installed upstream of the appliance; (b) Interlocked with the blower, if the blower is dedicated to the appliance; (c) Equipped with a visual valve position indicator; (d) Equipped with a mandatory manual reset function to open</p>	
65108 3-9	<p>Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).</p> <p>9) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.7.2, within the specified compliance date and ensure that the Stainless Steel Landfill Gas Piping which is being utilized for the Landfill Gas System above ground is identified as per code requirements. (Subsequently reference B105 M93 Code; Section 17.7.2)</p> <p>Evidence indicates that the System is utilizing Stainless Steel Landfill Gas Piping above ground which is not identified as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 18.7.2)</p> <p>18.7.2 All gas piping, tubing, fittings, and controls shall be painted or color coded with high visibility Yellow orange paint. Each system of piping shall be labeled, at least every linear 10 ft (3 m), and at every change in direction, with the name of the gas being transported and the direction of flow.</p>	AUG 30, 2013
65108 3-10	<p>CAN/CSA-B149.1-10 Natural Gas and Propane Installation Code. 5.3 Except as specified in Clauses 5.2.2.4 and 5.2.3, when a line pressure regulator is not equipped with an internal</p>	AUG 30, 2013

Customer Signature & Position / Date:		Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org	Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred
(Note: This is not an invoice)

Putting Public Safety First

**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s): Facility Type: Equipment Type:	Inspection Completion Date: MAY 29, 2013
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

	<p>relief device, it shall have immediately downstream an overpressure protection device or a line relief device as required in Clause 5.2.1.5(b), with a discharge setting of either</p> <p>(a) not less than 2 times and not more than 3 times the delivery pressure on systems operating up to 5 psig (35 kPa); or (b) not less than 1.5 times and not more than 2 times the delivery pressure on systems operating at more than 5 psig (35 kPa). The relieving pressure setting of the line relief device shall be not higher than that of the lowest-rated component or accessory located downstream.</p> <p>10) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.1 10, Natural Gas and Propane Installation Code, section 5.3, within the specified compliance date and ensure that the downstream components on the pilot fuel train are protected as per code requirements.</p> <p>Evidence indicates that the Landfill Gas System is utilizing a propane gas pilot solenoid valve rated for 50 psi, the propane supply pressure is regulated to 140 psi from the propane cylinders; no evidence of protection for downstream components as per the Natural Gas and Propane Installation Code (B149.1 10; section 5.3)</p>	
65108 3-11	<p>Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).</p> <p>11) Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.9.3, within the specified compliance date and ensure that the manual valve for drain line on the Landfill Gas piping supplying the Waste Gas Burner, has incorporated a union at the required location as per code requirements. (Subsequently reference B105 M93 Code, Section 17.9.3)</p> <p>Evidence indicates that the System is utilizing a manual valve for a drain line (drip trap) on the Landfill Gas Piping supplying the Waste Gas Burner; there is no evidence of a union being located as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 18.9.3)</p> <p>18.9.3 Each drain line connected to a manual-type drip trap shall be fitted with a manual ball or plug type shut off valve upstream from a union.</p>	AUG 30, 2013
65108 3-12	<p>Technical Standards and Safety Act. 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).</p>	MAY 30, 2013

Customer Signature & Position / Date:	Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org
		Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First


**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s):	Inspection Completion Date: MAY 29, 2013
	Facility Type:	Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect <small>The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.</small>	

65108 3-13	<p>12] Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 14.3.1, within the specified compliance date and ensure that any future work being performed on the equipment which is utilizing Landfill gas (Waste Gas Burner / components / Piping) is done so by qualified personnel licensed as required by the Authority Having Jurisdiction for that fuel (TSSA) (Subsequently reference B105 M93 Code, Section 13.3.1)</p> <p>Evidence indicates that system maintenance was being performed on the Landfill Gas System however there is no evidence of a certified technician performing this maintenance on the Landfill Gas System as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 14.3.1)</p> <p>14.3.1 All work on installed on line appliances or equipment utilizing or handling landfill gas shall be performed by qualified personnel licensed as required by the authority having jurisdiction.</p>	AUG 30, 2013
	<p>Technical Standards and Safety Act, 14 (1) - Safety orders A director may give a safety order to any person or class of persons with respect to any matter governed by this Act that pertains to safety. 2000, c. 16, s. 14 (1).</p> <p>13] Inspectors Orders issued today May 29, 2013: You are hereby ordered to comply with the B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.3.2.1, within the specified compliance date and supply supporting documentation for the "Old Well Heads" confirming code compliance or replace the "Old Well Heads" with material which meets code requirements. (Subsequently reference B105 M93 Code Section 17.3.2.1)</p> <p>Inspection of Well Heads (old ones / new ones) found that the new well heads references the CAN / CSA B137.3; inspection of the piping for the old well heads do not reference standards as specified in the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 18.3.2.1)</p> <p>18.3.2.1 Plastic pipe and fittings shall be made of polyethylene or glass fibre reinforced thermosetting resin or polyvinyl chloride (PVC) and be approved to the CAN/CSAB137.3 or CAN/CSA B137.4, or comply with API 15LE and ASTM D2996. The use of PVC and API 15LE pipes and fittings are restricted as follows:</p> <p>(a) PVC pipes and fittings: If it is to be installed above ground inside the landfill area and upstream, on the vacuum side of the LFG system, the TSSA must be notified by way of a letter from a Professional Engineer. The letter must identify the type of piping used, state that such piping is suitable to transport landfill gas under the temperatures and pressures to which it will be exposed and certify that it is resistant to ultraviolet degradation;</p>	

Customer Signature & Position / Date:		Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email AJanes@tssa.org	Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred
(Note: This is not an invoice)

Putting Public Safety First


**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s): Facility Type: 	Inspection Completion Date: MAY 29, 2013 Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

(b) API 15LE pipes and fittings: If it is to be installed upstream, on the vacuum side of the LFG system, the TSSA must be notified by way of a letter from a Professional Engineer. The letter must identify the type of piping used, the SDR, and state that it is suitable to transport landfill gas under all temperatures and pressures to which it will be exposed.	
---	--

Task Notes

Arrived on site May 28, 2013 for inspection of the Peterborough County / City Waste Management Facility, located at 1260 Bensfort Rd. Peterborough, ON. Met on site with Craig Simmons, coordinator of waste operations for the City of Peterborough and also with Bob Barry

Reviewed Inspection / Audit procedure with Craig Simmons and proceeded with review of the Landfill Site with respect to the Extraction System and the Waste Gas Burner as per section 22 (Operation and Maintenance of Landfill Gas Systems) of the Code for Digester Gas and Landfill Gas Installations.

The following sections were referenced

- 22.1.1 = No ☐ will implement
- 22.1.2 = Yes ☒ daily inspection sheets
- 22.2.1 = Yes ☒ annual inspection for gas piping / flame arrester (daily visual inspection)
- 22.2.2 = Yes ☒ annual inspection for gas piping / flame arrester (daily visual inspection)
- 22.2.3 = Yes ☒ will implement into Operation and Maintenance Manual
- 22.3.1 = Yes ☒ kept on laptop (electronic)
- 22.3.2 = No ☐ will implement into Operation and Maintenance Manual
- 22.4.1 = Yes ☒ not documented
- 22.4.2 = No ☐ will implement
- 22.4.3 = Yes ☒ will implement into Operation and Maintenance Manual
- 22.4.4 = No ☐ will implement into Operation and Maintenance Manual
- 22.5.1 = Yes ☒ annual inspection reports
- 22.5.2 = Yes ☒ annual inspection reports
- 22.6.1 = Yes ☒ no documentation
- 22.7.1 = Yes ☒ no documentation
- 22.7.2 = Yes ☒ no documentation
- 22.8.1 = Yes ☒ third party contractors/ reports supplied
- 22.8.2 = No ☐ will implement into Operation and Maintenance Manual
- 22.8.3 = No ☐ will implement into Operation and Maintenance Manual
- 22.9 = N/A

Customer Signature & Position / Date:		Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org	Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First



**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s):	Inspection Completion Date: MAY 29, 2013
	Facility Type:	Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect	
	The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

Proceeded with review of the "Work Instructions" Flares for Waste Gas Engineering Review document (IFSD 004) with Craig Simmons and Bob Barry

Proceeded with site inspection of the Extraction System and the John Zink Waste Gas Burner, Model ZTOF5 X 40; Serial 924763.

During inspection of the John Zink Waste Gas Burner the following was noted:
No evidence of approval as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 16.1.1)

Note: The following was confirmed:
Purges with modulating louvers "open"
Flexible hose utilized on pilot line, no evidence of approval
Flame arrester located on Landfill Gas piping at flare
Temperature sensor located at flame arrester (no thermal valve)
Only one automatic valve (upstream of blower)
No low gas pressure switch
No high gas pressure switch
Manual valve upstream and downstream of blower (no evidence of approval)
Pilot utilizing propane gas
No evidence of manual valve being utilized on pilot line being certified
5 minute pre purge
Trial for ignition approx. 10 seconds
Ignition remains on for approx. 2.5 minutes
Flame failure response time 4 seconds
Direct spark ignition test (OK)
Air switch tested (OK)
High temperature limit tested (OK)
Blower sequencing sensor tested (OK)
Flame Failure Alarm tested (OK)
5 seconds for flame to extinguish after unit was shut down.

No immediate hazards were identified with respect to the operation of the John Zink Waste Gas Burner Model ZTOF5 X 40; Serial 924763, at this time.

The Waste Gas Burner is located inside a fence with less than 7.5 meters from the fence as indicated in the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 16.4.1.7)

Customer Signature & Position / Date:	Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org
		Inspector Fax: 905-986-1358

As a not for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First



TECHNICAL STANDARDS
and SAFETY AUTHORITY

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s): Facility Type: Equipment Type:	Inspection Completion Date: MAY 29, 2013
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

The Waste Gas Burner Pilot regulator vent line does not terminate in a downward direction as per the Natural Gas and Propane Installation Code (B149.1 10; section 5.2.2.3)

The Waste Gas Burner is utilizing Propane cylinders for the pilot which, are located less than 10 feet (3m) from an electrical panel disconnect / transformer, reference the Propane Storage and Handling Code (B149.2 10; section 6.7.2)

Inspection of the Extracting System and piping concluded the following:

Stainless Steel welded piping being utilized above ground to the Waste Gas Burner with no evidence of the piping being 316L stainless steel as required by the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 18.3.1.1)

Two Manual valves being utilized on the Landfill Gas Piping to the Waste Gas Burner with no evidence of certification or suitability for use (B149.6 11; section 18.8.4)

The System is utilizing only one (1) Automatic SSOV with no evidence of positioning indicator or manual re set function as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 16.2.2.1)

The System is utilizing Stainless Steel Landfill Gas Piping above ground which is not identified as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 18.7.2)

The System is utilizing a propane gas pilot solenoid valve rated for 50 psi / pressure regulated to 140 psi from propane cylinders; no evidence of protection for downstream components as per the Natural Gas and Propane Installation Code (B149.1 10; section 5.3)

The System is utilizing a manual valve for a drain line on the Landfill Gas Piping supplying the Waste Gas Burner; there is no evidence of union being located as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 18.9.3)

Customer Signature & Position / Date:	Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org
		Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First


**TECHNICAL STANDARDS
and SAFETY AUTHORITY**

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1-877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s): 	Inspection Completion Date: MAY 29, 2013
	Facility Type:	Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

System maintenance was indicated as to being performed on the Landfill Gas System however there is no evidence of a certified technician performing this maintenance on the Landfill Gas System as per the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 14.3.1)

Inspection of Well Heads (old ones / new ones) found that the new well heads references the CAN / CSA B137.3; inspection of the piping for the old well heads do not reference standards as specified in the Code for Digester Gas and Landfill Gas Installations (B149.6 11; section 18.3.2.1)

Conclusion:

Inspection of the Peterborough County / City Waste Management Facility, located at 1260 Bensfort Rd. Peterborough, ON, is not complete; no immediate hazards were identified during inspection of the facility conducted on May 28, 2013.

Please refer to Inspectors Orders with respect to the noted deficiencies regarding conditions and compliance dates.

NOTE:

If the attached Fuel Safety Inspectors Orders cannot meet compliance within the time limit specified on the Order, an Approved Variance from TSSA issued within the compliance date of the Inspectors Order will also deem these Inspectors Orders to be in compliance. If such Variance is granted all conditions outlined in that Variance shall be adhere to.

Inspection Note Complete.

Pursuant to my authority under Section 21 of the Technical Standards and Safety Act, 2000, you are hereby ordered to comply with the above Inspectors Orders. Cost recovery fees will be billed according to TSSA billing policy and Technical Standards & Safety Act / 2000, Section 19 (1). Every person shall,

- (a) furnish all necessary means in his or her power to facilitate any entry, inspection, examination, test or inquiry by an inspector in the exercise of his or her powers and the carrying out of his or her duties; and
- (b) pay the fees required by the designated administrative authority for an inspection, examination, test or inquiry under clause (a). 2000, c. 16, s. 19 (1).

Inspector's instructions/orders are issued under the authority of Ontario's Technical Standards and Safety Act. Anyone who fails to carry out an inspector's order/instruction is guilty of an offence. Conviction as an individual carries fines up to \$50,000 or a prison term of up to one year or both. Conviction as a corporation carries fines up to \$1,000,000. (Technical Standards and Safety Act, 2000 / 37(1)(d)). You may appeal an inspector's order/instruction, but an order/instruction remains in effect during the appeal process. Appeals may be made to the Technical Standards and Safety Authority at the address shown above. (Technical Standards and Safety Act, 2000 / 22(1)).

Customer Signature & Position / Date:		Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org	Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.
(Note: This is not an invoice)

Putting Public Safety First



TECHNICAL STANDARDS
and SAFETY AUTHORITY

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario M8X 2X4
Toll free 1 877-682-8772
Fax (416) 231-1626
www.tssa.org

FS Inspection Report

Service Request #	1108740
Inspection Report #	4490043

Inspection Address: 1260 BENSFORT RD PETERBOROUGH;ON CA K9J 6X7	Reference Number(s):	Inspection Completion Date: MAY 29, 2013
	Facility Type:	Equipment Type:
Customer Name and Address: THE CORPORATION OF THE CITY OF PETERBOROUGH 500 GEORGE ST PETERBOROUGH;ON CA K9H 3R9	Task Type: FS-Unscheduled Inspect	
	The facility/equipment is inspected in accordance with Ontario's Technical Standards & Safety Act and the appropriate regulations and codes. When an Inspector's order is issued, time limits for compliance reflect the severity of the violation and serve to avoid disruption of service.	

Billing applied as per Technical Standards and Safety Act / 2000, Section 19 and TSSA billing policy.

**** NOTE****

Contact Inspector Anthony Janes at 905 986 1251, on or before compliance date to ensure compliance and or re inspection of site.

Customer Signature & Position / Date:		Inspector Name: Janes, Anthony	Inspector Contact Number: 905-986-1251
Report Received By: Peterborough County / City Waste Management Facility and Craig Simmons (e-mail / Canada Post)	Customer Contact Number: 705 742 7777 Ext. 2152	Inspector Email: AJanes@tssa.org	Inspector Fax: 905-986-1358

As a not-for-profit regulatory authority, TSSA operates on a cost recovery basis. An Invoice will be issued for the Total Charges Incurred.

(Note: This is not an invoice)

Putting Public Safety First

NOTE: You can now fill and save the DATA you entered on this form using free Adobe Reader (version 7 or 8)



Technical
Standards and
Safety Authority

www.tssa.org

14th Floor - Centre Tower
3300 Bloor Street West
Toronto ON M8X 2X4
Tel: 416 734 3348
Fax: 416 231 7525
Customer Service 1 877 682 8772
E-mail: tssubmissions@tssa.org

Application for a Variance/Deviation

Technical and Standards and Safety Act
Fuels Safety Regulation

Clear Form

Print Form

Print form on Legal (8 1/2" x 14")

Please submit completed application and supporting documentation by mail, fax, or e-mail (in pdf format). Making a false statement may result in a fine or prosecution.			For Office Use Only	
Check applicable box(es)			FS Stamp	
<input type="checkbox"/> Bio-Gas	<input type="checkbox"/> Gasoline	<input type="checkbox"/> Propane		
<input type="checkbox"/> Fuel	<input type="checkbox"/> Landfill	<input type="checkbox"/> Other		
<input type="checkbox"/> Oil	<input type="checkbox"/> Natural Gas			
Code: _____ Section: _____				
Is this a field development project? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Equipment/Appliance/Component involved				
Make		Model	Serial No.	
Variance Description				

Legal Disclaimer - The owner agrees to hold harmless the Technical Standards and Safety Authority, its employees, agents, successors and assigns from any and all damages, actions, suits, claims or loss arising from the use, approval or refusal to approve of the appliance, equipment or work to which this approval applies. In the event of claims made against TSSA arising from the use of the appliance, equipment or work the owner accepts, on demand to defend such actions on behalf of TSSA and to assume any costs legal or otherwise for the defence or settlement of such claims. Failure to comply with any of the terms and conditions of the approval voids the approval.

A. Owner of Appliance, Equipment or Installation		B. Invoicee Same as: <input type="checkbox"/> A <input type="checkbox"/> C <input type="checkbox"/> D (Person/Company responsible for fees invoiced for approval including engineering and inspection fees.)	
Person/Company Name		Person/Company Name	
Street Name / 911 Number/Address if applicable		Street Name / 911 Number/Address if applicable	
Unit/Suite	PO Box	Unit/Suite	PO Box
City/Town	Province/State	City/Town	Province/State
Postal/Zip Code	Country	Postal/Zip Code	Country
Telephone No.	Fax No.	Telephone No.	Fax No.
E-mail	Cell No.	E-mail	Cell No.
Print Name of Contact Person		Print Name of Contact Person	
Signature of Contact Person <small>Please Print & Sign before returning to TSSA</small>		Signature of Contact Person <small>Please Print & Sign before returning to TSSA</small>	
C. Location Address Same as: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> D (Where variance is to be inspected.) (Note this must be a delivery or fire route address.)		D. Technical Contact Same as: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C (Company/Person we should communicate with regarding Engineering and inspection of the approval on behalf of the owner.)	
Person/Company Name		Person/Company Name	
Street Name / 911 Number/Address if applicable		Street Name / 911 Number/Address if applicable	
Unit/Suite	PO Box	Unit/Suite	PO Box
City/Town	Province/State	City/Town	Province/State
Postal/Zip Code	Country	Postal/Zip Code	Country
Telephone No.	Fax No.	Telephone No.	Fax No.
E-mail	Cell No.	E-mail	Cell No.
Print Name of Contact Person		Print Name of Contact Person	

Note: It is illegal to use an appliance, equipment, or work for its intended purpose unless it is approved.
Please note that this approval may be revoked or suspended if the relevant review and inspection fees are not paid in full.

Deposit Payment Method	
Deposit of \$593.25 (13% HST included) must accompany each application. Invoice will only be issued for the amount billed over and above the deposit. HST Registration No. 891131369	
<input type="checkbox"/> Cheque or money order enclosed. Please make payable to: Technical Standards and Safety Authority	
<input type="checkbox"/> Charge my credit card <input type="checkbox"/> VISA <input type="checkbox"/> MASTERCARD	
Card No. <input type="text"/>	Expiry Date <input type="text"/>
Name of Card Holder <input type="text"/>	
Signature of Card Holder <input checked="" type="checkbox"/> <small>Please Print & Sign before returning to TSSA</small>	Date <input type="text"/> (dd/mm/yyyy)
Payment Receipts can be requested by calling our Customer Contact Centre at 1.877.682.8772 only after the payment has been processed.	
Purchase Order No. <input type="text"/> Purchase Order number will be reflected on invoices and TSSA will not enter into any purchasing agreements.	

FEES

For Fee Schedule Information please visit our website at www.tssa.org

\$169.50 (13% HST included) per hour for engineering and inspection services

\$339.00 (13% HST included) per hour for engineering services

\$339.00 (13% HST included) per hour for engineering and inspection services

FS 09531 (08/11)

SERVICES

Check box to request type of service

☐ Regular Service 20 to 30 working days for engineering and inspection services☐ Rush Engineering Service Only 5 to 10 working days☐ Rush Engineering and Inspection Services 5 to 10 working days for each service



Technical
Standards and
Safety Authority

www.tssa.org

14th Floor - Centre Tower
3300 Bloor Street West
Toronto ON M8X 2X4
Tel: 416 734 3348
Fax: 416 231 7525
Customer Service 1.877 682 8772
E-mail: tssubmissions@tssa.org

Application for Field Approval of Appliances or Equipment

Technical Standards and Safety Act
Fuels Safety Regulations

Clear Form

Print Form

Please submit completed application and supporting documentation by mail, fax, or e-mail (in pdf format).		For Office Use Only	
<div>Check applicable box(es)</div> <div>Digester <input type="checkbox"/> Gas <input type="checkbox"/> Natural Gas</div> <div>Fuel <input type="checkbox"/> Oil <input type="checkbox"/> Propane <input checked="" type="checkbox"/></div> <div>Land <input type="checkbox"/> fill <input type="checkbox"/> Other <input type="checkbox"/></div> <div>Required Documentation (2 copies each) <input type="checkbox"/> Bill of Materials <input type="checkbox"/> Electrical Schematic</div> <div><input type="checkbox"/> Purge Calculations <input type="checkbox"/> Valve Train / P&ID Drawing(s)</div>			
Type of Appliance/Equipment:		<input type="checkbox"/> Mobile Appliance	
Manufactured by:		No. of Units:	
Model:		Serial No.(s):	
Main Supply Pressure:			
Maximum Input:		Minimum Input:	
Burner/Manifold Operating Pressure:			
A. OWNER OF APPLIANCE OR EQUIPMENT			
Company Name: Ontario Corporation No., if applicable			
Street Name / 911 Number/Address, if applicable:			
Unit/Suite:		PO Box:	
City/Town:		Province:	Postal Code:
Telephone No.:		Fax No.:	Cell No.:
E-mail:			
Print Name of Contact Person:		Signature of Contact Person: Please Print & Sign before returning to TSSA	
B. LOCATION ADDRESS Same as: <input type="checkbox"/> A (Where appliance/equipment is to be installed/inspected. Note this must be a delivery or fire route address.)			
Company Name:			
Street Name / 911 Number/Address, if applicable:			
Unit/Suite:		PO Box:	
City/Town:		Province:	Postal Code:
Telephone No.:		Fax No.:	Cell No.:
E-mail:			
Print Name of Contact Person:			
C. TECHNICAL CONTACT Same as: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> D (Company we should communicate with regarding engineering and inspection approval on behalf of the owner.)			
Company Name:			
Street Name / 911 Number/Address, if applicable:			
Unit/Suite:		PO Box:	
City/Town:		Province:	Postal Code:
Telephone No.:		Fax No.:	Cell No.:
E-mail:			
Print Name of Contact Person:			

Note: It is illegal to use an appliance, equipment, or work for its intended purpose unless it is approved.
Please note that this approval may be revoked or suspended if the relevant review and inspection fees are not paid in full.



Technical
Standards and
Safety Authority

14th Floor - Centre Tower
3300 Bloor Street West
Toronto ON M8X 2X4
Tel: 416 734 3348
Fax: 416 231 7525
Customer Service 1 877.682.8772
E-mail: fssubmissions@tssa.org

Application for Field Approval of Appliances or Equipment

Technical Standards and Safety Act
Fuels Safety Regulations

Location Address:

D. INVOICEE		Same as: <input type="checkbox"/> A	
(Company responsible for fees invoiced for approval including engineering and inspection fees)			
Company Name:			
Street Name / 911 Number/Address, if applicable:			
Unit/Suite:	PO Box:		
City/Town:	Province:	Postal Code:	
Telephone No.:	Fax No.:	Cell No.:	
E-mail:			
Print Name of Contact Person:		Signature of Contact Person: <small>Please Print & Sign before returning to TSSA</small>	

Date of Application (dd-mm-yyyy) : _____

FEES FOR ENGINEERING REVIEW AND INSPECTION

Check box to request type of service.

- ☐ **Regular Service:** 20-30 working days for engineering and inspection services.
Standard Fee: \$169.50 (13% HST included) per hour for engineering review and inspection services.
- ☐ **Rush Engineering Service Only:** 5 to 10 working days.
Fee: 2 x Standard fee for engineering review.
- ☐ **Rush Engineering and Inspection Services:** 5 to 10 working days for each service.
Fee: 2 x Standard fee for engineering review and inspection services.

Legal Disclaimer - The owner agrees to hold harmless the Technical Standards and Safety Authority, its employees, agents, successors and assigns from any and all damages, actions, suits, claims or loss arising from the use, approval or refusal to approve of the appliance, equipment or work to which this approval applies. In the event of claims made against TSSA arising from the use of the appliance, equipment or work the owner accepts, on demand to defend such actions on behalf of TSSA and to assume any costs legal or otherwise for the defence or settlement of such claims. Failure to comply with any of the terms and conditions of the approval voids the approval.

Deposit Payment Method

Deposit of \$593.25 (13% HST included) must accompany each application. Invoice will only be issued for the amount billed over and above the deposit.
HST Registration No.: 891131369

- ☐ Cheque or money order enclosed. Please make payable to: **Technical Standards and Safety Authority**
- ☐ Charge my credit card: ☐ VISA ☐ MASTERCARD

Card No.

Expiry Date

Month	Year
<input type="text"/>	<input type="text"/>

Name of Card Holder First Name Last Name Telephone No.

Signature of Card Holder X Please Print & Sign before returning to TSSA Date (dd-mm-yyyy)

Payment Receipts can be requested by calling our Customer Contact Centre at 1.877.682.8772 only after the payment has been processed.

Purchase Order No. Purchase Order number will be reflected on invoices and TSSA will not enter into any purchasing agreements.

14th Floor - Centre Tower
3300 Bloor Street West
Toronto ON M8X 2X4
Tel 416 734 3348
Fax 416 231 7525
Customer Service 1.877.682.8772
E-mail fsubmissions@issa.org

Clear Form

Technical and Standards and Safety Act
Fuels Safety Regulation

Print Form

Print form on Legal (8 1/2" x 14")

For Office Use Only

FS Stamp

Bio-Gas	<input type="checkbox"/>		Landfill	<input type="checkbox"/>	II
Digester	<input type="checkbox"/>	Gas		<input type="checkbox"/>	Other _____

☐ Bill of Materials

☐ Drawings

☐ List of appliances burning fuel

☐ cations for valves, controls, gas pipes and components

☐ Any other supporting documents

Description of work to be conducted:

Intake Stamp

Legal Disclaimer - The owner agrees to hold harmless the Technical Standards and Safety Authority, its employees, agents, successors and assigns from any and all damages, actions, suits, claims or loss arising from the use, approval or refusal to approve of the appliance, equipment or work to which this approval applies. In the event of claims made against TSSA arising from the use of the appliance, equipment or work the owner accepts, on demand to defend such actions on behalf of TSSA and to assume any costs legal or otherwise for the defence or settlement of such claims. Failure to comply with any of the terms and conditions of the approval voids the approval.

B. Invoicee Same as: ☐ A ☐ C ☐ D
(Person/Company responsible for fees invoiced for approval including engineering and inspection fees.)

[illegible]

Street Name / 911 Number/Address if applicable

PO Box

Province/State

Country

Country	
Fax No.	

FAX NO.	
---------	--

C-11a11	
---------	--

D. Technical Contact Same as: ☐ A ☐ B ☐ C
(Company/Person we should communicate with regarding Engineering
and inspection of the approval on behalf of the owner.)

Person/Company Name

Street Name / 911 Number/Address, if applicable

PO Box

Province/State

Country:

Country	
Fax No.	

PER NO.	C-11 N-
---------	---------

Print Name of Contact Person: _____

Note: It is illegal to use an appliance, equipment, or work for its intended purpose unless it is approved. Please note that this approval may be revoked or suspended if the relevant review and inspection fees are not paid in full.

Deposit of \$593.25 (13% HST included) must accompany each application. Invoice will only be issued for the amount billed over and above the deposit.



☐ Cheque or money order enclosed. Please make payable to: Technical Standards and Safety Authority

☐ Charge my credit card: ☐ VISA ☐ MASTERCARD

Expiry Date

Telephone No. _____

Date _____

Signature of Card Holder  Please Print & Sign before returning to TSSA Date  (dd mm yyyy)

Payment Receipts can be requested by calling our Customer Contact Centre at 1.877.682.8772 only after the payment has been processed

Purchase Order No. _____ Purchase Order number will be reflected on invoices and TSSA will not enter into any purchasing agreements.

SERVICES

SERVICES
Check box to request type of service

☐ Regular Service 20 to 30 working days for engineering and inspection services

Rush Engineering Service Only 5 to 10 working days

Rush Engineering and Inspection Services: 5 to 10 working days for each service

FS 09129 (08/11)

Appendix B – Report WMC13-018 TSSA Inspection of Waste Management Facility



Technical
Standards and
Safety Authority

www.tssa.org

14th Floor - Centre Tower
3300 Bloor Street West
Toronto ON M8X 2X4
Tel.: 416.734.3348
Fax: 416.231.7525
Customer Service: 1.877.682.8772
E-mail: fssubmissions@tssa.org

Application for a Variance/Deviation

Technical and Standards and Safety Act
Fuels Safety Regulation

Please submit completed application and supporting documentation by mail, fax, or e-mail (in pdf format) Making a false statement may result in a fine or prosecution		For Office Use Only	
Check applicable box(es) <input checked="" type="checkbox"/> Bio-Gas <input type="checkbox"/> Gasoline <input type="checkbox"/> Propane <input type="checkbox"/> Digester Gas <input checked="" type="checkbox"/> Landfill <input type="checkbox"/> Other <input type="checkbox"/> Fuel Oil <input type="checkbox"/> Natural Gas		FS Stamp	
Code <u>TSSA Inspection Report #4490043 CSA B149 6-11</u> Section <u>16 1 4 7 and 18 3 1 1</u> Is this a field development project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Equipment/Appliance/Component involved Landfill gas collection system and associated components			
Make Burner - John Zink	Model ZTOF5 X 40	Serial No 924763	
Variance Description The City is requesting a variance for the following from Report #4490043 extension of the compliance dates for all Items, Item 3-1, Item 3-3, Item 3-6 See attached memo for details			
Legal Disclaimer - The owner agrees to hold harmless the Technical Standards and Safety Authority, its employees agents, successors and assigns from any and all damages, actions, suits, claims or loss arising from the use, approval or refusal to approve of the appliance, equipment or work to which this approval applies. In the event of claims made against TSSA arising from the use of the appliance, equipment or work the owner accepts, on demand to defend such actions on behalf of TSSA and to assume any costs legal or otherwise for the defence or settlement of such claims Failure to comply with any of the terms and conditions of the approval voids the approval			

A. Owner of Appliance, Equipment or Installation		B. Invoicee Same as: <input checked="" type="checkbox"/> A <input type="checkbox"/> C <input type="checkbox"/> D (Person/Company responsible for fees invoiced for approval including engineering and inspection fees)	
Person/Company Name <u>City of Peterborough</u>		Person/Company Name	
Street Name / 911 Number/Address if applicable <u>500 George Street North</u>		Street Name / 911 Number/Address if applicable	
Unit/Suite	PO Box	Unit/Suite	PO Box
City/Town <u>Peterborough</u>	Province/State <u>Ontario</u>	City/Town	Province/State
Postal/Zip Code <u>K9H 3R9</u>	Country <u>Canada</u>	Postal/Zip Code	Country
Telephone No. <u>705-742-7777 x 1894</u>	Fax No.	Telephone No.	Fax No.
E-mail <u>wjackson@peterborough.ca</u>	Cell No.	E-mail	Cell No.
Print Name of Contact Person <u>Wayne Jackson</u>		Print Name of Contact Person <u>WAYNE JACKSON</u>	
Signature of Contact Person <u>W. H. Jackson</u>		Signature of Contact Person <u>W. H. Jackson</u>	
C. Location Address Same as: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> D (Where variance is to be inspected) (Note this must be a delivery or fire route address)		D. Technical Contact Same as: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C (Company/Person we should communicate with regarding Engineering and inspection of the approval on behalf of the owner)	
Person/Company Name <u>City of Peterborough</u>		Person/Company Name <u>Urban and Environmental Management</u>	
Street Name / 911 Number/Address if applicable <u>1250 Bensford Road</u>		Street Name / 911 Number/Address if applicable <u>5100 Orbitor Drive</u>	
Unit/Suite	PO Box	Unit/Suite	PO Box
City/Town <u>Peterborough</u>	Province/State <u>Ontario</u>	City/Town <u>Mississauga</u>	Province/State <u>Ontario</u>
Postal/Zip Code <u>K9J 6X7</u>	Country <u>Canada</u>	Postal/Zip Code <u>L4W 4Z4</u>	Country <u>Canada</u>
Telephone No. <u>705-742-7777 x 2150</u>	Fax No.	Telephone No. <u>905-212-9722 x 24</u>	Fax No.
E-mail <u>csimmons@peterborough.ca</u>	Cell No.	E-mail <u>jovcjak@uemconsulting.com</u>	Cell No.
Print Name of Contact Person <u>Craig Simmons</u>		Print Name of Contact Person <u>Joe Ovcjak</u>	

Note: It is illegal to use an appliance, equipment, or work for its intended purpose unless it is approved.
Please note that this approval may be revoked or suspended if the relevant review and inspection fees are not paid in full

Deposit Payment Method	
Deposit of \$593.25 (13% HST included) must accompany each application. Invoice will only be issued for the amount billed over and above the deposit. HST Registration No.: 891131369	
<input type="checkbox"/> Cheque or money order enclosed. Please make payable to: Technical Standards and Safety Authority <input type="checkbox"/> Charge my credit card: <input checked="" type="checkbox"/> VISA <input type="checkbox"/> MASTERCARD	
Card No. <u>4151 6000 0169 6947</u>	Expiry Date <u>Month Year</u>
Name of Card Holder <u>WAYNE JACKSON</u>	Telephone No. <u>(705) 742-7777</u>
Signature of Card Holder <u>X W. H. Jackson</u>	Date <u>August 26, 2013</u> (dd-mm-yyyy)
Payment Receipts can be requested by calling our Customer Contact Centre at 1 877 682 8772 only after the payment has been processed	
Purchase Order No. _____ Purchase Order number will be reflected on invoices and TSSA will not enter into any purchasing agreements	

FEES	SERVICES
For Fee Schedule Information please visit our website at www.tssa.org .	Check box to request type of service
\$169.50 (13% HST included) per hour for engineering and inspection services	<input checked="" type="checkbox"/> Regular Service: 20 to 30 working days for engineering and inspection services
\$339.00 (13% HST included) per hour for engineering services	<input type="checkbox"/> Rush Engineering Service Only: 5 to 10 working days
\$339.00 (13% HST included) per hour for engineering and inspection services	<input type="checkbox"/> Rush Engineering and Inspection Services: 5 to 10 working days for each service



MEMO

TO: TECHNICAL STANDARDS AND SAFETY AUTHORITY

FROM: CITY OF PETERBOROUGH (MR. WAYNE JACKSON, P.ENG.)

AND URBAN AND ENVIRONMENTAL MANAGEMENT (MR. JOE OVCIAK, P.ENG)

DATE: AUGUST 26, 2013

RE: RESPONSE TO PETERBOROUGH TSSA INSPECTION REPORT OF MAY 29, 2013

FILE: 13-006

This report was prepared in response to the May 29, 2013 Technical Standards and Safety Authority (TSSA) Inspection Report #4490043 of the Peterborough County/City Waste Management Facility (PCCWMF) Gas Collection System. Part 1 summarizes the items in Report #4490043 that the City is requesting a variance for. Part 2 summarizes general facts and our understanding of the matter. Part 3 provides a summary of TSSA comments and the suggested approach to respond to TSSA comments.

PART 1 ITEMS REQUIRING A VARIANCE

Compliance Dates

All of the items noted in TSSA Inspection Report #4490043 have a compliance date of August 30, 2013. Due to the City of Peterborough's internal Request for Quotation process, this compliance date cannot be met. Therefore, we respectfully request an extension of the compliance to December 15, 2013.

Item 3-1 – Burner Approval

This item refers to the approvals for the John Zink Waste Gas Burner. All required MOE approvals were in place, and the system was designed in accordance with the Canadian Gas Association CAN/CGA B 149.3, the code governing in 1999/2000. A variance is requested to grandfather in the approval of the existing burner due to the previous approvals granted for the existing burner. Refer to Part 3, Clause 1 for more details.

Item 3-3 – Fence Distance

This item refers to the distance of the existing fence from the existing burner. The Waste Gas Burner is located in a fenced enclosure and is restricted from public access. A variance is requested to allow the existing fence to remain where it is currently located. Refer to Part 3, Clause 3 for more details.

Item 3-6 – Stainless Steel Pipe and Fittings

This item refers to the existing stainless steel pipe and fittings being utilized above ground to the Waste Gas Burner. The piping is to be Type 316L stainless steel as per the CSA B149.6 11. There is evidence that suggests the existing pipe and fittings are likely 316L stainless steel. A variance is requested to allow the existing pipe and fittings to remain. Refer to Part 3, Clause 6 for more details.

PART 2 GENERAL UNDERSTANDING OF THE TSSA INSPECTION REPORT

1. It is our understanding that in 2007, MOE and TSSA signed a memorandum of understanding (MOU) giving TSSA the authority to inspect and approve digester plants and landfill sites. An interim code was developed (CSA-SPW-149) that was replaced by CSA B149.6 11, Code for Digester Gas and Landfill Gas Installations, in December 2012.
2. The PCCWMF Gas Collection System was designed and constructed in 1999 and 2000 respectively, before the MOU was signed and before CSA B149.6 11 certification standards governed.
3. Nonetheless, TSSA has the authority to conduct field audits and inspect existing landfills with landfill gas installations in accordance with the current Code. The Code applies to existing landfill gas systems, where, in the opinion of the authority having jurisdiction (TSSA) a hazard or potential hazard exists.
4. It is understood that if discrepancies are noted (facility does not meet current TSSA code requirements), the Owner and facility may be eligible to be grandfathered and not subject to the current Code if it can be demonstrated that construction was done in accordance with the standard of the day.
5. The TSSA audit on May 29, 2013 identified a number of matters to be addressed. Although it can be argued that the PCCWMF Gas Collection System (GCS) is not subject to the Code, it was suggested that the City:
 - a) Propose that a number of issues be grandfathered;
 - b) Make application for a code variance for some non-compliance items; and
 - c) Undertake actions to modify certain non-compliance items to meet the current Code.

The overall intent is to ensure that the GCS maintains safety levels equivalent to the current standard.

PART 3 TSSA COMMENTS AND PROPOSED CITY RESPONSES

The following summarizes TSSA inspection comments (black print) using the TSSA comment numbering system in their inspection report, and the City responses to TSSA (red print with proposed actions underlined).

1. **TSSA Comment 3-1:** Code for Digester Gas and Landfill Gas Installations, B149.6 11, section 16.1.1 states that *"There is no evidence to indicate that the John Zink Gas Burner Model ZTOF5 X 40; Serial 924763 has an approval as per Code for Digestion Gas and Landfill Gas Installations (B149.6.11; Section 16.1.1). An appliance utilizing landfill gas only, dual fired, or in combination with natural gas, propane, or fuel oil shall be approved by the authority having jurisdiction for the application."*

City Response to Comment 3-1: *"The City contacted the system designer (CRA) and confirmed that there was no authority similar to TSSA in place at the time of design or construction that had jurisdiction over the project."*

The Waste Gas Burner (John Zink, Model ZTOF5 X 40; Serial 924763) was approved, along with the design of the landfill gas collection and flaring system, by the Ministry of the Environment under C of A (Air) 8-4006-99-007 dated December 6, 1999. All required MOE approvals were in place, and the system was designed in accordance with the Canadian Gas Association CAN/CGA B 149.3, the code governing in 1999/2000. Further, the system has been in successful operation since 2000 and now that a gas utilization plant is in operation the waste gas burner is only expected to be in operation when the utilization plant is not in operation."

Since it can be demonstrated that design and construction were in accordance with the code of the day; the system has operated successfully since 2000; and that the waste gas burner will only be in operation for limited periods of time now that the gas utilization plant is in operation, the City will be making an application for a variance to allow the existing burner to be grandfathered.

2. **TSSA Comment 3-2:** B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 22, (22.1.1) states that *"The Owner of an operating landfill gas system shall develop a set of operating and maintenance procedures based on the experience and knowledge of the system and the conditions under which it is operated. The procedures shall be acceptable to the authority having jurisdiction"*.

City response to Comment 3-2: *"The Owner has an Operations and Maintenance Manual for the Gas Collection System that was prepared in 2000 following construction of the System. The majority of items required by B.149.11 Section 22 (22.1.1) are addressed in the existing manual. Any missing items will be added to the Manual as an addendum. "*

The updated Manual and addendum to the Manual will be retained on site. A copy of the updated Manual will be provided to TSSA upon request.

3. **TSSA Comment 3-3:** B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 16.4.1.7, requires that *"when a waste gas burner stack is accessible to the public, safety fencing shall be provided not less than 7.5 m horizontally from the stack."*

City response to Comment 3-3: *"The Waste Gas Burner will only operate when the gas utilization plant is not in operation. This is expected to be less than 5% of the time. The Waste Gas Burner is located in a fenced enclosure and is restricted from public access by the main site entrance fence and gate; the fenced enclosure around the Burner; jersey barriers several meters beyond the fenced enclosure and adjacent to the access road to the waste tipping face; and Danger signs on the fence around the Burner."*

Further, the public is not permitted to enter the area surrounding the fenced compound and is not permitted to leave their vehicles except at the waste drop off depot or active waste tipping face, which are several hundred meters from the Burner.

Rather than reconstructing or installing new fencing around the Burner compound the Owner will ensure concrete jersey barriers remain in place adjacent to the access road closest to the Burner compound and if necessary, mount additional signs on the barrier re-iterating the potential danger and restricting public access to the Burner compound."

A variance application will be prepared to request approval to retain the existing security and safety measures already in place.

4. **TSSA Comment 3-4:** CAN/CSA-B149.1-10 Natural Gas and Propane Installation Code. 5.2.2.3: *"A regulator installed outdoors or in an unheated area shall be positioned so that the bonnet vent opening discharges vertically downward, except that (a) when installed within a container dome, the vent opening shall be positioned downward not less than 15° from the horizontal; and (b) a single-stage regulator of a capacity not exceeding 150 000 Btu h (45 kW) may be installed in a horizontal position, provided that it is protected from inclement weather. Evidence indicates that the Waste Gas Burner Pilot regulator vent line does not terminate in a downward direction."*

City response to Comment 3-4: "The Owner will retain a licensed technician to re-configure the waste gas burner pilot regulator vent line to terminate in a downward direction in compliance with current codes."

5. **TSSA Comment 3-5:** CAN/CSA-B149.2-10 Propane Storage and Handling Code. 6.7.2. *"Except as permitted in Clauses 6.5, 6.7.3, 10, and 11.9(b) of this Code and Clause 5.2.2 of CAN/CSA-B149.5, a cylinder shall be installed outside a building, with the discharge from the cylinder relief valve not less than (a) 3 ft (1 m) on a horizontal plane from any building opening when the opening is below the level of the relief valve discharge; (b) 10 ft (3 m) on a horizontal plane from the air intake of any appliance or air-moving equipment; and (c) 10 ft (3 m) on a horizontal plane from any source of ignition. Items (b) and (c) shall not apply to an appliance when the cylinder retention means is incorporated and certified as part of the appliance. Evidence indicates that the Waste Gas Burner is utilizing Propane cylinders for the pilot which are located less than 10 feet (3m) from an electrical panel disconnect / transformer".*

City Response to Comment 3-5: "The Owner will retain a licensed technician to make the necessary modifications to ensure the propane cylinders for the pilot are located a minimum of 10 ft (3m) from the electrical panel / disconnect / transformer."

6. **TSSA Comment 3-6:** B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.3.1.1: *"When stainless steel pipe and fittings are used, they shall be made of Type 316 stainless steel, except that when field welding is required, Type 316L shall be used. Evidence indicates that there is Stainless Steel welded piping being utilized above ground to the Waste Gas Burner with no evidence of the piping being 316L stainless steel as required by the Code".*

City response to Comment 3-6: "Supporting documents (CRA 1999 Record Contract drawing M1) shows that the above ground pipe between the blower and the Burner is 150 mm diameter Stainless Steel. Bid documents for Construction of Landfill Gas Collection System Expansion (CRA Contract no. 3186-00 (39)) Section 13420 states that process flanges and adaptors are Type 316L Stainless Steel. It is not certain but likely, based on contract documents that the above ground pipe is Type 316 and welded pipe is Type 316L."

The City will make an application for a variance.

7. **TSSA Comment 3-7:** B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.8.4, states that *"Non-lubricated valves up to 6 NPS (152 mm) in diameter shall be approved to CGA 3.16. Larger valves shall be gear operated. Non-lubricated valves up to 6 NPS (152 mm) in diameter shall be approved to CGA 3.16. Larger valves shall be gear operated."* Evidence indicates that there are two Manual valves on the Landfill Gas Piping to the Waste Gas Burner with no evidence of certification or suitability for use."

City Response to Comment 3-7: "Supporting documentation concerning the two manual valves was reviewed and it was determined that the valves are 150 mm in diameter. Therefore the valves are not required to be gear operated. The City contacted the system designer (CRA) and confirmed that there was no authority similar to TSSA in place at the time of design or construction that had jurisdiction over the project.

The existing manual valves were approved by the Ministry of the Environment under C of A (Air) 8-4006-99-007 dated December 6, 1999. All required MOE approvals were in place, and the system was designed in accordance with the Canadian Gas Association CAN/CGA B 149.3, the code governing in 1999/2000. Further, the system has been in successful operation since 2000 and now that a gas utilization plant is in operation the waste gas burner and associated valves are only expected to be in operation when the utilization plant is not in operation."

The City therefore concludes and respectfully submits that no further action is necessary since it can be demonstrated that design and construction were in accordance with the code of the day; the system has operated successfully since 2000; and that the waste gas burner and associated valves will only be in operation for limited periods of time now that the gas utilization plant is in operation.

8. **TSSA Comment 3-8:** B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 16.2.2.1 states that "An automatic safety shut-off valve certified to ANSI Z21.21/CSA 6.5 and marked C/I and suitable for use with landfill gas shall be provided to shut off the gas supply to the appliance when the pressure drops below the setting of the low-gas-pressure safety cut-off switch. The valve shall be installed so that the invert does not allow accumulation of moisture and debris and shall be: (a) Installed upstream of the appliance; (b) Interlocked with the blower, if the blower is dedicated to the appliance; (c) Equipped with a visual valve position indicator; (d) Equipped with a mandatory manual reset function to open.

Ensure that the Automatic SSOV being utilized for the Landfill Gas System has a positioning indicator and a manual re set function as required by code. Evidence indicates that the System is utilizing only one (1) Automatic SSOV with no evidence of positioning indicator or manual re set function."

City Response to Comment 3-8: "It was determined the valve position indicator is not visible."

The Owner will retain a licensed technician to modify the existing installation to ensure that the Automatic SSOV being utilized for the Landfill Gas System has a visible positioning indicator and a manual re set function as required by code.

9. **TSSA Comment 3-9:** B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.7.2, states that "All gas piping, tubing, fittings, and controls shall be painted or color coded with high visibility Yellow orange paint. Each system of piping shall be labeled, at least every linear 10 ft (3 m), and at every change in direction, with the name of the gas being transported and the direction of flow" (Subsequently reference B105 M93 Code; Section 17.7.2). Ensure that the Stainless Steel Landfill Gas Piping which is being utilized for the Landfill Gas System above ground is identified as per code requirements. Evidence indicates that the System is utilizing Stainless Steel Landfill Gas Piping above ground which is not identified as per the Code.

City Response to Comment 3-9: The Owner will modify the existing installation to ensure that the Stainless Steel Landfill Gas Piping, tubing, fittings and controls used for the Landfill Gas System above ground is painted or color coded with high visibility yellow orange paint as per code requirements.

10. **TSSA Comment 3-10:** CAN/CSA-B149.1-10 Natural Gas and Propane Installation Code. 5.3 states that "Except as specified in Clauses 5.2.2.4 and 5.2.3, when a line pressure regulator is not equipped with an internal relief device, it shall have immediately downstream an overpressure protection device or a line relief device as required in Clause 5.2.1.5(b), with a discharge setting of either (a) not less than 2 times and not more than 3 times the delivery pressure on systems operating up to 5 psig (35 kPa); or (b) not less than 1.5 times and not more than 2 times the delivery pressure on systems operating at more than 5 psig (35 kPa). The relieving pressure setting of the line relief device shall be not higher than that of the lowest-rated component or accessory located downstream. Evidence indicates that the Landfill Gas System is utilizing a propane gas pilot solenoid valve rated for 50 psi, the propane supply pressure is regulated to 140 psi from the propane cylinders; no evidence of protection for downstream components as per the Natural Gas and Propane Installation Code."

City response to Comment 3-10: *"The solenoid valve on the propane supply line provides propane at a pressure of approximately 10 psig even though the valve is rated for 50 psi. Once the pilot flare is confirmed and the ultraviolet flare scanner confirms that landfill gas is burning, the propane source for the pilot light is automatically closed, otherwise the start-up sequence fails. (Page 12 - CRA June 2000 Report entitled Landfill Gas Odour Control System Operations and Maintenance Manual)."*

A licensed technician will be retained to modify the installation to ensure the propane supply pressure is regulated to ensure downstream components on the pilot fuel train are protected as per code requirements.

- 11. TSSA Comment 3-11:** *B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.9.3, states that "Each drain line connected to a manual-type drip trap shall be fitted with a manual ball or plug type shut off valve upstream from a union. Ensure that the manual valve for drain line on the Landfill Gas piping supplying the Waste Gas Burner has incorporated a union at the required location as per code. Evidence indicates that there is no union located as per the Code.*

City response to Comment 3-11: The Owner will retain a licensed technician to modify the installation to ensure that the manual valve for the drain line has incorporated a union at the required location.

- 12. TSSA Comment 3-12:** *B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 14.3.1 states that "All work installed on line appliances or equipment utilizing or handling landfill gas shall be performed by qualified personnel licensed as required by the authority having jurisdiction. Evidence indicates that maintenance on the Landfill Gas System was not performed by a certified technician as per the Code."*

City response to Comment 3-12: The Owner will ensure that future work performed on equipment which is utilizing Landfill Gas (Waste Gas Burner / components / Piping) is done by qualified personnel licensed as required by the TSSA.

- 13. TSSA Comment 3-13:** *B149.6 11, Code for Digester Gas and Landfill Gas Installations, section 18.3.2.1 states that "Plastic pipe and fittings shall be made of polyethylene or glass fibre reinforced thermosetting resin or polyvinyl chloride (PVC) and be approved to the CAN/CSAB137.3 or CAN/CSA B137.4, or comply with API 15LE and ASTM D2996. The use of PVC and API 15LE pipes and fittings are restricted as follows: (a) PVC pipes and fittings; If it is to be installed above ground inside the landfill area and upstream, on the vacuum side of the LFG system, the TSSA must be notified by way of a letter from a Professional Engineer. The letter must identify the type of piping used, state that such piping is suitable to transport landfill gas under the temperatures and pressures to which it will be exposed and certify that it is resistant to ultraviolet degradation; (b) API 15LE pipes and fittings; If it is to be installed upstream, on the vacuum side of the LFG system, the TSSA must be notified by way of a letter from a Professional Engineer.*

- 14.** *The letter must identify the type of piping used, the SDR, and state that it is suitable to transport landfill gas under all temperatures and pressures to which it will be exposed." (Subsequently reference B105 M93 Code Section 17.3.2.1) The Owner shall supply supporting documentation for the "Old Well Heads" confirming code compliance or replace the "Old Well Heads" with material which meets code requirements. Inspection of Well Heads (old ones / new ones) by TSSA found that new well heads reference CAN / CSA B137.3; inspection of piping for old well heads do not reference standards as specified in the Code.*

City response to Comment 3-13: *"The City will contact the GCS designer (CRA) and will supply supporting documentation for the "Old Well Heads" confirming code compliance. A letter will be prepared by a Professional Engineer that will identify the type and SDR of piping used, state that piping is suitable to transport landfill gas under the temperatures and pressures to which it will be exposed; and certify that it is resistant to ultraviolet degradation.*

If the design engineer cannot confirm compliance with Code requirements the City will replace the "Old Well Heads" with material which meets code requirements.