



February 2019

## Notice – Staffing Requirements for Landfill Gas Flaring and Power Generation Systems

The Ontario Chapter of the Solid Waste Association of North America (SWANA) would like to remind owners of landfill sites in the Province of the requirements for approved operators of the associated landfill gas flares and power generation equipment. This letter is based on the requirements for the operators of such systems to be properly trained and certified as dictated by provincial regulations and the enforcement agency. The Ontario Chapter has been working over the past several months to arrive at a full understanding of what these requirements are for both the owners and operators of these systems. As many systems are owned by a municipality or another entity and operated by a third-party contractor, there is a need to ensure that all responsible parties are aware of the requirements and that the options for the proper operations of these systems are disseminated throughout the industry.

Projects involving landfill gas flaring and power generations systems in Ontario are governed by CSA Standards through design, construction and operations. The responsibility for enforcement of this code has been delegated to the **Technical Standards and Safety Authority (TSSA)**. In our province, the TSSA fuels Director adopts the Code and then it becomes effective in Ontario. Currently, the code that we must follow is **B149.6-15 Code for digester gas, landfill gas, and biogas generation and utilization installations** which was adopted by the Director and became code on July 1, 2017. These can be found at this location - <https://www.tssa.org/en/fuels/legislation-and-regulatory-information.aspx>

The TSSA's authority extends to the operations staff responsible for the safe functioning of the flares including the piping, venting and the combustion air supplying the generator. This authority is founded on O. Reg. 215/01: FUEL INDUSTRY CERTIFICATES under the Technical Standards and Safety Act, 2000, S.O. 2000, c. 16). That regulation establishes the standards and certification requirements needed for persons who work with gaseous fuels.

From the Advisory FS-217-14 (copy attached) dated October 22, 2014 as issued by the TSSA it states:

### Qualified Workers - Certificate Holders

In accordance with the Ontario Regulation 215/01, any person who installs, activates, repairs, or services any fuel-fired appliance, equipment or component shall be certified for the purpose.

The following certificates would be considered appropriate for work in the landfill, digester or biogas areas as defined by their scopes of certificate in Fuels Industry Certificates Regulation 215-01; Gas Technician 1 (G1), Gas Technician 2 (G2), Gas Pipe Fitter (GP) and IMT (when employed directly with the specific plant) within their scope of certificate.

Aside from this required certification, it is incumbent upon both employer and employee to ensure that workers are appropriately qualified for specialized tasks that may fall outside of existing certificate training programs and industry experience. Given the nature of these highly specialized fuel sector applications, additional training may be required. Trained personnel who operate & monitor equipment do not have to be a certificate holder however; they cannot perform the functions as covered in the specified certificates.

The TSSA has developed a training methodology for applicable staff of the owner of the landfill gas flares and power generation equipment to be enrolled in and upon successful completion of the certifying exam, meet the requirements for the IMT designation. Further, the IMT designation is only applicable to the specific employer and specified equipment.

The TSSA has also taken the position that only tradespeople or technically qualified individuals who are actively working on this equipment can be granted the IMT designation. Other staff such as engineers, supervisors, and, general field staff will not be allowed to hold the designation. This also includes the employees of any contracted parties who have been awarded the right to operate the landfill gas facility.

To date, we as an industry, have employed trained technical staff of no specific trades or educational background, many of whom have been able to obtain an IMT designation in past, to maintain the associated collection wells, the landfill gas flares and, the power generation equipment. However, there is still much confusion and uncertainty as to the correct requirements for operations personal whether these are contracted operators or employees of the landfill owner.

### **Clarification**

1. The TSSA is only interested in the positive side of the system. The details of the negative (vacuum) side of the Landfill Gas Collection System which includes the well field (horizontal or vertical) or other equipment is not of direct concern to the TSSA.
2. Per the Advisory FS-217-14, authorization certificates are required for “any person who installs, activates, repairs, or services any fuel-fired appliance, equipment or component shall be certified for the purpose” per O. Reg. 215/01.
3. Also in accordance with the Advisory FS-217-14, it states “Trained personnel who operate & monitor equipment do not have to be a certificate holder, however, they cannot perform the functions as covered in the specified certificates”.
4. Staff who are properly trained to do so, but do NOT have a Certificate, can re-start an appliance of the landfill gas collection and destruction system that has been previously activated. However, if any adjustments need to be made to the equipment which includes but is not limited to recalibration, re-setting the burner management system, set points or other diagnostic changes, this would require a certificate holder to attend to the facility.
5. Many Landfill owners operate their systems using a contracted operator. Consultants/Contractors responsible for the operation of a landfill gas flaring and energy generation system and/or the associated well fields have been given a solution that would be specific to the systems that they have been contracted to operate. The TSSA will not issue an IMT designation in this circumstance because they are not employees of the owners of the equipment. They may approve the issuance an approval for a G1 with a limited scope (G1- Limited Scope), provided that they attend a TSSA accredited training course and pass the certification exam. The format would be the same as an IMT training course and would require the use of a TSSA accredited approved trainer. The trainer must ensure that the trainees have received the training necessary for the Landfill Gas Collection Systems that they plan to work on. A G1-Limited Scope designation will identify the scope of work that is appropriate to their G1 certificate e.g.,

activate repair, or service any fuel-fired appliance, equipment or component. They will not be allowed to install a system. There is no flexibility in the G.1 Limited Scope. Applicants must be able to meet the full Scope of Certificate as set out by TSSA. All contractors are also required to hold heating contractors' registrations with TSSA. O.Reg 212.01.

## TRAINING COURSES

As part of our discussion with the TSSA, the issue of providing appropriate training for staff working in the industry was reviewed. The following has been agreed to.

- **Operators/Field Staff of Owner Operated Sites** - Joint training courses involving multiple owners of landfill sites can be held if the TSSA accredited trainer ensures that the course covers all the necessary training requirements of each of the respective Landfill Gas Collection Systems. Some of the trainees (depending on their systems) might be subjected to more or less training depending on the complexity of their Landfill Gas Collection System. This training would be approved by TSSA and the trainees would receive an IMT designation for their facilities upon successfully passing the certification exam.
- **Supervisors/ Managers/Engineers** - While Supervisors, Managers and Engineers are recommended to be trained in the design and operational requirements under the regulations, the TSSA will not approve an IMT designation for these staff. It was recommended that a certificate of attendance program be created that would provide recognition of completion of a training session offered through the IMT training program. However, it is clear that this would not be an IMT fuel certificate or a G1- Limited Scope which permits them to carry out the work of a certificate holder.
- **Consultants/Contractors** - Joint training courses held in conjunction with an IMT training session can be offered providing that the certified TSSA accredited trainer ensures that the course covers all the necessary training requirements of each of the respective Landfill Gas Collection Systems. Some of the trainees (depending on their systems) might be subjected to more or less training, depending on the complexity of their Landfill Gas Collection System. This training would be certified (approved) by TSSA and the trainees would receive their G1-Limited Scope as a fixed Scope of Certificate designation upon successfully passing the certification exam.

Should you have any questions or comments regarding this information please feel free to contact the office of the Ontario Chapter of SWANA at [office@swanaontario.org](mailto:office@swanaontario.org) and your email will be promptly answered by the appropriate person.

Regards,



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<b>Fuels Safety Program</b>	Ref. No.: FS – 217- 14	Rev. No.:
<b>ADVISORY</b>	Date: October 22 2014	Date:

**Subject:** Audit Program for Existing TSSA Digester, Landfill and Biogas Facilities  
**Sent to:** Posted on TSSA Web-Site, Natural Gas Council, Propane Gas Council, RRG-Digester, Landfill & Biogas, Ministry of Government Service, OMAFRA, Association of Municipalities of Ontario

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In November 2007, TSSA assumed jurisdiction for Digester Plants and Landfill Sites from the Ministry of Environment. Since then TSSA has audited Digester Plants. Starting in 2014 TSSA will be auditing existing Landfill Sites using the TSSA-DLB-2012 – “TSSA Digester, Landfill and Biogas Approval Code” which adopts the CSA- B149.6-11 – “Code for digester gas and landfill gas installations” with amendments. Depending on the age of the landfill site, one or more sections may be eligible for grandfathering to the code of the day when the site was constructed and put into operation. This is contingent on evidence when the site was put into operation and it had not been modified.

#### Codes

The above codes cover the production, transmission, storage and utilization of the gas regulated by the Ontario Regulation 212/01. Section 4(1) of this regulation in turn requires all appliances to be approved. The required approval may be gained by certification of an appliance as complying with an approved standard or test report by a testing agency accredited by the Standards Council of Canada (SCC) or by having the appliance field approved by TSSA. Since there is no certification standard available for appliances fuelled with digester, landfill or biogas, the only option available is a TSSA field approval.

Please note that:

1. Since 2007 all appliances fuelled with landfill gas only are required to be approved and,
2. Since 1957 all appliances fuelled with or which use a natural gas or propane fuelled pilot(s) are required to be approved.

Please use the following link/address for more information regarding the TSSA field approval program and the application: <http://www.tssa.org/regulated/fuels/fuelsField.asp>

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Aside from this required certification, it is incumbent upon both employer and employee to ensure that workers are appropriately qualified for specialized tasks that may fall outside of existing certificate training programs and industry experience. Given the nature of these highly specialized fuel sector applications, additional training may be required. Trained personnel who operate & monitor equipment do not have to be a certificate holder however; they cannot perform the functions as covered in the specified certificates.

#### Inspections

Our inspectors will require access to all maintenance and repair records as well as procedures and checklists to ensure safety and regulatory expectations are being adhered to.