



Ecowaste Industries Ltd. Yard Waste Composting

Ecowaste embarked on a program which included a pilot yard waste composting program initiated in the Spring of 1992, and a full scale program which commenced in the Fall of 1992. The company currently accepts green waste from residents of Richmond under agreement with the City of Richmond, as well as green waste received from citizens and companies operating throughout the Greater Vancouver Regional District.

Receiving



Green waste is received at the Richmond Landfill, located in East Richmond. The company has two stockpile areas for receiving green waste. A small paved area immediately west of the gatehouse was constructed for Richmond residents only at the beginning of 1998. In the Spring of 1998, a larger paved area accommodating all customers was opened just west of the gatehouse. From these locations the material is transshipped by Ecowaste to the processing area. Large commercial haulers will still deposit their material at a stockpile located near the processing area.

The type of refuse accepted under this program is called Clean Green ®. (Note: a list of acceptable and unacceptable materials for composting is given under the Clean Green link).

Processing

Green waste is processed using a grinder on intervals dictated by the accumulation of material. Commercial equipment of proven design is employed by subcontractors for this operation.



Grinding equipment is either of the "tub grinder" design (photo to right) or of the "horizontal grinder" design (photo below)



The yard waste grinder is normally fed with an excavator, and additional equipment (excavator, front end loader or bulldozer) may be used to assist in the processing.

The ground material is then relocated to the windrow area.

The ground materials are then windrow composted. The windrows have been constructed in a large level area near the south east corner of the landfill.

Windrows are approximately 2.5 m in height, 6 m in width and 75 m in length.

As the volume of material decreases through the composting process, windrows are combined to retain a suitable size for heat retention and cost effective turning. Minimum windrow dimensions are approximately 2.3 m in height and 4.5 m in width.

As an alternative to specialized turning equipment, an excavator can be used. For the last few years, Ecowaste has used a special type of bucket ("rake") mounted on an excavator to turn the compost windrows. With this type of equipment, initial windrows can be 4.5 to 6 m in height and 7.5 to 9 m in width.



Windrows are monitored for temperature and moisture content and turned as indicated by temperature measurements.

Following the active composting stage, the material is formed into a static pile for curing. The cured compost is utilized internally for a growing medium to establish vegetation for final cover on the closed portions of the landfill. In some limited cases, excess compost is included in the materials used for blending in standard and custom soil mixes.

Type A.

Compost being produced by Ecowaste is classified as

Odour Control

Given the size of the site, and the adjacent agricultural uses of the land, a satisfactory level of odour control has been achieved using open air windrows actively turned to avoid anaerobic decomposition. The composting area is in the south east corner of the property and is well buffered from neighbouring properties.



Leachate Control

Leachate from the compost area is collected and treated. A comprehensive leachate control system was installed by the Company during 1988 as part of the environmental controls for the landfill operation. The system was extended in 1995/96 as part of a lateral expansion of the landfill.

The leachate control system includes membranes, buried collector pipes and open ditches. The leachate is directed into the marsh area on the north side of the site, where it passes through an engineered marsh system initially designed by BC Research to provide natural treatment. From here the leachate flows to a final aeration treatment pond before being discharged to the Granville Ave. Ditch. The water is then discharged into the No. 7 Road ditch. The leachate is discharged under Operational Certificate MR-04922 issued by the BC Ministry of Environment. Sampling and analysis of water is done at locations and frequencies specified in the Operational Certificate.



Permits & Licensing

The compost facility started operation before there were any formal regulations, although the provincial Production and Use of Compost Regulation, which became effective January 1, 1994, was in draft form and the operation was tailored to conform to these regulations. When the Production and Use of Compost Regulation was in force, the facility was operated in accordance with the regulation

On March 25, 1997, the facility was licensed by the Greater Vancouver Sewerage & Drainage District Licence C-007). On October 14, 1998, the facility was specifically authorized in BC Environment Operational Certificate MR-04922.

The Production and Use of Compost Regulation was replaced by the Organic Material Recycling Regulation ("OMRR"), effective February 5, 2002. Under OMRR Section 3.(2)(a)(i), OMRR does not apply to any composting facility authorized by an operational certificate. Nevertheless, the facility is operated as appropriate in accordance with the requirements of OMRR.

last modified March 9, 2009