



VAS COUNTY  
GOVERNMENT OFFICE

Electronically signed by:  
Mr. Attila Bencsik  
Head of Department  
Vas County Government Office  
Department of Agriculture and Environment  
Environment and Nature Protection Unit  
(2020.11.25. 11:55:25)

Index: VA/AKF-KTO/1710-9/2020.  
Technical administrator: Mr. Richárd Horváth  
Phone: +36 (94) 504-130  
Legal administrator: Ms. Beatrix dr. Szentiványi  
Phone: +36 (94) 504-133

Subject: Sárvári HUKE Ltd. (Sárvár)  
procedure for amending  
waste management permits  
**Official permit decision**

**DECISION**

For the **Sárvár HUKE Waste Management Ltd.** (registered office: 9600 Sárvár, Ikervári u. 23., KÜJ number: 100 393 336, Statistical identification number: 12799776-3832-113-18) - hereinafter referred to as the Licensee -, for the premises at Sárvár, Ikervári u. 23. : 2862/5, PGI number: 100 987 505), issued by my Department under VA-06/AKF05/2342-7/2018 for the collection, pre-treatment and recovery of non-hazardous waste and under VA-06/AKF05/2464-16/2017 for the recovery of non-hazardous waste are,

**hereby amended,  
and consolidate them**

subject to the following conditions:

**I.**

**Approved treatment technology**

The authorised activity consists of the collection and sorting of wastes listed under IV/1, the collection of wastes listed under IV/2, the preparation for recovery of wastes listed under IV/3 (a) and (b), i.e. pre-treatment (**treatment code: R12, E02-03:** shredding (crushing, breaking, cutting, grinding); **E02-04:** compacting, baling, shredding (e.g. agglomeration, regranulation); **E02-05:** sorting by shape (classification); **E02-06:** sorting by material quality (classification)) and recovery of wastes listed in IV/4 (a), (b) and (c) (**treatment code R3:** recovery, recycling of organic substances not used as solvents).

from page No.2-3

### Wet grinding

PET bottle waste arrives at the site baled and is stored in the designated waste storage area before processing. Once delivered, the waste is weighed and then disposed of at the designated landfill site. The material handler checks the delivery note and the quantity and quality of the material on the truck.

90 % of the PET bales are dismantled by a Wágner knife-type baler and 10 % by a screw conveyor and transferred to a conveyor belt. The conveyor belt transports the bottles to a screen, where small impurities (e.g. gravel) in the bales are removed. The cylinders then pass through a metal separator, where they are first separated from the magnetisable metals, in a second step other metal contaminants are removed. From there, a conveyor belt takes the bottles to the optical sorting machine, where only bottles of the right material and colour are sent on. The material is then transferred to a manual sorting conveyor where the sorted material is checked.

The bottles to be ground are then checked by an optical separator. From the separator, the bottles are transferred to two buffer tanks from where they are fed into a wet grinder. The two crushers operate simultaneously, but in the event of a fault or knife change, one crusher can continue to operate.

In the next step, the grinded material is fed into a centrifuge, where the plastic and wash water are separated. After-treatment is used to remove impurities from the wash water and a portion of the purified water is recycled back into the technology. The impurities separated from the water are disposed of as waste.

In the next step, PET and PO (PP, PE, HDPE) are separated by a floatation method based on the difference in specific gravity. PET remains at the bottom of the water, PO floats on top. After drying, the PO is bagged and sold as raw material or further used.

After separation, the PET is placed in a hot water washer where a 2-4 % sodium hydroxide solution is used to remove impurities (e.g. glue). The temperature of the water varies between 55-90 degrees depending on the product. The water is heated by a gas boiler. After alkaline washing, the material is first subjected to a hot wash and then to a cold wash. To reduce the formation of scale, regenerating salt tablets are added to the water. The parameters of the washing process are automatically controlled by the system.

At the end of the washing process, the PET chips undergo a post-treatment. The first step of the treatment is the removal of light components (dust, labels, etc.) remaining in the material. In a second step, the regrind is passed through a metal separator where any metal remaining in the material is removed. In the third step, the material passes through an optical classifier. Optical sorting ensures that only the correct particle size, quality and colour of the crushed material is placed in the bags. To achieve a better result, the machine scans the material classified as rejects in a separate channel on its own, thus reducing the amount of waste.

from page No.4.

The following mechanical equipments (noise sources) are used for the activity.

Technology step	Name of noise source	Location of the noise source	Noise source operating time (hours)
Baling	Sorting line Johan A. Meier GGFB 1000	Baling hall	06 <sup>00</sup> -22 <sup>00</sup>
	Baling machine Persona LP40EH1		
	Grinder 1 Getteca RS6009		
	Grinder 2 Zerma GSH 500/1000		
	Schredder (WS 22)		
	Agglomerator PREALPINA T.60 L/D		
PET processing unit	Feeding hopper	PET hall	06 <sup>00</sup> -22 <sup>00</sup> and 22 <sup>00</sup> -06 <sup>00</sup>
	Feeding line		
	Pre-sorting belt		
	Shaking table		
	Separator		
	2 pc wet grinder		
	Washing equipment		
	Centrifuge		
	Pneumatic conveying system		
	Separators		
	Pulley feeders		
	Final cleaning		
	Transport fan		
Material handling	15-20 pc. heavy trucks	Outdoor	06 <sup>00</sup> -22 <sup>00</sup>
	2-3 pc van vehicle/day		
	4-8 pc forklift		
	1 pc frontloader		

from page No.5.

IV.

**Environmental regulations, clauses, operating conditions**

1. Non-hazardous waste that can be collected and pre-treated (sorted) are listed below by their code number, designation and quantity according to the Decree 72/2013 (VIII. 27.) VM:

<b>Waste</b>		
<b>code No.</b>	<b>description</b>	<b>amount (Mt / yr)</b>
02 01 04	plastic waste (excluding packaging)	72 650
04 01 08	tanned leather waste containing chromium (blue chips, shavings, chippings, grinding dust)	72 650
04 02 21	unprocessed textile fibre waste	72 650
04 02 22	processed textile fibre waste	72 650
07 02 13	plastic waste	72 650
12 01 05	plastic shavings from planing and turning	72 650
15 01 01	paper and cardboard packaging waste	72 650
15 01 02	plastic packaging waste	72 650
15 01 03	wood packaging waste	72 650

from page No.10.

- 4 c.) The code number, description and quantity of non-hazardous waste that can be recycled (by water grinding, washing) according to the Decree 72/2013 (VIII. 27.) VM are listed below

<b>Waste</b>		
<b>code No.</b>	<b>description</b>	<b>amount (Mt / yr)</b>
02 07 04	material unfit for consumption or processing	30.000
15 01 02	plastic packaging waste	30.000
19 12 04	plastic and rubber	30.000

from page No.11.

- 19 The permit will be valid until **15 October 2022**, subject to revocation if the activity is carried out in breach of environmental regulations.

Szombathely, 25th november 2020.

for and on behalf of  
**Mr. Bertalan Harangozó Government Commissioner:**

**Mr. Attila Bencsics**  
**Head of Department**