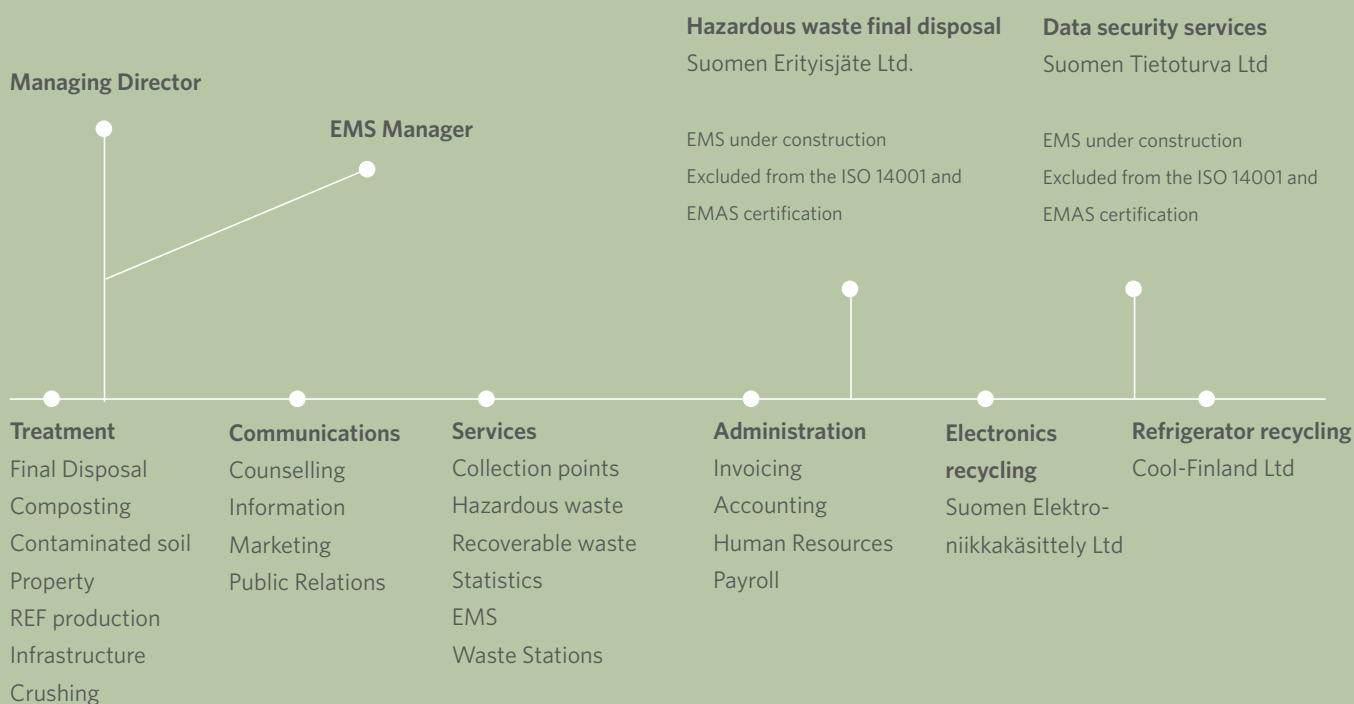


Organisation of the EMS



LHJ GROUP SUSTAINABILITY REPORT 2007 APPENDIX IV

Environmental Responsibility

Scope of the EMS

The EMS covers the operations of the companies and their sub-contractors carried out at the Kiimassuo Waste Management Center. The services outside the Center are excluded from the certification. Nevertheless they are included in the management system in order to develop the services systematically along with the treatment activities. The operations in the EMS are managed in eight different departments. The activities inside every department are described in the operation and working guidelines.

Internal and External Audits

The effectiveness of the EMS and its compliance with the internal guidelines and the standards are assessed regularly through internal and external audits. All operations are audited according to an audit plan at least in every three years. The results from the audits are presented in the management reviews. There were seven internal audits made in 2007. Eight non-conformances

were found. They were related to outdated working guidelines, occupational safety and practices that were made against the valid guidelines. These non-conformances did not present major threat to the environment or personnel.

An external audit was carried out by Bureau Veritas Certification on March 2007. Six non-conformances were found. They did not present major threat to environment and they were corrected in time.

Audits by Authorities

In 2007 the authority visited the site four times. The topics were construction of the two landfill sites and waste treatment. The company received feedback concerning the annual report to authority. In addition to official visits the personnel of LHJ Waste Management discussed with the authorities frequently.

Environmental Aspect Assessment

Significant aspect	Situation	Score of the assessed aspect by company		
		LHJ	SEK	Cool
1. Disposal of biowaste at a landfill site (formation of landfill gas)	Normal	225		
2. Decomposition of waste at the landfill site (formation of landfill gas)	Normal	375		
3. Impurities in the leachate water (emissions to waste water)	Normal	100		
4. Damage in the base structure of the landfill (emissions to groundwater)	Accident	150		
5. Damage in the structure of solidified contaminated soil (heavy metal emissions)	Abnormal	120		
6. Dismantling of refrigerator units (emissions of CFC in the air)	Normal, abnormal and accident		100	
7. Overfilling of a gas cylinder containing refrigerant (emissions of CFC in the air)	Abnormal			100
8. Damage in the structures in the hazardous waste final disposal (heavy metal emissions) Excluded of the EMAS	Abnormal	120		
9. Energy consumption in treatment operations and facilities	Normal	250	250	250

The Environmental Aspect Assessment

The assessment is done every two years or when the operations are significantly changed. The most recent complete assessment was done in spring 2006 and the previous one in 2005. However the assessment was added with the energy evaluation in 2007. The update in the assessment was regarded necessary, because the energy efficiency was not sufficiently evaluated before and the treatment volumes increased strongly in 2006. The assessment includes almost 200 activities, which are carried out in the waste management center. Their impact on air, water, soil, occupational health and safety, natural resources, scenery and waste were assessed. The probability, severity, extent and duration of the negative impact were assessed and scored separately. If the aspect scored more than 100 points it was considered significant.

Monitoring Programme

The programme fulfils the monitoring obligations of environmental impacts set by the regulations and environmental permit. The most recent version of the monitoring programme was introduced in 2004. It was approved by Häme Regional Environment Center. The last update was completed in 2007. The monitoring programme includes:

- Amount, quality and suitability of the waste accepted to the treatment

- Characteristics of the landfill (water, gas, depression)
- Properties of the compost, treatment and storage fields (water, depressions, cracks)
- Treatment of waste in a process plant (REF Facility, electric and electronic waste treatment)
- Emissions (ground water, surface water, dust, odour)
- Monitoring of operations (landfill and composting processes, structures)

Regular and systematic monitoring enables the companies to act promptly and to make repairs if some non-conformances are observed.

The monitoring programme describes the minimum observation activities performed regularly in the waste management center. In addition to the programme, the five companies carry out other voluntary monitoring and maintenance activities related to environmental impacts. According to the programme, different samples are taken and analyzed regularly from several observation points located in the waste management center and the neighbouring area. Visual inspection and evaluation is used during the observation rounds. Every three years, all the water samples taken in August are analyzed more widely. The monitoring is done by the company staff and external expert: the Water Protection Association of River Kokemäenjoki.

Operation Programme 2006-2007

1. Objective:

To reduce environmental impacts of the waste management center

1. Target: To improve the monitoring of the impacts

Actions:

1. Monitoring of the depression of the landfill started in 2006,
2. Monitoring programme was updated and issued to the environmental authority for approval.
3. A shared internet based odour surveillance system was introduced with composting and waste water treatment facilities in the Forssa region - Feedback: 2006/184 and 2007/90

2. Target: To prevent and reduce the environmental impacts

Actions:

1. A project to improve check-ups for waste loads was completed in 2007. Check-up record is made, if the load is incorrectly sorted. 16 records were made in 2007.
2. The need for separate water purification technique was evaluated in 2006. The emissions in leachate water did not require separate purification at that moment.
3. It was agreed with the Meteorological Institute that there will be a new monitoring period for landfill gas in 2008

2. Objective:

To improve the collection and treatment methods

1. Target: To increase the utilization rate of waste

Actions:

1. LHJ started the production of methane oxidizer in 2007. Municipal waste will be treated in the REF-facility and the underflow from the facility will be refined and utilized to oxidize methane on top of the landfill.
2. The utilization of both panel and funnel glass improved. Suomen Elektroniikkakäsittely started to export glass to the CRT manufacturer.
3. LHJ tried to increase sorting of household metals via Information campaigns. In spite of the information dissemination the collection decreased. (2005 2,67 kg/inhabitant, 2006 2,63 kg/inhabitant and 2007 2,56 kg/inhabitant)

2. Target: To improve treatment technology

Actions:

1. Suomen Elektroniikkakäsittely invested in new process technique in order to increase the efficiency in cable and printed circuit board treatment. The company exceeded the target 400 tonnes/a by 30 tonnes in 2007.
2. In order to increase the operation rate of the REF facility, the company increased test, research and development activities in the plant. In 2006 company processed approximately 900 tonnes of other wastes than municipal or energy waste. In 2007 the number was already almost 1 000 tonnes.
3. The internal logistics were developed in Cool-Finland Oy in order to increase the treatment capacity. In 2007 the capacity increased by 6 per cent.
4. The collection of CFC's in the pre-treatment was improved in 2007 by 22 per cent compared to the first complete operational year 2006.

3. Target: To develop regional collection point system

Actions:

1. The customer register were updated and checked in 2006. Households that were outside of the organised waste management were connected to the collection system.
2. The regional collection from the household was started in the municipality of Kylmäkoski.
3. To increase the number of customers by 5 % in the waste stations, company increased the marketing activities and optimized the opening hours. In 2007, the amount of customers increased by almost 60 % compared to the year 2005.

3. Objective:

To improve safety and know-how

1. Target: To improve occupational safety activities

Actions:

1. A new cleaning device was introduced in Suomen Elektroniikkakäsittely in order to decrease the amount of dust in the works space.
2. The absence due to occupational accidents decreased by 71 per cent, from 41 to 12 during the programme period. The target 25 per cent was exceeded clearly.

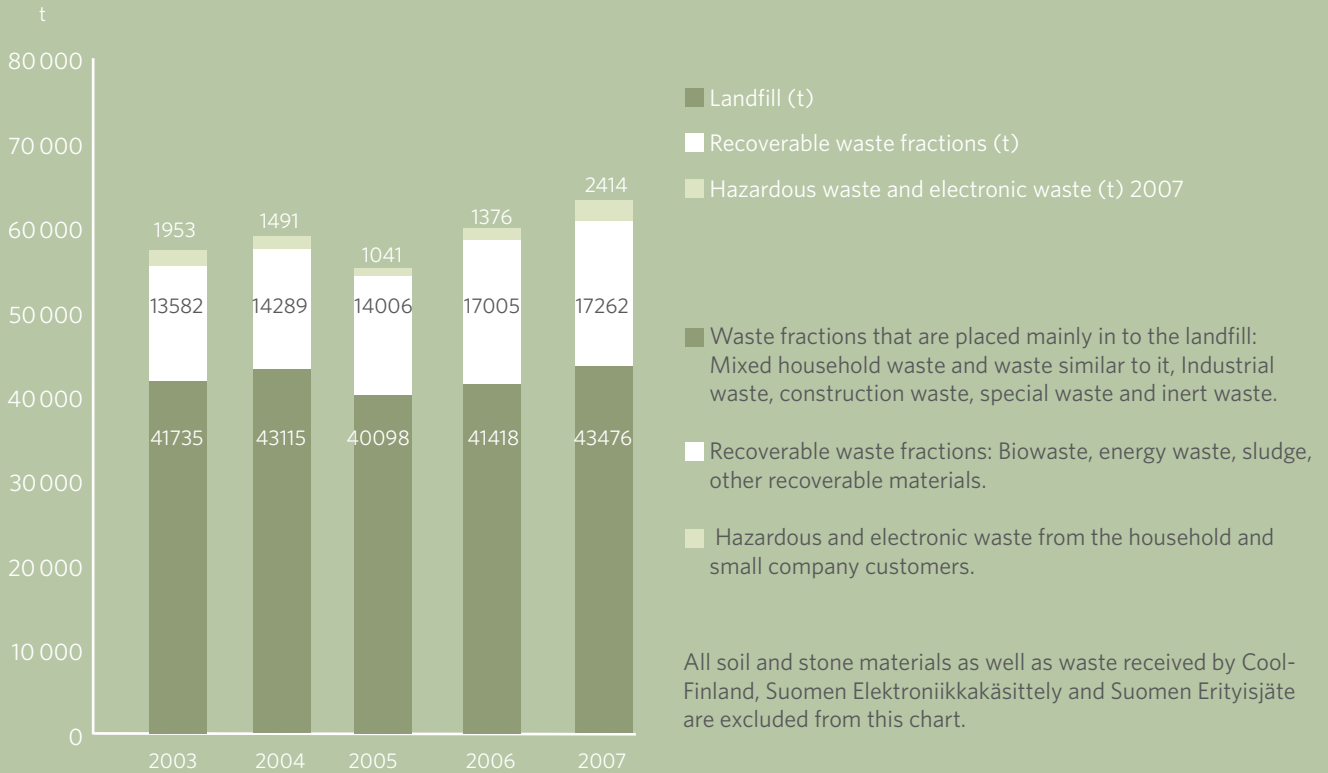
2. Target: To improve the knowledge of the staff and interest groups

Actions:

1. A new annual education and training plan was introduced in the end of 2006 concerning year 2007.
2. Subcontractors were informed of the operation guidelines in the waste management center during the contractor negotiations in 2006.

In the operation programme the company sets objectives and targets for environmental and safety improvements. It includes an action plan, timetables, resources and responsibilities in order to meet the objectives. The programme is monitored and it is evaluated in the management review twice a year.

Waste Accumulation (LHJ) 2003-2007



Material Flows In the Waste Management Center

In 2007, there has been slight growth in every waste category that was received by LHJ Waste Management. The recoverable waste fractions, such as biowaste, continued to increase. This indicates that the separation at the source has still improved. Only the metal collection in the regional collection points continued to decrease. The biggest relative growth was found in the electronics and hazardous waste. Inhabitants in the municipalities have learned to use waste stations as a collection points for these waste materials. Growth in landfill waste was caused mainly by other than household waste. The amount of mixed waste actually decreased a little bit compared to the previous years.

LHJ Waste Management's Utilization Rate

The highest possible recovery rate has been the objective in LHJ Group from the beginning. The waste incineration directive

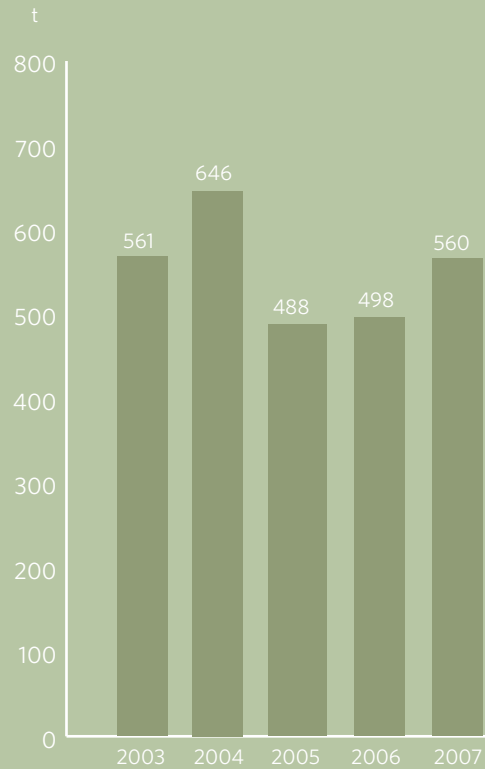
caused a significant drop in energy recovery of waste in Finland. This affected the company's waste utilization possibilities already in 2005. The REF production of municipal waste and sales of the REFIII fuel declined strongly during 2005 and 2006. However, the amount of received energy waste from the companies increased and LHJ was able to increase the production of the better quality REFI-fuel. During the past two years the amounts of energy waste has been at a same level.

The processed raw materials from the joint venture companies were included in the amounts of utilized waste until the end of 2005. From 2006 those mostly recoverable materials are reviewed separately. This decreased the utilization rate even further in 2006. In 2007, LHJ Waste Management was able to increase the utilization rate to 39 per cent. This was due to the increased utilization of waste materials in the waste management center structures, such as land construction.

Production of Recycled Fuel 2003-2007



Hazardous Waste 2003-2007



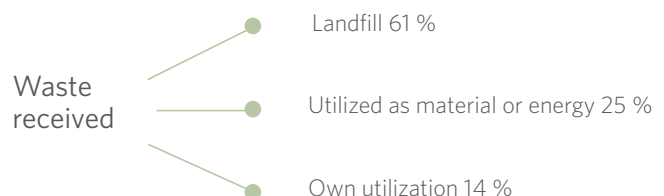
Hazardous Waste	2003	2004	2005	2006	2007
(kg/capita)	4,9	5,6	4,2	4,3	4,9

The monitoring of impregnated wood started in 2004. Impregnating wood was included in the report since 2006.

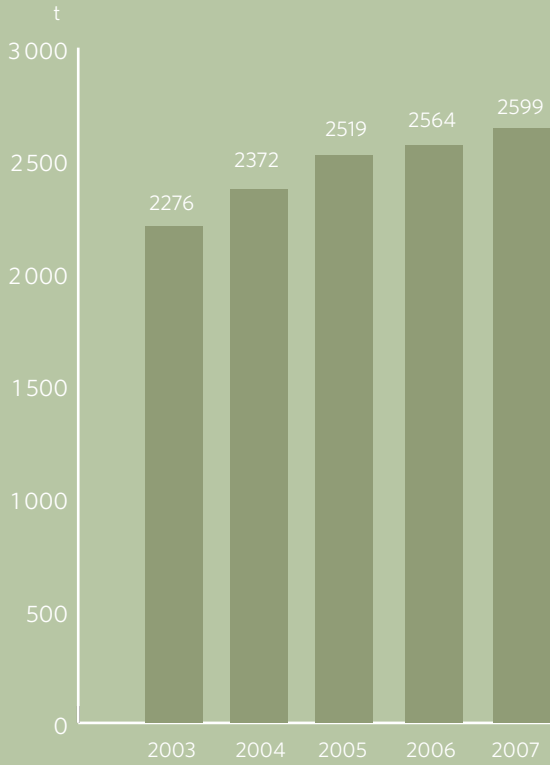
61 per cent of the treated waste materials were placed in the landfill. In order to reduce the percentage, it is necessary to increase the energy recovery of the waste. The municipal waste received in the waste management center contains several fractions that are suitable for energy recovery. The utilization rate cannot be increased significantly before the energy utilization problem has been solved.

The 39 per cent utilization rate does not include any soil substances that are accepted in the waste center. Most of the pure and contaminated soil materials are utilized in base structures and other construction works. Also significant proportion of the recyclable waste materials that are on the producers' responsibility, for example paper and cardboard, are not received in the waste management center. Because of this the reported rate does not represent the whole truth of the waste recovery rate in the area of LHJ.

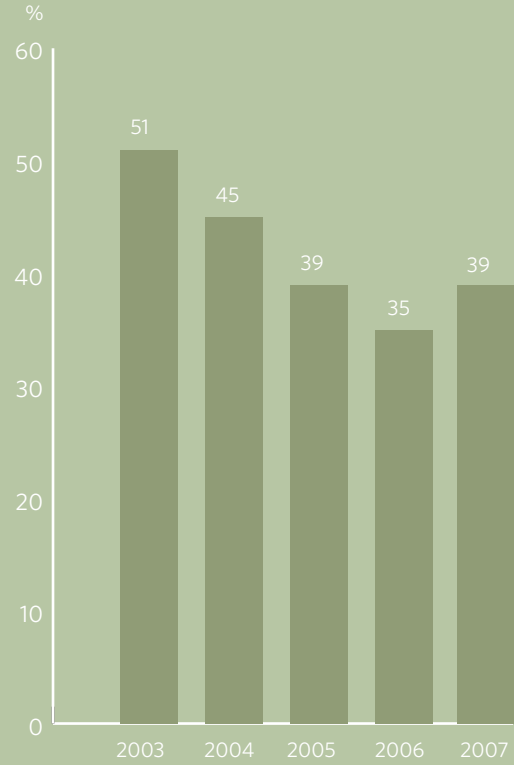
LHJ Total Waste Material Flow



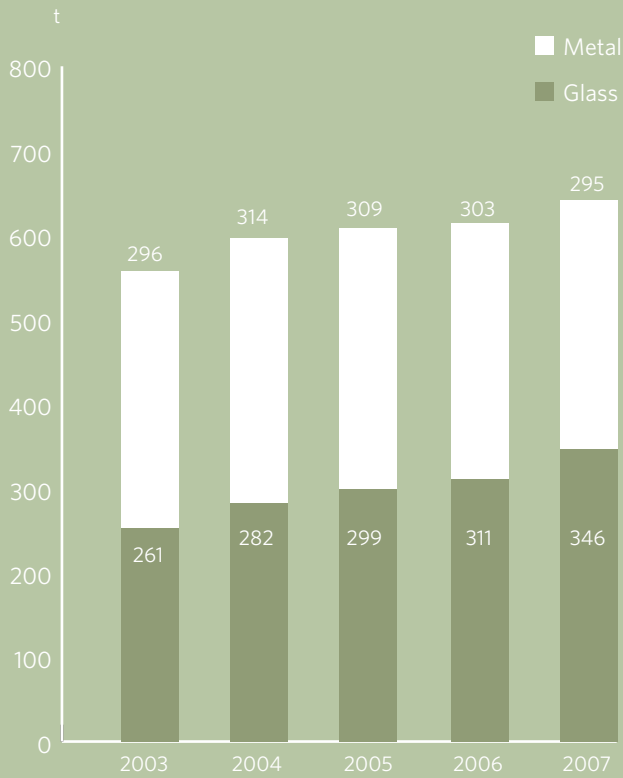
Separately Collected Biowaste 2003-2007



Utilization Rate (%) of the Waste in LHJ treatment 2003-2007



Collection Point Flows 2003-2007



Glass and Metal Combined (kg/capita)

2003	2004	2005	2006	2007
4,8	5,2	5,3	5,3	5,6

Environmental Impacts

Impacts on Water

Surface Water

The waste center impact on surface water was examined in three observation points. Every year, there is a wider analysis from the samples taken in autumn. In 2007 there was no evidence of straight surface water flows from the landfill or waste management center area. Only the ditch leading south indicates some burden that is originated from the Envitech area. This was caused partly by the water that was pumped from the new landfill construction site. The concentrations were relatively high in 2006 also because of the low level of water flows due to an exceptionally rainless summer. In 2007, the concentrations were again at a lower level.

Ground Water

The impact on ground water is monitored in 13 observation points. Two of these are located upstream of the landfill, one is below the landfill area and rest of them are downstream. In addition to these, there are 12 wells that are monitored in every three years in the surroundings of the Envitech area. The samples are taken twice a year in the ground water observation points. The results show that the landfill burden stays inside the waste management center area. The samples taken from the observation points outside of the waste center did not present any burden caused by the leachate water.

Landfill Water

The amount of collected landfill water has grown significantly from the beginning of the decade. This is caused by the new landfill and storage areas that are connected to the waste water collection. In 2007 altogether 79 077 cubic meters of landfill and surface waters were pumped to the waste water treatment plant in Forssa.

The landfill water is monitored four times annually. According to the report of the impartial research organisation and a statement from the specialist the landfill water in the waste management center is comparable with normal landfill water. The concentrations stayed more or less at the same level compared to the previous year. The landfill water does not cause any serious impact on environment or neighbouring area, because the water is first collected and then treated in the treatment plant before it continues to the natural water cycle.

Impacts on air

Dust

The spread of dust was first analyzed in the environmental impact assessment (EIA) in 2002. Since then dust has been monitored in 2003, 2005, 2006 and 2007. The most typical cause of dust in the waste management center is compost windrows, treatment of construction waste, screening of soil, treatment of contaminated soil, unloading the waste trucks and traffic.

In 2007 an expert organisation carried out a dust measurement in two observation points. The first observation period occurred from June to July and the second one from September to October. In the other observation point, the organisation continued the monitoring also in November after the contaminated soil treatment season was ended. According to the organisations the spread of dust does not exceed the limiting values in the closest residential areas. However the dust amounts were increased next to the treatment areas.

Landfill Gas

LHJ Waste Management has used composted underflow from the REF Facility on top of the landfill. It functions as a methane oxidizer on top of the landfill. The positive effect has been notified in a national KAATOPRO study.

Odour

The waste management centers odour emissions are caused mostly from the landfill site. These can be considered relatively mild. Contaminated soil treatment as well as other treatment operations may cause occasional local odour.

LHJ Waste Management has joined into an internet based odour follow up system with a private composting facility and waste water plant. In 2007, there were 90 notifications registered in the system. None of them couldn't be appointed directly to a certain operation done by LHJ Group. According to the memo's of the odour follow-up steering group, the odours were originated in the private composting plant. The number of notifications decreased significantly from previous year when there were altogether 184 notifications.

CFC Gases

The old refrigerators and freezers contain CFC's also known as Freons. The substances are located in the cooling circuit and also inside the insulation material. In fact, most of the harmful substances are in the insulation material. These substances are harmful because they have an ozone depleting impact in the atmosphere. Old discarded appliances contain also substances with global warming potential (GWP). Both substances can be collected from the old appliances in the Cool-Finland Oy treatment plant. Collection and separation technology and continuous monitoring secure the safe recycling result.

The collection of CFC gases has started effectively. The company has exceeded the target value clearly in the crushing phase. In the dismantling phase, where the cooling circuits are emptied from oil and Freon compound, the collected amounts increased compared to previous year. The data between the first years of operation and the next ones are not comparable, because there was a large difference in the numbers of the treated equipment and the technology used for recovery. The year 2006 was the first full year of operation and it gives the real comparison level for the following years. The amounts of CFC's is estimated to decrease gradually in the future because the CFC gases were replaced by other substances at first and banned completely after the year 1995 in Europe.

Quality of Surface Waters in the Surrounding Ditches of the Waste Management Center 2004-2007

Factor	Basic condition of the landfill site in 1996		Surface water 2004		Surface water 2005		Surface water 2006		Surface water 2007	
	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
pH	6,7	6,9	3,9	7,0	4,2	7,1	3,8	7,3	3,9	7,3
CODMn (mg/l)	9,9	48	41	92	39	89	35	140	29	120
El.conduct. (mS/ml)	11,5	52,2	4	27,9	6,5	68,2	5	124	6,3	24,4
NH4-N (micro g/l)	5	970	<5	1700	8	2100	42	3200	16	2100

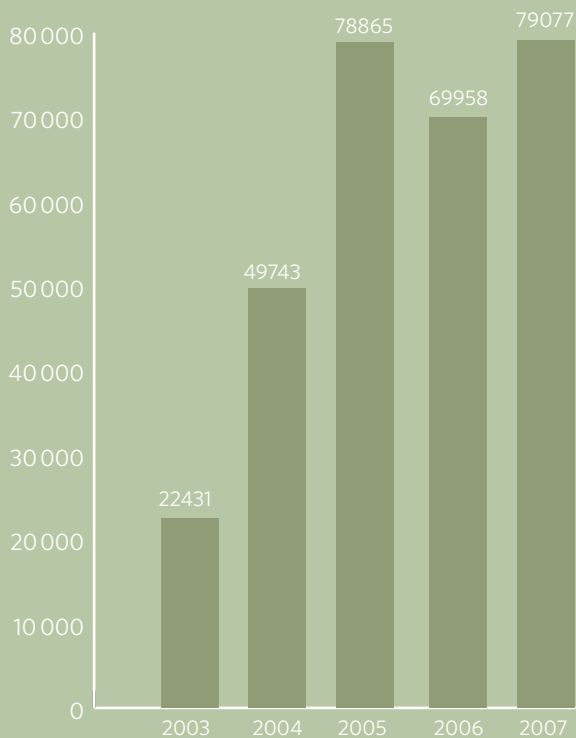
Quality of Groundwater of the Landfill Site in 2007 Compared to the Basic Condition

Factor	Basic condition of the landfill site in 1996		Upstream the landfill site		Below the landfill site		Downstream the landfill site	
	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
pH	6,1	6,5	6,2	6,7	6,4	6,8	5,2	6,7
CODMn (mg/l)	-	-	<0,32	0,66	4,5	7,8	0,42	89
El.conduct. (mS/ml)	6	20,6	5,7	8,1	10,1	21,5	7,5	50,3
NH4-N (micro g/l)	5	970	<5	24	130	800	<7	3200

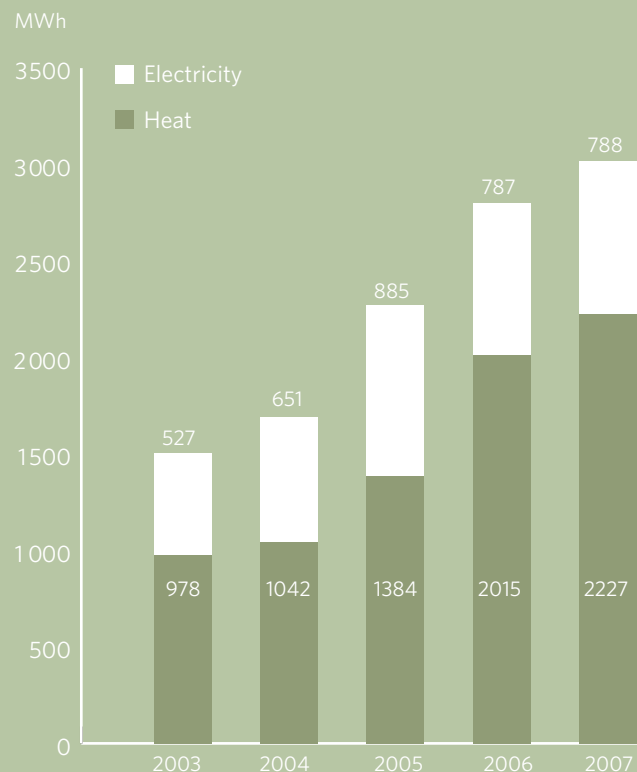
Quality of Landfill Water 2004-2006

Factor	2004		2005		2006		2007	
	Lowest	Highest	Lowest	Highest	Lowest	Highest	Lowest	Highest
pH	7,2	7,9	7,7	7,9	7,6	8	7,4	7,9
NH4-N (micro g/l)	13	170	55	310	61	270	80	280
Tot. phosphor (micro g/l)	350	2300	930	2800	1400	2700	1600	2400
El.conduct. (mS/ml)	142	403	191	603	310	550	196	482
Solid matter (mg/l)	12	520	32	170	23	57	14	230
CODCr (mg/l O2)	160	1500	380	1300	520	940	530	790
BOD7 (mg/l O2)	21	<210	69	190	54	98	41	160

Landfill Water Pumped to the Waste Water Treatment Plant 2003-2007



Total Consumption of Electricity and Heat 2003-2007



Energy Consumption

The growth in treatment operations caused the increase in total electricity consumption. New facilities explain the growth in the heat consumption from the year 2004 onwards. The mild winters on the other hand decreased the consumption in 2006 and 2007.

Other Impacts

Noise

Indicative noise monitoring was carried out once in 2007.

Four of the observation points are inside the waste management center and three are located in the surrounding area. The government has given guidelines for noise levels (55 dBA daytime and 50 dBA night time). The values were exceeded in one point outside of the area. It was caused more by the traffic than the treatment operations.

Nuisance animals

The rodent prevention programme is outsourced to an expert organisation. It monitors observation points eight times per year. According to the report of the organisation, 30 percent of the baits were eaten in 2007 compared to the 46 percent in 2006. The prevention programme and waste compaction at the landfill site prevents the rodents.

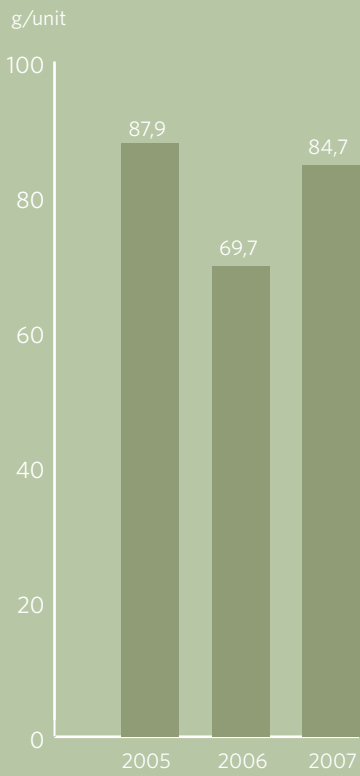
Impacts on Nature and Scenery

The waste management center is not located in an important natural area. There are neither significant nature types nor endangered species that should be protected according to the Environment Protection act. There are no special scenery values inside the waste center or in the surrounding area. The waste management center area is surrounded by forest and hills. The waste management activities are not visible in the residential areas. The landfill impact on scenery is limited so that the highest point of the landfill will not be visible in any direction from the surrounding area even in the future.

Deviations in the Waste Management Operations

LHJ monitors and tries to control every deviation that occurs in normal operations. Five deviations were registered in 2007. In May, there was a small fire in the landfill area. In June an acid barrel was damaged in the hazardous waste building. The acid was collected immediately and transported to hazardous waste treatment. In July a subcontractor's truck leaked diesel on the asphalt in the waste management center. It was absorbed and transported to hazardous waste treatment. In October, Cool-Finland's polyurethane big bags caught up fire. The fire department extinguished the burning sacks. In November, some ash in the landfill area started up a fire. The fire department took the fire under control quickly. The deviations did not cause any major damage to the environment, personnel or property.

Collected CFC´s in the Dismantling Phase 2005-2007



Collected CFC´s per Unit in the crushing Phase 2005-2007

