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FOCUS 02

Zero-Waste-to-Landfill Activities at Outside Japan Production Sites

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At plants in France, Zero-Waste-to-Landfill activities are promoted to achieve higher economic performance through the building of employees' environmental awareness.

Ricoh Industrie France S.A.S. (RIF), established in 1987, achieved level 3* Zero-Waste-to-Landfill in December 1999, making it Ricoh Group's first outside Japan production site to achieve that level. Although RIF produces copiers, toner cartridges, toners, and thermal paper, the plant is also positioned as the European product recovery center. Alsace, in the Eastern region of France, where RIF is located, is famous for its vineyards and has strict environmental regulations. The environmental awareness of the local community is also high. By achieving Zero-Waste-to-Landfill, RIF not only reduced environmental impact but also demonstrated that lower disposal costs contribute to bringing overall costs down. In October 2003, ECO' CLEANIC, which exhibits environmental conservation activities, was created. The displays are used to improve the quality of zero waste through employees' environmental awareness building and raising the awareness of zero waste in the local community. RIF continues its efforts to achieve a higher level through its Zero-Waste-to-Landfill activities.

* For information on the levels of Zero-Waste-to-Landfill. See page 39.

Sample Activity 1 Waste reduction through improvements in production processes

Thermal paper is produced by applying chemicals to paper. Because chemical mixtures vary depending on the type of product, a large amount of water is used to clean the pipes when a different product is manufactured. The amount of wastewater discharged was cut approximately 40% during the period from 2000 to 2004 by switching the pipe cleaning method to one that uses balls (cleaning the pipes pneumatically by putting balls inside the pipes) and making such improvements as integrating production processes by reducing the number of chemicals used from 29 to 6 with the support of the research and development division.

Cleaning the pipes pneumatically by putting balls inside the pipes

Sample Activity 2 Developing recycling routes with higher economic performance

Toner waste was sorted into two categories: waste containing iron and waste that does not. Waste that contains iron was recycled into roadbed materials, which generated processing costs. In 1998, a new recycling route that uses non-iron-containing toner waste as an additive in die making was developed, which made it possible to sell such waste for value and carry out recycling with a higher economic performance. Today, Ricoh UK Products Ltd., a manufacturing plant of the Ricoh Group, employs this processing route. Ricoh Electronics, Inc., in the Unites States, is also discussing using this route.

Production facilities for toners

Q What actions were taken to achieve Zero-Waste-to-Landfill?

A The Zero Waste Management Committee was established to study where waste comes from and how it is processed.

In January 1999, the Zero Waste Management Committee (which comprised staff from various divisions, including general affairs, procurement, technical, and research and development) was set up. The committee's aims were to achieve Zero-Waste-to-Landfill and a 15% cost reduction. First, committee members determined the amount of waste generated from each process. They discovered that the quantity of thermal paper waste and wastewater from the thermal paper production process and toner waste from the toner production process was large. The members then discussed ways to reduce such waste and enhance the sorting of waste and explored new processing routes. These initiatives led to the achievement of Zero-Waste-to-Landfill and a cost reduction that was far greater than the target of 15%. Fiscal 2004 saw a reduction of approximately ¥44 million in resource recovery cost as compared to that before achieving Zero-Waste-to-Landfill.

Resource sorting station at a plant

Q What improvement activities were taken after achieving Zero-Waste-to-Landfill?

A The company strove to cut costs even further and move up in level, from energy recovery to material recycling.

In October 2003, ECO' CLEANIC was created to improve the environmental awareness of all 1,000 members of the company, from employees to management. Everybody went through a one-hour environmental awareness building session. ECO' CLEANIC displays environmental conservation activities, i.e., what kinds of waste are generated, in what amounts, the production processes that generate such waste, how the waste is recycled, and the processing cost. All of these are explained in an easy-to-understand way, using actual samples and charts for 54 kinds of typical waste. Looking at these displays, employees could see the amount of waste generated, how waste is generated, and the current cost of processing waste, which led to their commitment to improving Zero-Waste-to-Landfill activities by submitting proposals. (See below.)

Now, before starting the production of a new product, the company estimates the kinds and amount of waste that will be generated and examines processing methods and routes. This is to deal with the potential risk of a sudden interruption in the resource recovery process.

Q What activities are planned for the future?

A Achievements in Zero-Waste-to-Landfill activities are shared with the local community to contribute to the creation of a sustainable society.

At ECO' CLEANIC, environmental issues, such as the relationship between environmental conservation by Zero-Waste-to-Landfill activities and economic performance, changes in methods of recycling polyethylene terephthalate bottles in France and how they are currently recycled, and what people should do as citizens to create a recycling-based society, are presented in an easy-to-understand way. Nearly 2,000 people, including teachers and pupils at local schools, government officials, and neighboring residents, have already visited ECO' CLEANIC. A half-day program, consisting of a learning session at the ECO' CLEANIC and plant tour designed for students, is available. By sharing the achievements of Zero-Waste-to-Landfill activities with society rather than keeping them within the plant, the company will contribute to the creation of a sustainable society.

A lecture for employees: Three staff members of the Health/Safety/Environment Section take turns giving a lecture.

Sample Activity 3

Promoting thorough sorting of wastes by building employee environmental awareness

Waste generated from the thermal paper production process is recycled into paper by material recycling, however if other substances are mixed in with thermal paper waste, the recycling process does not work. Therefore, once such a thing happens, recycling companies will refuse to accept thermal paper waste, which means the waste has to go to energy recovery. In order to raise employee awareness of the importance of waste sorting, a poster is placed in the sorting area to remind them that thorough sorting reduces not only environmental impact, but also processing cost by 83,000 euros a year.

Poster

ECO' CLEANIC

Overview of the ECO' CLEANIC setup inside the plant: Displays are arranged in a way that is easy for anyone, from children to Ricoh employees, to understand. To date, ECO' CLEANIC has had 2,948 visitors.