

1 Global warming prevention (energy conservation)

We have set ourselves the goal of reducing our primary unit of carbon dioxide emission by 25% from the 1990 levels by fiscal 2010 and have also taken various energy-saving measures. Moreover, to help achieve the Kyoto-Protocol objective of reducing greenhouse gas emissions in Japan by 6%, we have additionally set ourselves the goals of reducing our primary unit of carbon dioxide emission by 3% from the 1990 levels by fiscal 2005 and by 7% by fiscal 2010.

By installing energy-saving equipment and executing complete energy management, we reduced our primary unit of carbon dioxide emission in fiscal 2002 by 13% from the previous year's levels. However, the index of the primary unit has deteriorated by 3% because of a reduction in production.

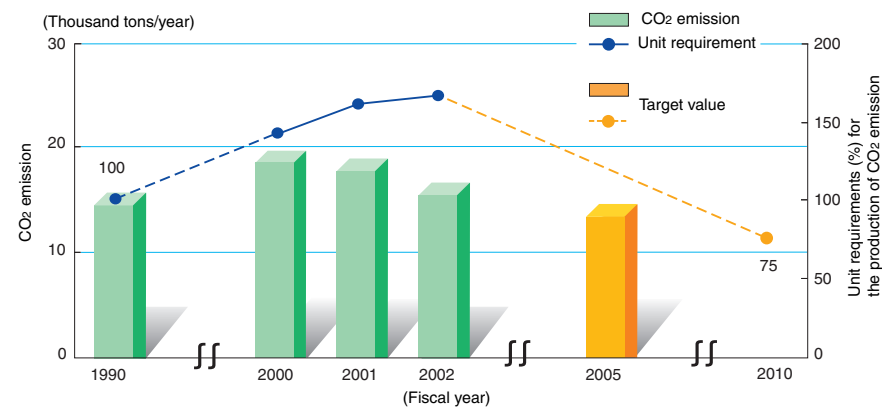
<Major energy-saving measures taken in fiscal 2002>

1. Upgrading of transformers
2. Use of more efficient lighting fixtures
3. Installation of water sprayers on external air-conditioning equipment

<Energy-saving measures to be taken in the future>

1. Application of ESCO
2. Use of inverters in cooling pumps and air blowers
3. Fundamental improvements in production

Trends in CO₂ emission and primary unit index



2 Waste reduction

We have set ourselves the goal of reducing our final landfill amount by 95% from the 1991 levels by fiscal 2010 and are continuing our efforts to reduce waste to achieve our goal of zero emissions. In addition, our continuing efforts in separating and collecting waste and promoting recycling have enabled us to reduce our final landfill amount in fiscal 2002 by 89% from the 1991 levels. To ultimately reduce our final landfill amount to zero, in addition to recycling waste, we have carefully considered ways of reducing its production. With this in mind, we are making efforts to improve the yield rates of production lines and curtail the production of packaging waste.

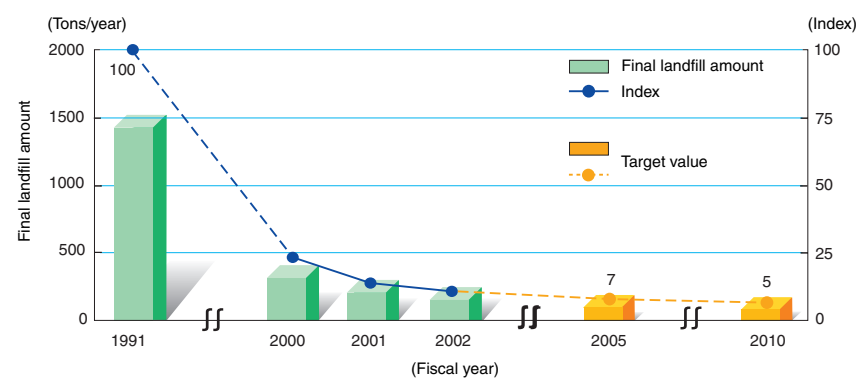
<Major waste reduction measures taken in fiscal 2002>

1. Improvement of coagulant processing method to reduce sludge
2. Thermal recycling (RDF) of waste plastics
3. Recycling of waste lighting fixtures and dry-cell batteries

<Waste reduction measures to be taken in the future>

1. Recycling of nitric acid fluoride waste liquid
2. Thermal recycling (RDF) of waste plastics
3. Improvement in the yield rates of production lines

Trends in final landfill amount



3 Chemical substance management

According to the PRTR* Act enacted into law in July 1999, starting from April 2002, all companies are required to report the amounts of chemicals they release into the environment. Therefore, it is now important for companies to strictly control chemicals on a daily basis and exercise strong risk management in their business operations.

The PRTR Act stipulates that all companies that used 5 tons or more of any of the 354 first-category chemicals in fiscal 2002 must report the fact to the appropriate regulating authority. Because of our commitment to protecting the environment, we have reduced to below 5 tons or completely eliminated our consumption of these chemicals, and as a result we did not need to make such a report for fiscal 2002.

* PRTR: Pollutant Release and Transfer Register

Unit: kg/year

Chemical	Handled amount	Consumed amount	Recycled amount	Transferred amount (waste)	Released amount (atmosphere and water)
Lead solder	780	278	460	42	0
Xylene	679	504	0	20	155
Hydrogen fluoride	660	0	0	630	30
Toluene	183	3	0	90	90
Dichloromethane	0	0	0	0	0

At the end of fiscal 2001, we replaced dichloromethane, which is designated as a hazardous air pollutant, at all of our factories with an alternative and completely abolished its use in fiscal 2002.

4 Water pollution prevention

We have not only complied with the laws and ordinances regulating water discharge from factories to public water areas but have also set even stricter voluntary control standards for all of our factories to further protect water quality. There has not been a single violation of these voluntary control standards.

5 Air pollution prevention

To prevent air pollution, we have set voluntary control standards that are much stricter than the regulations stipulated by law for atmospheric release of dust, sulfur oxides (SOX), and nitrogen oxides (NOX). As with our voluntary water pollution control standards, there has not been a single violation of our voluntary air pollution control standards.

6 Prevention of noise, vibration, and odors

The levels of noise and vibration at our factories are below the standard limits set by the pertinent laws and ordinances. In cases where there is no public regulation regarding orders, we have voluntarily set our own control standards to protect local residents.

7 Lead-free solder

From fiscal 2000, we have successively introduced equipment that does not require the use of lead and promoted the development of technology for use in newly developed products. Based on the results of using this technology in some of our companies, we worked to extend this technology to all of our in-house groups and affiliated companies during fiscal 2002. In fiscal 2003, this new technology will be employed in all of our newly developed products.