How does the JR East Group manage chemical substances?

When using chemical substances, it is important to give due consideration to their impacts on the human body and ecosystems. In addition to complying with all applicable laws and regulations, the JR East Group has set our own voluntary targets to reduce the use and release of chemical substances. We are also making an effort to use lower-impact alternative substances.

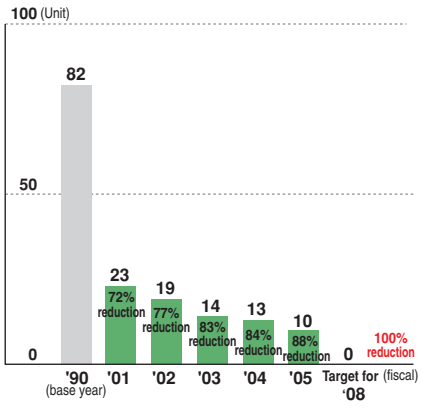
Reducing the use and releases of chemical substances

Initiatives for ozone-depleting substances

While JR East has been using air-conditioning units (heat exchangers) in station buildings that use ozone-depleting chlorofluorocarbons (CFCs) as a refrigerant, we are gradually replacing them with non-CFC equipment. By the end of fiscal 2005, we had reduced the number of air conditioning units using CFCs to 10, down from 82 in fiscal 1990.

Except for some diesel railcars and locomotive-hauled passenger cars, all of our cars use CFC-substitutes. As of the end of fiscal 2005, we were using 92 tons of CFC substitutes and only two tons of CFCs. We routinely check for gas leaks, and recover the refrigerants when scrapping retired railcars in accordance with applicable laws and regulations. Although 60 tons of halon gas was still in use as a fire-extinguishing agent as of the end of fiscal 2005, we are replacing it with non-halon agents (such as powder agents and CO_2) when building new facilities or renovating existing ones.

Number of large building air-conditioning units using CFCs



Chemical substance management

As JR East uses chemical substances primarily for painting and repairing our railcars, we take rigorous steps for their use and management in order to prevent their leakage. As a company that handles a certain amount of specified chemical substances, 20 JR East facilities have submitted release and transfer data for these substances to relevant authorities since fiscal 2001, pursuant to the PRTR Law*1.

We are also promoting the introduction of stainless steel railcars that do not require painting. As of the end of fiscal 2005, 66% of the 10,652 cars operated on our conventional lines are stainless steel railcars.

Beside our initiatives for railcars, we used 450 tons of organic solvents for painting railway facilities and stabilizing track beds in fiscal 2005.

Amount released and transferred from 20 reporting-required facilities

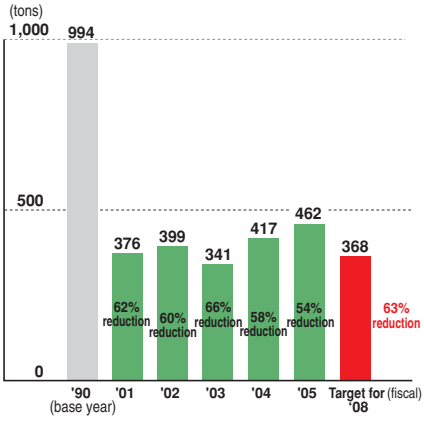
Chemical substance	Released into the air	Released into sewerage system	Transferred outside the facilities
Ethylbenzene (kg)	5,698	0	720
Styrene (kg)	2,392	0	0
4,4'-methylenedianiline (kg)	0	0	208
Ethylene glycol (kg)	0	0	18,097
Toluene (kg)	31,533	7	14,146
Xylene (kg)	45,800	7	1,535
2-Aminoethanol (kg)	0	1,600	200
HCFC-141b (kg)	2,043	0	0
Bisphenol A-type epoxy resin (kg)	0	0	1,678
m-tolylene diisocyanate (kg)	1,083	0	200
Linear alkylbenzenesulfonate (kg)	0	1,400	0
Chromium and chromium (III) compounds (kg)	0	0	109
Dichloromethane (kg)	6,048	0	1,400
Poly (oxyethylene) alkyl ether (kg)	0	1,400	0
o-toluidine (kg)	0	0	95
Manganese (kg)	0	0	32

Notes
There was no release to soil and public water as well as no disposal to landfills.
Among the substances for which reporting is required, those that were actually released or transferred are posted here.

Initiatives at JR East's thermal power plant

Our Kawasaki Thermal Power Plant uses city gas, kerosene, and low-sulfur heavy oil as fuels with lower environmental impact. Since the plant emits nitrogen oxides (NOx), sulfur oxides (SOx), and soot, we are making efforts to reduce the emission of these pollutants by using NOx-removal equipment, dust separators, and other devices. When the Niigata-Chuetsu Earthquake in fiscal 2004 forced our hydroelectric plant to shut down, operating hours at our thermal power plant increased, resulting in an upsurge of NOx emissions to 462 tons.

NOx emissions from JR East's thermal power plant



Control of PCBs

Although JR East has long used polychlorinated biphenyls (PCBs) as insulating oil for our railcars, transformers, and other devices, we actively replace equipment using PCBs with non-PCB ones. We now store the retired PCBs-equipment at 82 locations under stringent supervision, and report its status as stipulated by applicable laws and regulations.

We are currently studying the ways to render PCBs harmless, taking into account the status of PCB-contained waste treatment facilities and the government policies.

***1 PRTR Law**
PRTR stands for "pollutant release and transfer registers."
The formal name of this law is the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in their Management. The law promotes the assessment and control of toxic chemical substances emitted into the environment, and encourages measures to prevent negative impacts on the environment.