

Environmental Protection Activities Report

Promotion of Green Factories

The FDK Group pursues green factories where protection of the environment is well considered including reduction of wastes and chemical substances, prevention of contamination to air, water and soil, and avoiding noises and vibrations.

Reduction of Discharging Chemical Substances

The FDK Group sets out and operates 'Chemical Substances Handling Regulation' to restrict emission of chemical substances from its plants in order to reduce environmental load. It also controls chemical substances appropriately. At the level of plants, types and volumes of chemicals used or discharged to air and watersheds as well as the amount of chemicals contained in wastes that are disposed outside of each plant are measured. Through such activities, the FDK Group as a whole is committed to achieving its environmental targets continuously. At the same time, the accuracy of the measurement and substitution to items that don't contain hazardous chemicals are pursued.

Targets of the Third Environmental Action Plan

Discharge of chemical substances under the Pollutant Release and Transfer Register (PRTR) reduced at the end of FY 2006 by 15% of those discharged in FY 2001

- The scope of the reductions includes FDK plants and offices in Japan.

Reduction of PRTR-Controlled Substance Emission

In FY2005, the chemical discharged from the domestic plants of FDK was toluene only, amounting to 3.26 ton which was increased by 87% over the previous fiscal year. In terms of the target of the Third Environmental Action Plan, it was a reduction by 41% over the actual volume of the chemical released in FY2001 i.e. 5.5 ton.

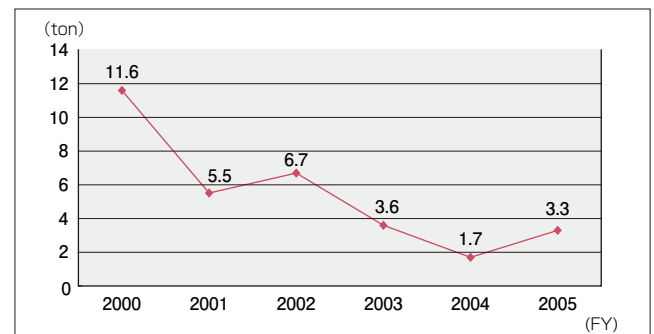
The major reason for the increase is the growth of module products. Besides the manufacturing of the products, toluene is used as flushing solution of products, jigs and facilities. A part of the toluene used in the plants is released to air in a form of vapor. The FDK Group will continue its efforts in searching for substituting agents and confirming the performance of them in order to gradually shift from toluene.

The PRTR Law requires notification to the authority of designated chemical substances handled 1 ton or more a year. The FDK Group controls those handled 0.1 ton or above.

PRTR Tabulation Result for FY2005

In FY2005, the volume of poly (oxyethylene) octylphenyl ether used for the year came to more than that in FY2004 for strengthening flushing of battery cans. During the same year, use of nickel increased due to the expanded production of multi-layer products.

Shift of Toluene Emission



Total Chemical Substances Handled in FDK Group Plants in Japan (100kg or more)

Unit: ton(FY2005)

Chemical substances	Handling volume	Discharged		Volume of transfer		Consumption volume	Recycled
		To the air	To the watershed	Discharged to sewerage	Contained in wastes		
Manganese and its compounds	4,473.52	0.00	0.00	30.22	0.00	4,443.30	0.00
Toluene	5.69	3.26	0.00	2.43	0.00	0.00	0.00
Lead and its compounds	5.66	0.00	0.00	1.36	0.00	3.95	0.35
Bisphenol A epoxy resin	5.53	0.00	0.00	0.01	0.00	5.52	0.00
Poly (oxyethylene) octylphenyl ether	0.97	0.00	0.00	0.97	0.00	0.00	0.00
Boron and its compounds	0.96	0.00	0.00	0.001	0.00	0.96	0.00
Silver and its water soluble compounds	0.80	0.00	0.00	0.00	0.00	0.36	0.44
Nickel compound	0.51	0.00	0.00	0.03	0.00	0.48	0.00
Di-n-butyl phthalate	0.45	0.00	0.00	0.02	0.00	0.43	0.00

Zero Emission of Wastes (Measures to Waste Reduction)

The FDK Group is committed to restrict generation of wastes through 3R (Reduce, Reuse, Recycle). Wastes generated from the plants are separated and recycled in order to reduce loads to the global environment. FDK Ecotec Co., Ltd., one of the group companies, collects information-related devices such as PCs and separates waste plastic, glass and metal from them for recycled use of them, through which it is committed to a business for formation of the recycling-based society. (See page 31)

Targets of the Third Environmental Action Plan

Generation of wastes reduced at the end of FY 2006 by 3% of those generated in FY 2003

- The scope of reductions includes FDK plants and offices in Japan.
- Zero emission of wastes will be achieved by the end of FY 2004 ahead of the target shown in the "Second Environmental Action Plan" by 1 year.

Waste Reduction Activities

In FY2005, the FDK Group continued its activities of using returnable carton in lieu of packaging materials and promoted recycled use of raw materials in processes and plastic vessels in the office. Due to these activities, the waste generated was successfully retained to 1,590 ton, down by 12% over the previous fiscal year.

Achievement of Zero Emission

The target of 'zero emission' was successfully achieved in FY2004. The zero emission activities were continued in FY2005 as well in accordance to the 'Zero Emission Guideline.' Thanks to these efforts, 'wastes disposed by landfill' were totally eliminated throughout FY2005, for the first time. Major activities included recycled use of sludge into road bed and cement materials, separation of plastic wastes more strictly for reuse purposes, reusing of shredded papers for packaging materials, and magazines and newspapers recycled as raw materials for paper.

Recycling of Various Wastes

- Sludge: Raw materials for cements and road bed materials
- Waste plastics: Raw materials for plastics and fuels of blast furnaces
- Waste acids and alkalis: Neutralizing agents
- Waste oils: Oils and combustion improvers
- Waste paper: Paper, buffer materials and thermal recycle purposes
- Metal slag: Raw materials for steel
- Plant residues (food wastes): Fertilizers

Zero Emission of Wastes in FDK Group

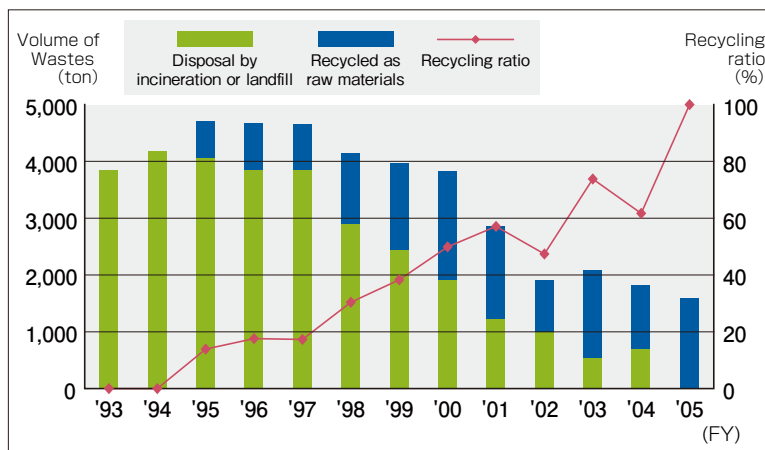
Definition:

Zero emission is defined as utilizing all wastes generated in the group effectively to eliminate disposal of them by incineration and landfill.

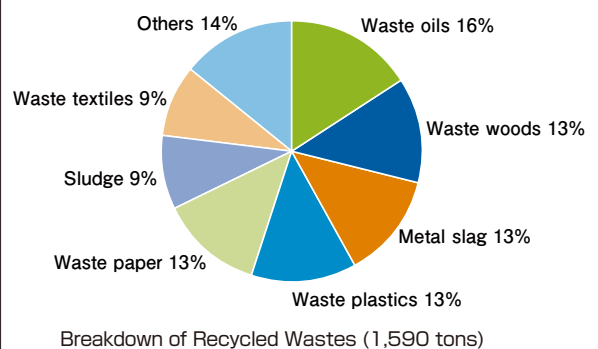
Wastes:

Sludge, waste acids, waste alkali, waste plastics, waste oil, metal slag, glass, ceramics, dusts, waste wood chips, waste paper, waste textile, animal and plant residues (food wastes) and sludge in septic tanks

Volume of Wastes and Recycling Ratio



Wastes by Type



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Environmental Protection Measures to Plants

In order to prevent soil, underground water and air pollutions, the FDK Group is involved in various environmental protection activities. Environmental limits are voluntarily set for effluents, vibration and noise which are stricter than those set by the authorities, and the measurement data are periodically notified to the authority.

Soils and Underground Water

The FDK Group conducted a series of investigations for soil and underground water contamination in 1998 and 1999 to investigate how they are contaminated by volatile organic compounds. The results at the four plants of Washizu, Sanyo, Hosoe and Osuga where soil and underground contaminations were found in the investigations in October 1999, were voluntarily disclosed to the public and works for removing contaminations are going on. In 2002, Hosoe Plant was totally purified.

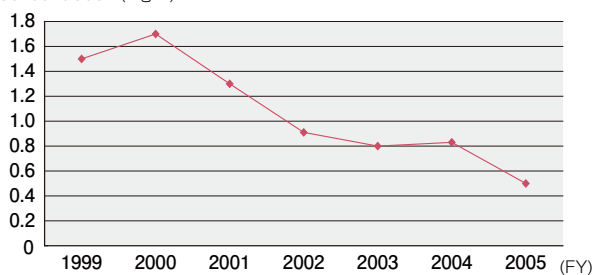
In 2004, the former Osuga Plant site was reinvestigated to check the condition of the soil in accordance to the Soil Contamination Countermeasures Law, and the healthiness of the soil was confirmed. For other plants, we will continue purifying soil and underground water using an air stripping method, while checking the effects regularly.

Washizu Plant

Major contaminants	Volume of contaminants in underground water before starting purification	Current volume of contaminants in underground water	Environmental limit
Tetrachloroethylene	1.5 mg/L (Oct. 1999)	0.5 mg/L (June 2005)	0.01 mg/L

Soil Purification at Washizu Plant (tetrachloroethylene)

Concentration (mg/L)

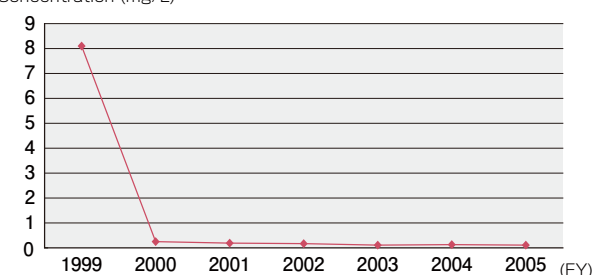


Sanyo Plant

Major contaminants	Volume of contaminants in underground water before starting purification	Current volume of contaminants in underground water	Environmental limit
Trichloroethylene	8.1 mg/L (Oct. 1999)	0.11 mg/L (Oct. 2005)	0.03 mg/L

Soil Purification at Sanyo Plant (trichloroethylene)

Concentration (mg/L)



Emergency Drills

Due to an existing risk of Tokai earthquake, Kosai Plant in Shizuoka Prefecture conducts an earthquake and disaster prevention drill every year. In addition to an evacuation drill, a rescue drill and a fire extinguishing drill, the emergency drill assumes occurrence of environmental pollutions out of the plant premises. In FY2005, an emergency response drill was held under the assumption of an oil leakage from the compressor room.



A drill for prevention of oil leakage from the compressor

Storage and Control of PCB

The volume of storage of PCB in FY2005 was notified to each governor of the prefecture according to the Law Concerning Special Measures Against PCB Waste. At the FDK Group, PCB are appropriately stored and controlled by accurately recording the volume to a ledger. In the future, they are controlled and treated appropriately as designated.

Total Volume of PCB Retained by the FDK Group in Japan

Item	Volume (pcs)
Capacitor	5
Transformer	1
Fluorescent light stabilizer	22



Storage of PCB at Iwaki Plant

Asbestos

After the case of 'health damages caused by asbestos' was covered by the mass media on June 30, 2005, the FDK Group investigated the condition of asbestos use in all of its plants in Japan and confirmed that asbestos were used at none of them.

As to the building demolition works of the former Osuga Plant from October to December 2005, though no asbestos were found sprayed at the building, asbestos were found to its building materials such as slates. The FDK Group instructed the workers to take necessary measures to prevent asbestos dusts from scattering and to protect the health of workers there.



Demolition works of the former Osuga Plant No.2

Effluent Analysis Result

FDK's Kosai Plant is situated near Lake Hamana. Effluents from the plant are strictly controlled than 'water quality criteria of Lake Hamana.'

Kosai Plant (Plant that has been specially designated in accordance with antipollution laws)

Chemical substances	Unit	Control limit	Voluntary limit	Actual value
		(Japan)	(FDK)	(max.)
PH (Hydrogen-ion concentration)	—	5.8~8.6	6.0~8.4	7.6~7.9
COD (Chemical Oxygen Demand)	mg/l	160	15	9.9
BOD (Biochemical Oxygen Demand)	mg/l	160	15	11
SS (Suspended Solids)	mg/l	200	20	1.3
N-hexane extract	mg/l	5	3	<0.5
Copper	mg/l	3	0.5	<0.05
Zinc	mg/l	5	0.5	0.05
Soluble iron	mg/l	10	3	<0.3
Soluble manganese	mg/l	10	3	<0.1
Nitrogen	mg/l	120	40	17
Total phosphorous	mg/l	16	5	3.7
Nickel	mg/l	—	0.5	<0.05
Lead	mg/l	0.1	0.05	<0.01
Boron and its compound	mg/l	10	5	<0.1
Ammonia, ammonium compound, nitrites and nitric compound	mg/l	100	100	9.0

The following substances were found as significantly below the voluntary standards and official detection limits: benzene, fluorine, arsenic, trichloroethylene, tetrachloroethylene, 1-1-1-trichloroethane, total mercury, carbon tetrachloride and cadmium.

Prevention of Discharging Dioxins

All existing incinerators in FDK's domestic plants have been not in use since 2001 to prevent generation of dioxins.

Compliance

In FY2005, no cases of non-compliance to environment-related laws and environmental accidents were reported in the FDK Group.