

Environmental Protection Activities Report

Environmental Solution Activities

The FDK Group is committed to environmental solution businesses such as environmental analysis and investigations as well as promotion of recycled use of resources.

Business Activities of Fujidenka Research and Analysis Center Co., Ltd.

The company has been involved in total environmental analysis and research business for more than 30 successful years. Utilizing the analysis technology and environmental research technologies nourished for a long time of periods, the company contributes to environmental preservation for companies and the local area. Cooperating with other diversified research institutes and local governments, it is involved in planning and proposal of various solution businesses, as well as environmental service businesses including environmental educations and consultations. It also advances to the world after obtaining the ISO17025 certification.



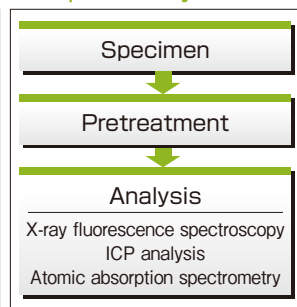
Investigation of Hazardous Substances Relating to Green Procurement

In order to manufacture eco-friendly products in compliance to EU's RoHS and ELV Directives, it is essential that parts and raw materials procured for products shouldn't contain hazardous substances. For this purpose, a system should be established so that hazardous substances contained in various metallic and ceramic products are correctly and speedily analyzed. Fujidenka contributes to the requirements for green procurement by setting up such a system.

Examples of Items Investigated by the Company

Plastics	Lead
Electric wire	Mercury
Printed circuit boards	Cadmium
Cases	Hexavalent chromium
Metallic products	PBB
Ceramics	PBDE
Labels	
Cardboard boxes	
Packaging materials	
Tapes	
Stapler pins	

Example of Analysis Flow



Analyzing instruments



ICP analyzing instruments



X-ray fluorescence spectrometer

Measurement of Asbestos

Fujidenka conducts asbestos measurement as an entity of work environment measurement. After a partial amendment of 'Air Pollution Control Law' in March 2006, it is mandatorily required to confirm existence of asbestos and notify to the authorities for starting demolishing of a building that use of asbestos are suspected. At the same time, much stricter regulatory criteria is now applied to the demolishing works. In order to respond to the requirement of the amended Air Pollution Control Law, the FDK Group will strengthen asbestos analyzing instruments and measure and analyze asbestos contained in construction materials and air.

Measurement of Formaldehyde and Scattering of VOCs

A case of 'sick house syndrome' has been one of the social problems, recently. It is said that the syndrome is caused by chemical substances discharged from construction materials, furniture and home electric appliances. Fujidenka provides a service of measuring sick house syndrome substances discharged from such materials and items using a chamber method as well as those existing in houses and offices.

Examples of Contaminants Existing in a Building

Compound	Typical origin
Formaldehyde	Plywood, adhesive agents for wall paper and picture
Acetaldehyde	Adhesive agents and antiseptic materials (substances originated from alcohol decomposition - cause of a hangover)
Toluene	Paints and adhesive agents for construction use
Xylene	Paints and adhesive agents for construction use
Ethyl benzene	Adhesive agents and paints
Di-n-butyl phthalate	Paints, pigments, adhesive agents and antiseptic materials

Examples of Measurement



VOC measurement in a house and an office



Measurement of VOCs emitted from large-sized equipment (home electric appliances and PCs)



Measurement of VOCs emitted from small-sized equipment (electronic parts, printed circuit boards and materials)



A microscope for asbestos investigation



A microscopic picture of amosite

Comprehensive Investigation and Measures for Soil and Underground Water Contaminations

After enforcement of Soil Contamination Countermeasures Law in February 2003, soil investigation has been mandatorily required in abolishing designated facilities in which hazardous substances were handled. The needs for soil contamination investigation have been on the rise for such occasions as land appraisal for real estate transactions. Fujidenka provides (i) initial documentary investigation, (ii) on-site investigation (overall and detailed) and (iii) assessment and purification measures based on the investigation on soil and underground water contamination by volatile organic compounds, heavy metals and agricultural chemicals.

Contamination Investigation and Measures (Outlines)

Contamination Investigation

Phase I (Documentary Investigation)

Possibility of contamination is investigated from the history of the land use.

- **Land History Investigation**
 - a. Old maps and air photos
 - b. Collection of land registry book
 - c. Interviews
- **Investigation of the Peripheral Areas**
 - a. Underground water contamination
 - b. Investigation of geography around the area, etc.
 - c. Investigation of the history of use of the peripheral area



Investigation by air photos



Sampling of soil gases



Soil gas analysis



Boring exploration

Phase II (Overall and Detailed Investigations)

Conditions of soil contamination are investigated.

- Soil gas sampling
- Surface investigation for heavy metals, etc.
- Surface investigation for agricultural chemicals, etc.
- Boring exploration
- Underground water investigation
- Simulation analysis

Measures against Contamination

Phase III (Purification Measures)

Soils and underground water is purified using the best possible methods based on the investigation results.

- Soil vapor extraction (SVE)
- Air stripping
- Biological decomposition
- Iron powder reduction
- Reaction-type water retaining wall
- Removal by digging
- Others



Removal by digging



Purification system installation works

Environmental Investigation and Consultation

Fujidenka provides environmental investigation and measurement services of plants, facilities and the local environment in order to respond to the diversified needs of environmental investigation, such as water quality. The services provided by Fujidenka include consultation, environmental protection equipment design, construction and maintenance.

Water quality analysis

Effluents from factories, sewages, river water, lake water, sea water, underground water and their bottom sediments

Air quality analysis

Air circulation investigation of sludge, waste acid suspension particles, nitroxide, sulfur oxides, hazardous contaminants, volatile organic compounds and dioxins and effluent gas measurement



Water quality survey of Lake Hamana

Malodorous substance analysis

Concentration analysis of designated malodorous substances such as ammonia and hydrogen sulfide, and odor index concentration survey

Noise and vibration investigation

Measurement of noise and vibration level and frequency analysis as well as simulation of road transportation, construction works and factories

Environmental protection facility design, construction and maintenance

Design, construction and maintenance work of environmental protection facilities

Environmental assessment

Environmental assessment for construction of garbage incineration facilities, waste disposal plants and various plants



Noise and vibration measurement at the boundary of a construction site

Business lines:

Environmental analysis and measurement, Environmental assessment (Analysis of air, water, noise, vibration, odor and soil contamination level, and measurement of work environment) Investigation and removal of soil and underground water contaminants Material analysis and reliability tests, calibration of measuring devices Measurement of sick house causing substances and VOC emission measurement Environmental protection facility design, construction and maintenance

Fujidenka Research and Analysis Center Co., Ltd.

Foundation: January 24, 1976
 Capital: 20 million yen (wholly-owned by FDK corporation)
 President & CEO: Takeo Maeda
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 Tel.053-576-0841 Fax.053-576-5258
 Employees: 50

Environmental Protection Activities Report

Environmental Solution Activities

Business Activities of FDK Ecotec Co., Ltd.

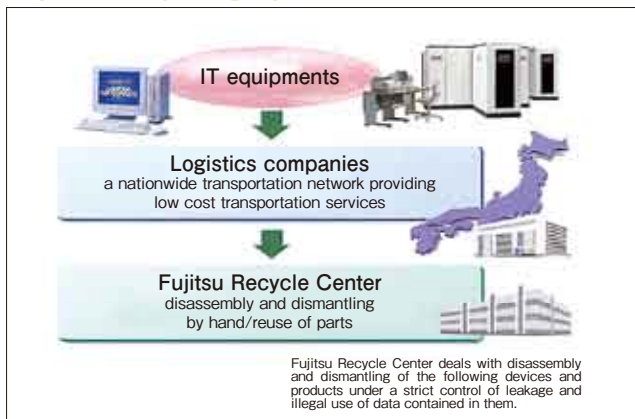
Incorporated in 1997, FDK Ecotec Co., Ltd. is committed to recycling of PCs and other information-related devices to contribute to the realization of recycle-oriented society. In 2002, the company obtained the certification of ISO14001 ahead of other companies in the industry, and since then, it has been proactively involved in environmental protection and prevention of depleting resources to bring the society come true. Since FY2003, FDK Ecotec has been continuing zero emission in handling office automation equipment.



As a core site of Fujitsu Recycle Center

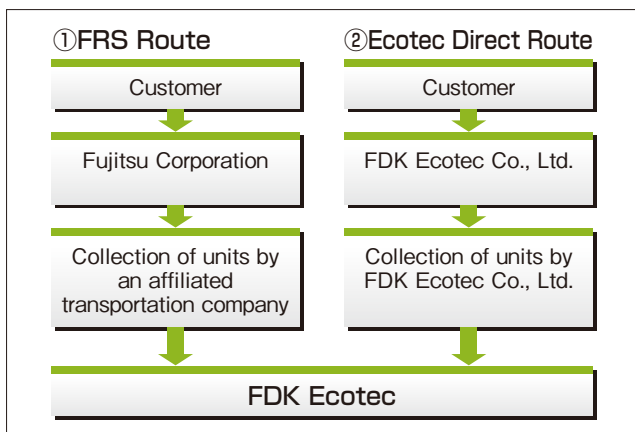
FDK Ecotec handles used PC and other information-related equipment generated from 13 prefectures in Tokai, Hokuriku and Kinki regions as the Chubu Recycle Center of Fujitsu Recycle Center (FRS). It accepts collection of waste devices through the Ecotec Direct Route, and provides an integrated services to customers from collection to disposal of units.

Fujitsu Recycling System



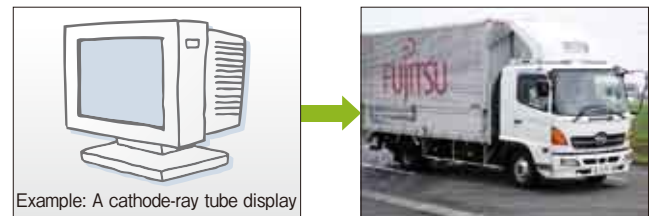
FRS handles recycling of information communication equipment regardless of manufacturers. Disposal of fixed assets are also handled.

Flow of Disposal from Acceptance of Request for Collection



Flow of Reuse and Recycle

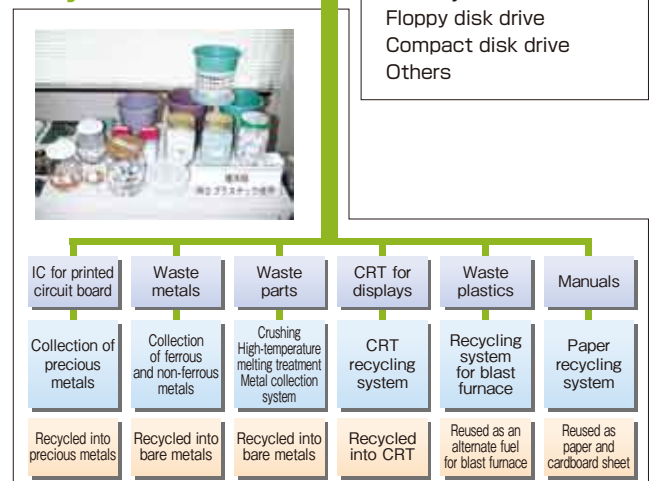
After collection of used devices, FDK Ecotec manually decompose and separate materials to a level that can be recycled and reused.



Reuse

- Hard disk
- Memory
- Floppy disk drive
- Compact disk drive
- Others

Recycle



Measures to Prevent Leakage of Information

After collecting PCs and recording media, the data contained in them are all deleted safely according to the guideline on deletion of data on hard disks of personal computers before disposal and transfer by Japan Electronics and Information Technology Industries Association (JEITA) in order to prevent leakage of confidential information of companies and individuals. Special deletion software developed by Fujitsu Corporation is used for deleting data. The software complies with various deletion standards applied by Department of Defense and National Security Agency in the U.S.

Besides this, data destruction kit for compact disks and physical destruction system for hard disks developed by the company are used as well. The company also provides data destruction services of tapes, IC cards, semiconductor memories and other storage media. A data destruction certificate is issued on demand.



HDD data deletion system



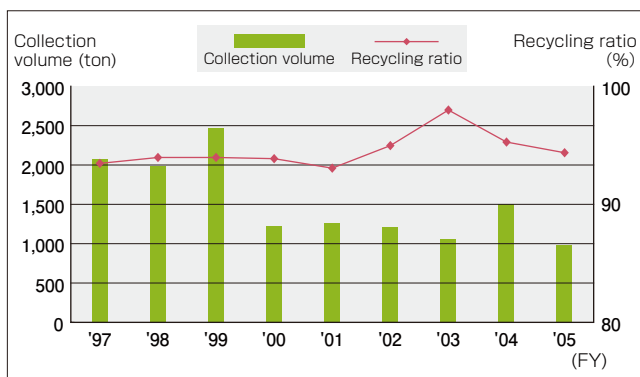
HDD destruction system



CD destruction system

Volume of Collection and Recycling Ratio

FDK Ecotec has committed to enlarging its service area and types of device handled by it to increase the volume of collecting waste devices. In FY2005, the company collected 981 ton of waste devices and the recycling ratio was 94.4%. Compared to the previous year, the number of waste devices remained unchanged, however, in terms of weight, due to the miniaturization of each system and lowered unit prices, the collection volume was decreased by approx. 30%.



Promotion of Recycling

Efforts for Increasing Recycling Ratio

Disassembling of a used parts to just a level of parts composed of more than one materials is not sufficient for recycling of materials. Such parts are separated to a level of plastic, metal and other single materials in the company so that they can be reused for other products. Plastics, in particular, are decomposed to a level of vinyl chloride and polyurethane resin for reuse purposes. Waste plastics are crushed using a crusher.



A plastic crusher

Expansion of the Scope of Recyclable Products

FDK Ecotec accepts used fluorescent lights which are crushed using a special crusher. A melting machine is used for recycling foam polystyrene. The company plans to introduce a magnet tape destruction machine so that it can accept magnet tapes for recycling.



A fluorescent light crusher

Licenses

- Collection and transportation of industrial wastes:
License No. 2100053003 (Gifu Prefecture)
- The range of collection and transportation:
All areas of the following prefectures: Gifu, Aichi, Mie, Shizuoka and Shiga
- Intermediate treatment of industrial wastes:
License No. 2120053003 (Gifu Prefecture)
- Types of industrial wastes authorized to treat:
Waste plastics, metal chips, waste glass and ceramics, concrete chips (excluding those generated by new construction or refurbishment of buildings)

FDK Ecotec Co., Ltd.

Foundation: March 10, 1997
 Capital: 30 million yen (wholly-owned by FDK corporation)
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