



JAE Group

# 2006 Environmental Report

Environmental Activities of JAE

April 2005 to March 2006

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## Scope of Reporting and Editing Policy

This report covers the environmental activities of the JAE Group during the period from April 1, 2005 to March 31, 2006. The scope of this report includes the activities of Japan Aviation Electronics Industry, Ltd. and its five domestic manufacturing plants:

Japan Aviation Electronics Industry, Ltd. (JAE)  
(including subsidiaries Nikko Services, Ltd., JAE Engineering, Ltd., Nikko Logistics, Ltd., and JAE Hakko, Ltd.)  
JAE Hirosaki, Ltd. (HAE)  
JAE Yamagata, Ltd. (YAE)  
JAE Fuji, Ltd. (FAE)  
JAE Shinshu, Ltd. (SAE)

Note: The activities of overseas facilities are described, although they are not included in environmental data or the like.

This report is intended for our stakeholders, including our shareholders and investors, manufacturers and other customers of the JAE Group, suppliers of parts and materials, and members of the communities in which the JAE Group operates.

The goal of our editing policy is to communicate the environmental commitments and policies of the JAE Group, and its actual activities, in a clear and concise manner.

## About the Cover

### Forest of JAE Group

The JAE Akishima Plant, located in Akishima City, Tokyo, draws its entire water supply, including drinking water, from city-supplied underground water sources originating from the forested Okutama region of Tokyo. It has been two years since the JAE Group participated in the Tokyo Development Foundation for Agriculture, Forestry and Fishery's corporate adopt-a-forest program as the first corporate sponsor. Step-by-step activities of tree planting by our employees have been completed for the time being. The cover of this report features a photograph of the Forest of JAE Group. (More details can be found on page 8.)

# Group United in Its Commitment to Environmental Management

## Environmental Management

Some say that the 21st century is the environmental century. The success of last year's Expo 2005 Aichi, Japan, a World's Fair addressing environment issues, is ample proof of greater environmental awareness. In the business world, there is greater awareness of corporate social responsibility (CSR), making consideration for the environment a key management issue.

The JAE Group is united in its commitment to achieving harmony between our business operations and environmental conservation, at times in partnership with our customers and suppliers. We are also committed to remaining a top company, contributing to society without forgetting our responsibility to local communities. In FY 2005, the entire group worked together to create a unified environmental-management system covering all domestic group companies.

## Forest of JAE Group

The year before last, we established the Forest of JAE Group in Tokyo's Okutama region as a symbol of the group's commitment to the environment. Planting trees, clearing undergrowth, and other activities help raise employees' environmental awareness as well as protect the forest, conserve it as a watershed, and make a small contribution to bettering the environment. Participating employees experienced firsthand the importance of protecting nature. It is our hope that they will apply what they have learned not only at work, but also at home and in their communities. Tree planting finished this spring, so henceforth the focus will be on clearing undergrowth, trimming branches, and other forest maintenance activities.

## Community Involvement

A company is closely linked with the surrounding community. It interacts with the local people. Its employees live out their daily lives there. It provides employment for the neighboring region. Last year in April, Akishima City, home to our Head Office Plant, set up Akishima City Environmental Awareness Operator Network, a forum for local operators striving to reduce environmental load. JAE Group is an active participant, forging closer ties with other operators and local citizens while contributing to the region and polishing its own activities.

Group companies at home and abroad help clean up roads, parks, riverbeds, and hiking paths nearby, plant trees, and participate in other activities contributing to the local community, thus building friendly relations with their neighbors on various levels.

## RoHS Directive Compliance

Europe, which is very strict on environment issues, will finally implement the RoHS Directive, regulations limiting the use of specific toxic substances, in July of this year. Our Green Procurement Guidelines, issued in FY2002, have been promoting

similar efforts by requiring reduction (or total elimination) of toxic substances not just within group companies, but also among suppliers. We require compliance with these guidelines from all suppliers. This early start means that our lineup of RoHS-compliant products free of toxic substances is now complete. We also recommend changing over to RoHS-compliant products to our customers.

The independent Environment Advisor Program that we set up in FY2004 to promote environmental quality checks of suppliers, finished checking all target suppliers in FY2005. We firmly believe that environmental quality is a requirement imposed on a company by society and that responding to that requirement is our corporate responsibility. Achieving true environmental quality requires not only efforts within group companies, but also the cooperation of suppliers.

## Countermeasures against Global Warming

Promulgation of the Kyoto Protocol last year made combating global warming an extremely important issue. The JAE Group announced participation in Team Minus 6%, a Ministry of the Environment campaign promoting activities to combat global warming, in FY2005. So far, group companies have upgraded air conditioning systems with computer control, converted compressors and well pumps to inverter technology, and taken many other measures to combat global warming. This year, we plan horizontal expansion of these measures to other group companies, combating global warming on an even greater level.

## Conclusion

In FY2005, the Akishima Plant added a building for health, welfare, and office purposes. Group companies HAE, YAE and JAE Wuxi in China added new factory buildings. These new facilities have installed waste water treatment facilities for their cafeterias, installed eco-ice systems to take advantage of lower nighttime electricity rates, and incorporated other environmental measures, so now the task before us is promoting a management cycle aimed at further reducing environmental load.

This 2006 Environmental Report summarizes our FY2005 environmental activities indicating our resolve to harmonize

environmental conservation activities and business activities. I welcome all comments and criticism.

June 2006



President  
Japan Aviation Electronics Industry, Ltd.

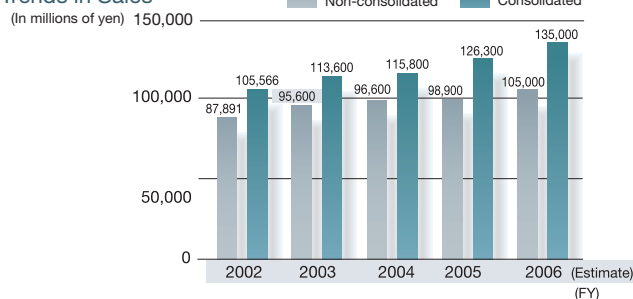
A handwritten signature in black ink, appearing to read "M. Shinzoda". The signature is written in a cursive, flowing style.

# Corporate Data

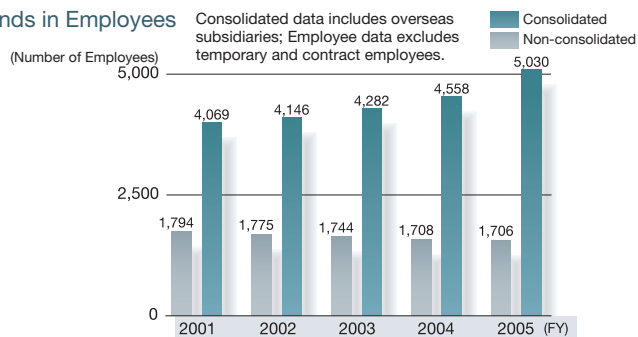
## Outline of Company

Company Name	Japan Aviation Electronics Industry, Ltd.
Established	August 20, 1953
Capital	¥10.69 billion
Head Office	1-21-2 Dogenzaka, Shibuya-ku, Tokyo 150-0043, Japan Tel: (81) 3-3780-2711 Fax: (81) 3-3780-2733
Akishima Plant	3-1-1 Musashino, Akishima, Tokyo 196-8555, Japan Tel: (81) 42-549-9112 Fax: (81) 42-549-9559
Number of Employees	5,030 (consolidated) / 1,706 (non-consolidated) as of March 2006
Net Sales	¥126.3 billion (consolidated) / ¥98.9 billion (non-consolidated) for FY2005
Group Companies	Japan:10 Overseas:11 (Consolidated subsidiaries: Japan:6 Overseas:9)
Website	www.jae.co.jp

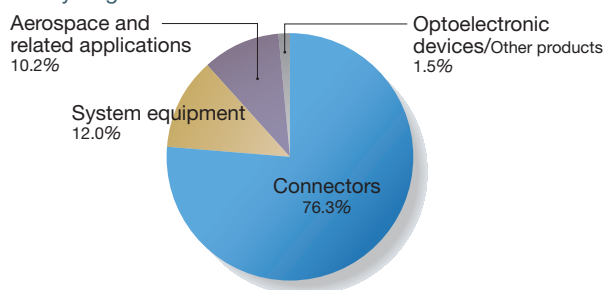
## Trends in Sales



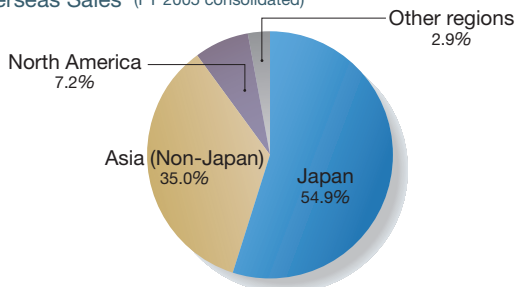
## Trends in Employees



## Sales by Segment (FY 2005 consolidated)



## Overseas Sales (FY 2005 consolidated)



# Business Activities

Ever since JAE was established in 1953, we have been operating our business on a global scale.

Our operation has been based on our high-level technological expertise developed under the corporate philosophy: "Explore, Create, and Practice." In the process, we have provided a wide spectrum of products ranging from electronic connectors to system equipment, aerospace electronics and optoelectric devices to meet customer expectations.

## Connectors

As your design partner, we fully utilize our strengths in development for you.

- PC board connectors
- FPC connectors
- Circular connectors
- Rectangular connectors
- Fiber optic connectors
- Connectors for a wide variety of media and memory cards
- Coaxial connectors
- Automobile electronics connectors
- Jumper coupler for vehicles
- Cable termination equipment

## System Equipment

We create human-machine interface devices that are more user-friendly.

- Input devices  
Metal dome switches, Two-step push switches, Four-directional center-push switches, Operation switch assembly
- Interface equipment  
Panel units, Teaching pendants, Optical touch panels, Touch panel monitors
- PWB assembly for LCD  
LCD driver PWB

## Aerospace and Related Applications

We provide motion sensing and control solutions to satisfy your needs.

- Sensors  
Inertial sensors  
Accelerometers, Ring laser gyros, Fiber optic gyros, Angle sensors
- Defense and space equipment  
Inertial navigation and guidance systems, Strap-down attitude and heading reference systems, Strap-down position and azimuth/determining systems, Automatic flight control systems, SASs (stability augmentation system), Flat panel displays, Radar altimeters, Angle-of-attack transducers
- Industrial equipment  
Active vibration control products for lithography systems, Sensor and sensor applied products for oil drilling industry, Camera stabilizers, LCD display for train cockpit

## Opto Devices

We use a wide spectrum of components to develop high performance complex modules.

- Optical filters
- AR coating
- Optical switches
- Optical couplers
- Optical links
- Modulator modules

For further product information, access the Web page to the right. <http://www.jae.co.jp/e-top/eproduct/index.asp>

# Corporate Philosophy and Charter of Corporate Behavior

JAE Group’s corporate philosophy can be summarized in three terms: explore, create, and practice. Equally important are respect for the planet and contributing to society. These have been employee watchwords ever since our founding. Based on this corporate philosophy, the JAE Group has issued its Charter of Corporate Behavior and, for employees, a matching Code of Conduct setting forth specific basic policies with regard to the economy, society, and the environment and promoting corporate activities based on an awareness of corporate social responsibility.

## Corporate Philosophy

In response to the boundless, changing needs of society, our duties are never-ending exploration and creation. Business enterprise must essentially be like the earth as it spins and revolves through the boundless universe, in the midst of incessant change.

Exploration and creation are born in an environment of freedom and independence, and raised by relentless quest and actions which vigorously transcend barriers and difficulties.

Practicing this principle and further making contributions to society; this more than anything is the goal of our business, and the source of our development.

## JAE Charter of Corporate Behavior

(Revised July 5, 2004)

Based on our corporate philosophy, “Explore, Create, and Practice”, Japan Aviation Electronics (JAE) Group will continue to expand efforts to maintain a fair profit, increase corporate value, and contribute to the creation of sustainable growth in society.

At the same time, as a good corporate citizen, we will abide by relevant laws and rules, and fulfill social responsibilities toward customers, stockholders and investors, business partners and other related persons in the community at large.

1. Fair and Honest Corporate Activities

JAE Group will develop fair and honest corporate activities, observing laws and rules of the countries or regions where we conduct business based upon fair and open competition. We will also maintain sound and fair relationships with government agencies and political bodies.

2. Pursuit of Customer Satisfaction

JAE Group will offer high quality products and services useful for society by paying careful attention to safety. We will continue to be committed to the development of innovative and creative technologies, aggressively launching new products and exploring new business areas.

3. Disclosure of Corporate Information

JAE Group will continue to enhance the transparency of its corporate activities by conveying corporate information in a timely and cooperative manner.

4. Harmony with the Environment

JAE Group, as a member of society, will respect the natural environment, and through environmentally friendly activities, contribute to the achievement of a recycle-oriented society and promote environmental management.

5. Harmony with Society

JAE Group will respect customs and cultures of all regions and countries, and contribute to community development by recognizing international and regional diversity and differences. We, as a good corporate citizen, will also engage in activities that contribute to society.

6. Respect of Human Rights

JAE Group will respect human rights in every corporate activity and not condone discrimination or the employment of child labor or forced labor in the workplace.

7. Respect for Employees’ Individuality and Personality

JAE Group will respect each employee’s individuality and personality, and provide workplace environments that allow thorough development of individual capability and ensure safety and comfort.

8. Management of Intellectual Properties and Information

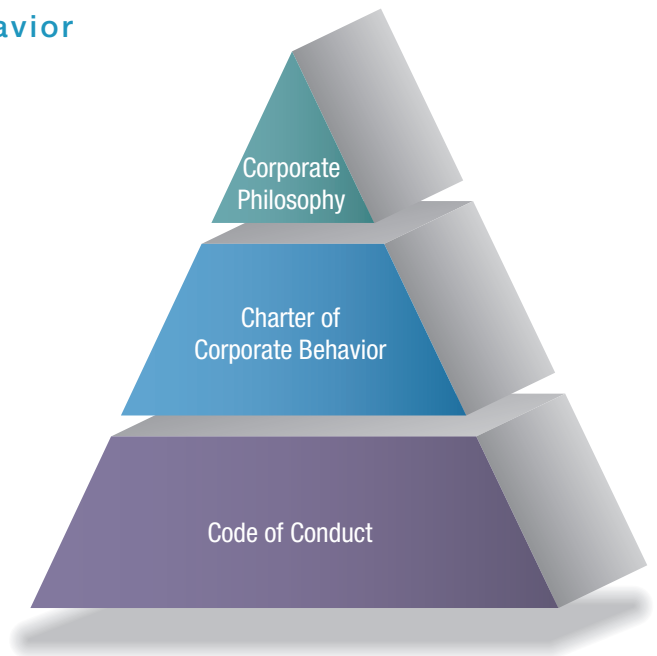
JAE Group will recognize the importance of and properly manage intellectual properties and information.

## Promoting JAE Group Corporate Behavior

The Charter of Corporate Behavior communicates the JAE Group's basic management policy to those outside the Group. A revised version issued in July 2004 further clarifies management's stance toward corporate social responsibility practiced up until that point.

The matching Code of Conduct provides guidelines for employee conduct in line with the basic policies specified by our Charter of Corporate Behavior.

Henceforth, by promoting JAE Group management based on this Charter and this Code of Conduct and adopting as our basic stance ethics and legal compliance and honesty in corporate activities, we will strive to enhance corporate value as a top company working in harmony with society.



## Corporate Social Responsibility to Stakeholders

By putting the corporate conduct promotion activities shown on the right into practice during daily operation, the JAE Group attempts to more thoroughly educate employees, raise awareness, and thus better live up to our social responsibilities to our stakeholders.

Social Responsibilities to Our Stakeholders



### Corporate Behavior Promotion Activities

1. Distribute Charter of Corporate Behavior cards to all employees.
2. Designate a "Legal Compliance Day" each year in July, and ensure it is observed by all employees on the authority of top management.
3. Periodically distribute case sheets and ethics emails to achieve wide employee understanding.
4. Periodically provide training to employees via e-Learning.
5. Create a "CP Ethics" help line, enabling employees to seek counseling or report problems, while at the same time preventing scandals.



Charter of Corporate Behavior card, carried by all employees

## Communicating with Local Community and Contributing to Society

Based on our Charter of Corporate Behavior, the JAE Group actively engages in activities communicating with and contributing to society to strive for harmony between corporate activities and the environment as a good corporate citizen.

### Activities Contributing to Society

- **Clean & Green Activities and Health Checkups (JAE Philippines, Inc.)**

The company, as a member of the industrial park in which it is located, aggressively promotes Clean & Green activities for a cleaner, safer environment. It also implemented health checkups to build relationships with the local community and to boost social welfare there.



Clean & Green activity



Health checkup

- **Cooperating in Japanese Language Education (JAE Oregon, Inc.)**

On the West Coast of the United States, there are high school students who learn Japanese as an elective foreign language.

For five years running, starting in 2002, the JAE Group has been contributing to grass roots diplomacy by holding Japanese language education opportunities, allowing students who have been learning Japanese for three years at West Linn High School to practice their Japanese before graduation—in early June in the United States.



JAE Oregon, Inc.

- **Relief for Hurricane Katrina Victims (JAE Group)**



Certificate of appreciation

When hurricane Katrina struck the United States, JAE Group employees banded together to collect contributions which they donated to the American Red Cross. As a result, the American Red Cross sent us a certificate of appreciation.

- **Production Starts at Newly Completed JAE Wuxi Plant**

Construction of the new factory began in early FY2005 and was complete in January 2006. February marked the start of a sequential changeover to the new plant and the start of production. As one aspect of our response to environmental risks, we have dug observation wells at various locations around the premises and instituted a system to monitor ground water quality.



New Wuxi Plant



## Environmental Management Symbol

# Forest of JAE Group

In June 2004, the JAE Group symbolized its commitment to environmental management by establishing the Forest of JAE Group in Tokyo's Okutama region. Group employees cleared undergrowth and planted seedlings: *Prunus jamasakura* (Mountain Cherries), *Acer mono* (Painted Maple), *Magnolia kobus*, and others to provide seasonal color as well as Japanese cypress, *Quercus serrata*, Japanese zelkova, Japanese horse chestnut, Japanese walnut, and others native to the Okutama forest to provide food to attract small animals. Twice that summer they braved the fierce sun to clear undergrowth and, when that job was done, learned how to sharpen their sickles. These operations have cumulatively so far attracted the participation of over 200 group employees, who learned the importance of protecting nature and the hard work involved.

The spring of 2006 saw the successful planting of the last seedling on our schedule, so the Forest of JAE Group has entered a new phase. We are now investigating ways to cooperate with the local Okutama government and other bodies concerned to protect the forest and conserve it as a watershed.

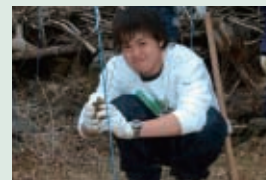
## Tree Planting by New Employees

On April 13, 2006, new employees participated in this year's tree planting event. The weather that day was cloudy, but fortunately there was no rain. Under the guidance of Tokyo Forestry Union experts, the participants planted 130 trees of five types, including *Quercus serrata* and Japanese zelkova.

Reaching the number of trees planted called for by our original goals for the Forest of JAE Group meant the end of employee involvement in tree planting, but there is still other work to be done: clearing undergrowth, trimming branches, thinning out trees, and building paths, for example.

### New Employee Reactions to Tree Planting

I have a keen interest in this kind of activity, so was eagerly looking forward to it, but the actual operation of tree planting itself turned out to be amazingly difficult. Digging holes in the steep slopes took far too long. Yet knowing that the trees that I planted were making a small contribution to the environment brought a feeling of great satisfaction. Henceforth, I hope to actively participate in this kind of activity so as not to forget this awareness of protecting the Earth's environment.



New employee as of April 2006  
Yasuomi Yoshioka,  
Connector 1st Sales Division

### Definition

- **Clearing undergrowth** For the first few years, weeds and other plants surrounding the seedling rob it of sunlight, impeding its growth. In the summertime, when weeds grow especially quickly, clearing such undergrowth so that it cannot interfere with the young tree's growth is thus highly important to maintaining the forest.



## Issuing this Environmental Report Mikio Ogawa, Executive Officer in charge of Environmental Management, JAE Group

Looking back at our FY2005 environmental activities, the biggest change was the integration of the independent ISO 14001 certifications for our domestic production companies into a single multisite system. We also started expanding certification coverage to domestic Sales Offices as well. These moves were in keeping with closer ties between all business activities, clarification of coverage, and other 2004 revisions in the ISO 14001 standard calling for greater standardization, so could not have been more perfectly timed.

FY2005 was also characterized by great amounts of time devoted to audits. In addition to the ad hoc internal environmental audit necessary for integration certification, there was also an internal environmental quality audit strengthening measures for dealing with toxic substances, an issue assuming increasing importance. I firmly believe that this in-house review has effectively prepared us for the implementation of the EU RoHS Directive this July.

In the second half of FY2005 alone, since I assumed charge of environmental affairs last October, there have been problems on the environmental front that we have never seen

before—equipment leaks and spillage in house and contamination with toxic substances both in house and from suppliers, for example. I am happy to report, however, that we dealt with customers forthrightly and honestly. Our prompt, incisive response was only possible because of our day-to-day training in dealing with accidents. Nonetheless, we must still horizontally expand the experience by thoroughly examining the causes and developing preventive measures.

This Environmental Report frankly and honestly reports these incidents to emphasize our extreme commitment to our corporate social responsibility to actively tackle defects, accidents, and other problems. The JAE Group stands united in its commitment, striving for continuous improvement in our environmental management activities to promote environmentally aware business activities.



Mikio Ogawa, Senior Vice President

## JAE Group Environmental Policy (Revised October 1, 2005)

### Basic Philosophy

The JAE Group will contribute to the attainment of a prosperous and sustainable society by fulfilling its corporate social responsibility through environmentally friendly business activities and respect for the natural environment.

### Basic Guideline

The JAE Group recognizes the significance of the 21st century as “the environmental century,” and is fully aware of the environmental impact caused by procurement, development, manufacturing, sales, and logistics activities relating to electronic devices, including connectors – its main product – as well as electronic devices for avionics and aerospace, optical products, and panel units. Accordingly, we will practice environmental management according to the following policies, in order to form a sustainable society:

- |  |   |
|--|---|
| <p>1. Establish environmental goals and targets, and execute plans for improvement. Furthermore, prevent pollution and continually improve environmental management activities through the periodic revision of these goals and targets, and applying a framework to them.</p> <p>-----</p> <p>2. Practice full compliance with legal requirements related to the environment and agreements made by the JAE Group, and establish voluntary standards as needed. Furthermore, strive to improve efforts to conserve the environment.</p> <p>-----</p> <p>3. Establish an environmental management organization and management structure headed by the Executive Officer in Charge of Environmental Management. This organization shall be responsible for ensuring that corporate regulations for environmental management are kept up to date at all times.</p> <p>-----</p> <p>4. Promote green procurement, striving to reduce environmental impact at the product-design stage, and reduce the use of toxic substances. Furthermore, give top priority to 3R (reduce, reuse, and recycle) in energy/resource conservation and waste.</p> | <p>5. Conduct periodic internal environmental audits, and strive to improve environmental management systems.</p> <p>-----</p> <p>6. Document these environmental policies, and ensure they are known by everyone working in the JAE Group. Furthermore, strive to raise environmental awareness.</p> <p>-----</p> <p>7. Disclose JAE technologies for improving the environment and environmental-management data as necessary.</p> <p>This environmental policy shall be disclosed to interests outside the Company upon request.</p> <p style="text-align: right;">October 1, 2005<br/>Mikio Ogawa<br/>Executive Officer in charge of Environmental Management<br/>JAE Group</p> |
|--|---|

# Environmental Management System

The JAE Group promotes its daily environmental conservation activities with an environmental management system constructed in compliance with the ISO 14001 standard. We consider social trends and group business activities when setting forth our environmental policy and objectives. The system aims for continuous improvement by setting annual targets and plans to achieve these objectives, evaluating the results, and reviewing our activities accordingly.

## Environmental Management System Status

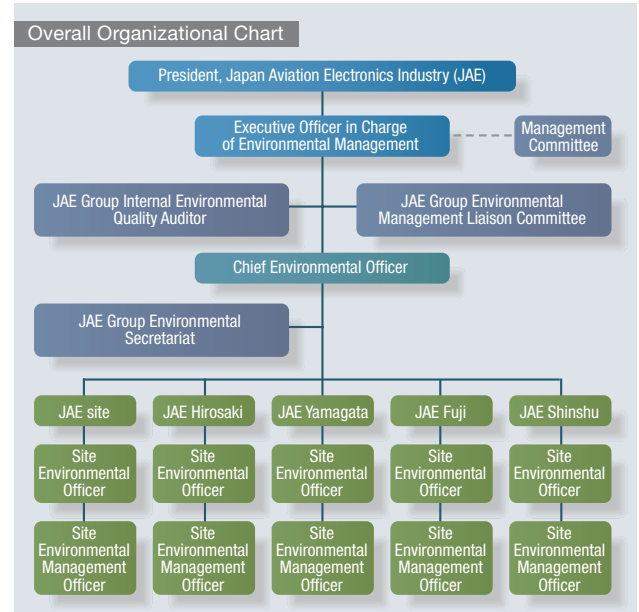
### ● Promotion System

The JAE Group environmental management system for promoting environmental management activities throughout the group consists of the JAE Group Environmental Management Liaison Committee and Environmental Management Committees at the individual sites.

The JAE Group Environmental Management Liaison Committee, a decision-making body made up of the JAE Executive Officer in Charge of Environmental Management, the JAE Manager of Production Support and Environmental Planning Division, and the Presidents of domestic production subsidiaries, sets forth policy and plans for the JAE Group as a whole and deliberates other matters.

The Environmental Management Committees of each site are the centers for day-to-day operation of the environmental management system. They monitor achievement status for the environmental management plan, decide specific environment targets and objectives, and deliberate important environment issues and other matters.

They entrust the formulation of specific target values and measures to specialized subcommittees formed to investigate a particular environment issue.



## ISO 14001 Certification Status

### ● Domestic Sites

Since the JAE Akishima Plant first acquired ISO 14001 certification in August 1998, coverage has expanded year by year. Now all production sites have certification, and we have brought in Sales Divisions and staff company wide as well. FY2005 marked the shift to an integrated multisite system

#### ■ Prior to August 2005

Site	Certification Date	Certification Body	Certification Number
JAE Akishima Plant	Aug. 7, 1998 (renewed July 2004)	JQA	JQA-EMO198
JAE Hirosaki	Dec. 24, 1999 (renewed December 2004)	JQA	JQA-EMO658
JAE Yamagata	Nov. 12, 1999 (renewed November 2004)	JQA	JQA-EMO588
JAE Fuji	Feb. 10, 2000 (renewed February 2004)	JQA	JQA-EMO713
JAE Shinshu	Feb. 10, 2000 (renewed February 2004)	JQA	JQA-EMO771

covering all the group's domestic sites. An audit in July 2005 led to an updated registration in August. FY2006 plans call for incorporating the few sales company regional sites left over to complete a multisite system truly covering all group operations within Japan.

#### ■ After August 2005

Site	Certification Date	Certification Body	Certification Number
JAE Akishima Plant	Aug. 7, 1998 (renewed August 26, 2005)	JQA	JQA-EMO198
JAE Hirosaki			
JAE Yamagata			
JAE Fuji			
JAE Shinshu			

### ● Overseas Sites

Our overseas sites are equally aggressive in promoting certification. All overseas production sites have completed the certification process.

Site	Certification Date	Certification Body	Certification Number
JAE Taiwan	Mar. 22, 2001	Bureau of Standards, Meteorology and Inspection (BSMI), Ministry of Economic Affairs Taiwan, R.O.C.	5E5E001-01
JAE Philippines	Jan. 30, 2003	TUV Management Service GmbH	1210415177 TMS
JAE Wuxi	Nov. 24, 2005	SGS Societe Generale de Surveillance SA	CH05/0838
JAE Wujiang	Oct. 22, 2003	SGS Societe Generale de Surveillance SA	CH03/0920
JAE Oregon	Aug. 20, 2003	Underwriters Laboratories Inc. (UL)	A12142
JAE Hong Kong	Sep. 2, 2004	SGS United Kingdom Ltd.	GB04/62758

Note: JAE Wuxi had to be recertified in FY2005 because the certification body changed. Its original acquisition date was Oct. 29, 2002.

## Environmental Education

Environmental education is a regular feature of working for JAE. When an employee first joins the company, is promoted to supervisor, team leader, or middle management, there is compulsory environmental education to raise awareness of global environmental conservation and to stress the need for compliance with environmental regulations. Those in charge of plating and other operations with high environmental impact receive specialized training in accident prevention and emergency measures to further reduce risks. Complying with the EU RoHS Directive concerning environmental quality has also meant devoting increasing efforts to training environmental advisers in environmental quality.

Employees are actively encouraged to participate in outside workshops and seminars to obtain publicly recognized qualifications to foster employees with greater knowledge of environmental issues. Finally, we incorporate environmental education in employee training programs for our distributors as well, passing on general information on the environment together with materials that better acquaint them with the JAE Group's environmental activities.



Training program for distributor employees

## Environmental Audits

The new JAE Group multisite system in effect from August 2005 strengthened the internal audit requirements, calling for an audit by group auditors every year for sites with large

environmental impacts and once every three years for those with smaller environmental impacts. In the intervening two years, the latter sites conduct their own internal audits.

### ● Inspection Results

#### ■ Regular ISO 14001 Inspections in FY2005

Site	Strong Points	Citations		
		Category A	Category B	Opportunities for Improvement
JAE Group	1	0	2	25

#### ■ Internal Audits in FY2005

Category	Strong Points	Citations		
		Non-complying	Borderline	Requests
Group audit subtotal	18	1	43	35
Site audit subtotal	10	2	21	34
Totals	28	3	64	69

The JAE Group also underwent a mutual audit performed by the NEC Affiliates Environmental Operations Exchange Committee.

This is considered a second-party audit because many members of this committee have supplier-customer relationships.

#### ■ Results of NEC Affiliates Environmental Operations Exchange Committee FY2005 Mutual Audit at JAE Akishima Plant

	Evaluation Results		
	Good Points	Immediate Issues	Future Issues
Results based on preliminary questionnaire and on-site inspection	6	2	6

## Compliance with Environmental Regulations

These last few years have seen many corporate scandals both at home and abroad, causing newspapers and other media to take up the cry for corporate social responsibility (CSR), calling for companies to comply with both ethics and laws and to conduct their business activities fairly and honestly.

The JAE Group was an early leader in making regulatory compliance a key goal, promoting the construction and

application of an in-house corporate ethics system. It has also kept close watch on trends in regulations concerning the environment and promoted activities to prevent values exceeding regulation standards, failure to perform mandated tasks, and other risk factors and, in parallel, held training sessions to minimize the damage of any accidents that should happen to arise.

### ● Voluntary standards for air and water emissions

Air Pollution Control Law Water Pollution Control Law Sewerage Law Local municipal ordinances	Our in-house standards are approximately 80% the ones specified by law.
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### ● Compliance Audits by NEC

FY2005's audits, at JAE Hirosaki and JAE Yamagata, of compliance with laws related to health, safety, and environmental issues revealed several areas requiring improvement, so we immediately implemented remedial measures. JAE Shinshu and JAE Fuji are scheduled as FY2006's targets.

### ● Violations and Accidents in FY2005

There were no fines, lawsuits, or other environment-related violations in FY2005, but there was one potentially hazardous accident. Fortunately, a prompt response meant that this did not

lead to environmental contamination. We ran a total inspection of the related equipment, investigated the causes, and implemented countermeasures. We are now developing preventive measures.

#### ■ Accident Overview

Date	Site	Description
Feb. 28, 2006	JAE Akishima Plant	A waste fluid transfer pipe ruptured, leaking waste fluid containing fluorine into a rainwater gutter and from there into a rainwater catch basin. Fortunately, the proper response meant that this did not lead to soil or ground water contamination.

## Eco-friendly Products


Product development at the JAE Group concentrates not only on the traditional big three considerations of quality, cost, and delivery, but adds a fourth, the environment. This page gives examples of environmentally aware products.

### Examples of Eco-friendly Products

We incorporate environmental awareness into our products. Here we give examples of products incorporating such consideration for the environment.

#### System Equipment

##### Standard LCD Touch Screen Monitor

<ul style="list-style-type: none"> <li>1. RoHS-Compliant</li> <li>2. Power saving design</li> <li>3. Long lifetime and high reliability</li> <li>4. VESA-Compliant</li> </ul>	<p>(1) We were among the first in the industry to comply with the EU RoHS Directive.</p> <p>(2) The screen clears, reducing power consumption when the power-saving function is operational and when there is no input signal.</p>		<p>(3) These are designed for extended use. The touch panel has an operation lifetime of 10 million strokes; the high-luminance backlight, 50,000 hours or more.</p> <p>(4) The mounting screw holes on the rear panel are compliant with the VESA standard, eliminating the need for customers to install a separate mounting plate or other components.</p>
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### Research and Development of Design for Environment Applications

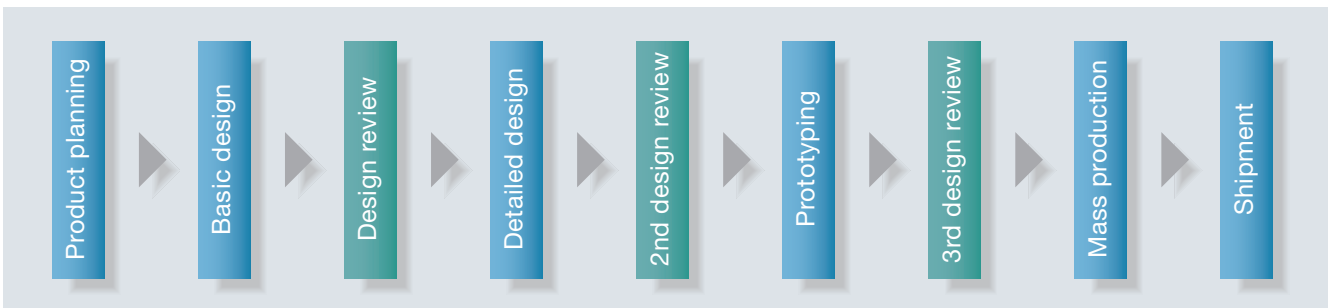
Design a new product or introducing a new production process always involves an assessment to ensure compliance with a key pillar of our environmental policy:

#### Product Assessments

We design and develop a wide spectrum of products, from connectors and other electronic parts through to products for avionics and aerospace. Each Department therefore draws

up its own assessment procedures for evaluating environmental impact and thus deciding whether the new product idea can proceed to the development stage.

practicing environmentally aware business activities from the product design stage. Eliminating toxic substances is an important check item here.



#### Lead-free and Hexavalent Chromium-free

The JAE Group starting moving to lead-free production early on, with all new parts developed from FY2001 onward complying. Our aggressive stance and technical analysis of the solder wicking problem with lead-free FFC/FPC connectors were especially well received.

The table on the right shows the completion dates for our programs to totally eliminate lead (other than impurities) and hexavalent chromium from our products. These following similar programs that abolished PBB, PBDE, mercury, and cadmium. As a result, our production system is now fully compliant with the EU RoHS Directive.

March 2005	Changeover to lead free production complete
December 2005	Changeover to hexavalent chromium free production complete

Note: Aerospace products have a separate schedule because of their heavy reliance on imported parts.

#### Definitions

- PBB Polybrominated biphenyls. Used as flame retardants, these are reportedly toxic.
- PBDE Polybromodiphenyl ether. Used as a flame retardant, this is also reportedly toxic.
- PVC Polyvinyl chloride. Incinerating discarded polyvinyl chloride requires particular caution.

## Setting Targets and Evaluating Results

In August 2005 we integrated the JAE Group’s domestic environmental management systems into a single multisite one that builds upon those systems by setting targets and objectives for the entire JAE Group while giving consideration to unique initiatives implemented at each site.

### Overview of FY2005 Activities

FY2005 marked the start of the JAE Group’s integrated environmental management system for domestic sites.

We reached our original objectives for green procurement and waste reduction, but not for reductions in energy usage (in CO<sub>2</sub> equivalents). The primary reasons were increased production and factory expansion. Our FY2006

activities will aim at reaching this objective by reviewing our plans for incorporating global warming measures.

Toxic substance identification management, another objective, has yet to be fully implemented. The management procedures and system have been improved, but over the transition period defects related to environmental quality have arisen.

Activity	Objective	Target	Results	Evaluation
Energy conservation	Reducing energy usage (in CO <sub>2</sub> equivalents) for the JAE Group overall relative to FY2004 levels	813 metric tons of CO <sub>2</sub>	642 metric tons of CO <sub>2</sub>	×
Green procurement	Finish checking environmental quality for all target companies by the end of FY2005	100% complete (391 companies)	Over 100% complete (404 companies)	○
Environmental quality	Fully implement toxic substance identification management, with no identification management mistakes or mixing in of forbidden substances	Zero environmental quality defects	Environmental quality defects arose	×
Waste reduction	Trim 5% off the preceding year’s plastic waste volume with the twin goals of reducing volume and cutting costs	5% reduction year over year	11.6% reduction year over year	○

### Future Efforts

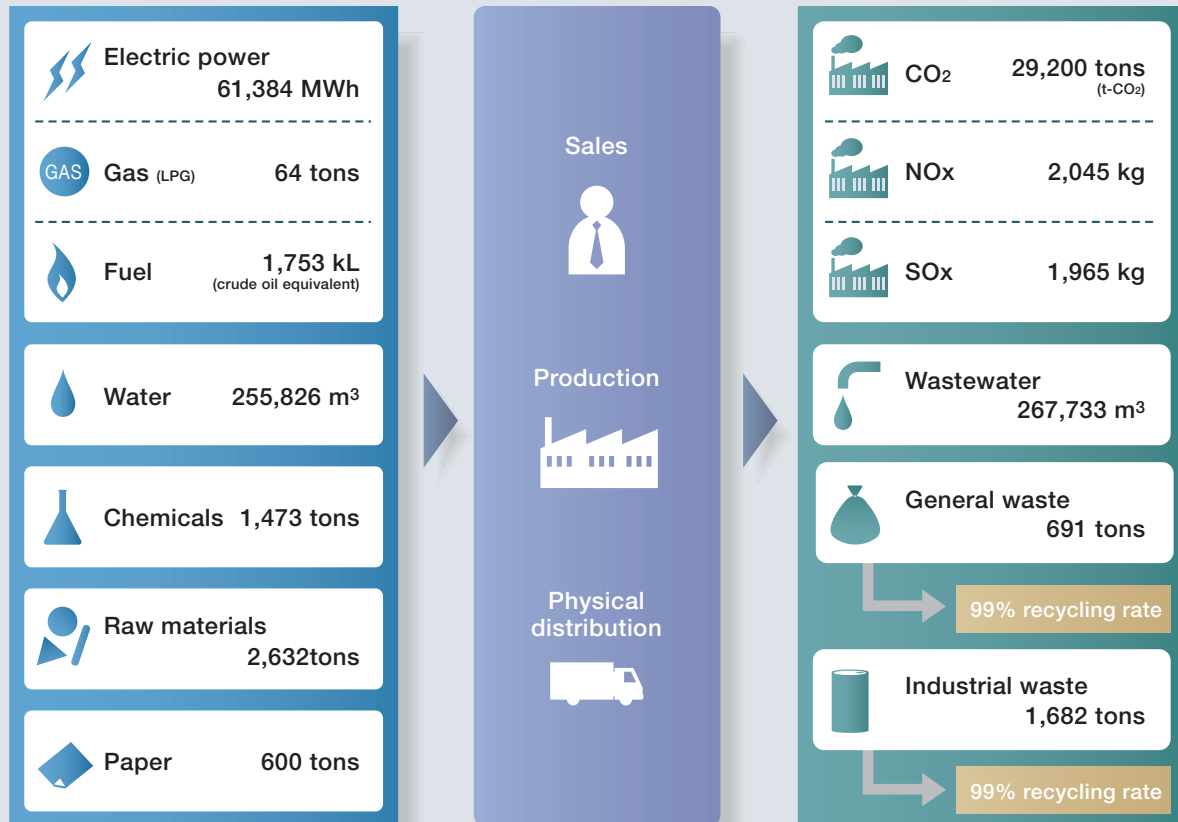
We have set the following shared environmental objectives for the group in FY2006.

Environmental Objective	Plan	Sites
Promote measures to counter global warming	Reduce power, fuel, water, and other energy usage (in CO <sub>2</sub> equivalents)	JAE, HAE, YAE, FAE, SAE
Reduce waste volumes	Promote resale of molding scraps as resources with value	JAE, HAE
Reduce environmental load by promoting environmentally aware design	Reduce environmental load using lighter molds and other measures	JAE, YAE, FAE
Reduce environmental load by reducing defect ratios	Pick target products and lower defect ratios, thus saving on resources, waste volume, energy usage, and other environmental load	JAE, HAE, YAE, FAE, SAE

# Overview of Environmental Load

The following mass balance sheet compares, for the JAE Group's domestic sites, the resources and energy going in and the environmental load arising from our business activities.

## Mass Balance Sheet



### INPUT

Electric power	▶ Power purchased from power utilities for plant operations
Gas	▶ LPG used for energy
Fuel	▶ Heavy oils and kerosene used for energy
Water	▶ Tap water and groundwater
Chemicals	▶ Regulated chemicals, including designated control substances, poisonous and deleterious substances, hazardous substances, organic solvents, and specialty gases
Raw materials	▶ Metals and plastics used as raw materials for production
Paper	▶ Copier and packaging (wrapping/cardboard, etc.) paper used at plants

### OUTPUT

CO <sub>2</sub>	▶ Carbon dioxide generated from electric power, gas, and fuel use
NO <sub>x</sub>	▶ Nitrogen oxide generated from gas and fuel use
SO <sub>x</sub>	▶ Sulfur oxide generated from fuel use
Wastewater	▶ Industrial waste and sewage from plants
General waste	▶ Non-industrial waste generated from business activities
Industrial waste	▶ Waste generated from business activities stipulated by Japan's Waste Management and Public Cleaning Law

## Towards Better Environmental Quality

In October 2002, the JAE Group issued its Green Procurement Guidelines to all suppliers and promoted the conclusion of memoranda promising compliance with these guidelines. Supplier environmental quality checks started in October 2003. To make these even more effective, we expanded this program by setting up an independent Environment Adviser Program in May 2004.

### Answering Customer Demands for RoHS Directive Compliance

#### ●Production System

After eliminating lead from our production system in March 2005, the next step was eliminating hexavalent chromium in December 2005.

Note, however, that the Akishima Plant continues assembling connectors using cadmium plating parts, but only for defense and aerospace applications. To keep these from getting mixed in with other connectors, we have adopted the preventive measure of keeping entirely separate all production steps—from parts acceptance through storage, parts delivery, product assembly, product inspection, and storage up to product shipments.

#### ●Changeover to RoHS-Compliant Products

For parts and products used in fields covered by the RoHS Directive, our RoHS-compliant parts lineup is already complete, as is our framework for complying with the RoHS Directive. In fact, RoHS-compliant parts already account for approximately 95% of our connector sales. Although there are customers still using non-compliant parts in fields not

covered by the RoHS Directive, we are asking them to change over to RoHS-compliant parts, as we aim for 100% RoHS-compliant parts by the end of FY2006 except for defense, aerospace, and other special applications.

#### ●Environmental Quality Audits by Customers

##### Sony

A total of nine sites—group companies at home and abroad plus key suppliers—have successfully passed renewal audits for green partner. JAE Wujiang and JAE Wuxi in China's Jiangsu Province have been approved as new green partners.

##### Samsung

The Wireless and LCD Divisions have passed audits, thus winning approval as eco partners.

We have also passed similar audits by our customers, Toyota Motor Corporation, TAIYO YUDEN Co., Ltd., Seiko Epson Corporation, Fujitsu Limited, Panasonic AVC Networks Company, and PIONEER CORPORATION.

### Establishment of Internal Promotion

#### ●Regulations Concerning Environmental Quality

To boost environmental quality even more, we have issued individual regulations for each site based on company wide regulations, drawn up new regulations to accompany the start of identification management with our trunk EDP system, and reviewed operating procedures.

#### ●Internal Environmental Quality Audits

Internal environmental quality audits started in FY2004, but there arose problems in tracking product flow vertically because such audits were organized by management body. In

FY2005, we strengthened our internal environmental quality audits by upgrading to audits following operation flow from order through to delivery.

#### ●Measuring with XRF Analyzer

In FY2004, our Akishima site, two sites in China, and Taiwan site together acquired four X-ray fluorescence (XRF) analyzers for use in checking whether products, parts, or materials contain substances forbidden by the RoHS Directive. Plans for FY2006 call for (1) increasing the frequency of such measurements and (2) adding more XRF analyzers.

### Environmental Quality Checks of Suppliers

#### ●Checking New Suppliers and Updating Existing Ones

**Domestic:** Our environmental quality checks of suppliers, which started in October 2003, finished covering all major domestic suppliers in March 2006. Those approved in March 2004 received certificates only valid to March 2006, so started undergoing update confirmation in January 2006.

**Overseas:** In FY2005, our overseas manufacturing companies in China, the Philippines, and Taiwan were able to smoothly implement environmental quality checks of their suppliers. In the United States, the start was delayed until May 2006.

The first time around, some suppliers were unfortunately not at a level high enough to pass, so had to be dropped.

When it came time to reconfirm, however, we found that many suppliers had either (1) obtained third-party certification of their environment system or otherwise (2) taken up the

challenge of environmental awareness on a level matching their scale of operations.

#### ●Environment Advisers

As of June 2006, we had trained a group total of 234 environment advisers: 177 in Japan and 57 overseas. We thus now have a system capable of environmental quality checks of suppliers on a global scale. The next step will be to pool supplier information for greater efficiency in an attempt to raise the precision of these environmental quality checks.

#### ●Environmental Quality Checks of Secondary Suppliers

In FY2005, our environmental quality checks of secondary suppliers were merely experimental. From FY2006 onward, however, we will extend them to all secondary suppliers to achieve even higher levels of quality assurance. In particular, we plan to make such on-site checks obligatory for five production processes crucial to ensuring environmental quality: molding, painting, printing, plating, and wiring harnesses.

## Activities Conserving Resources and Energy

Global warming presents a major challenge to the very survival of the human race, so the response has been various measures and activities on a world scale. Our group has responded by applying Business Process Reengineering (BPR) methods to conserve paper and by making operations more efficient.

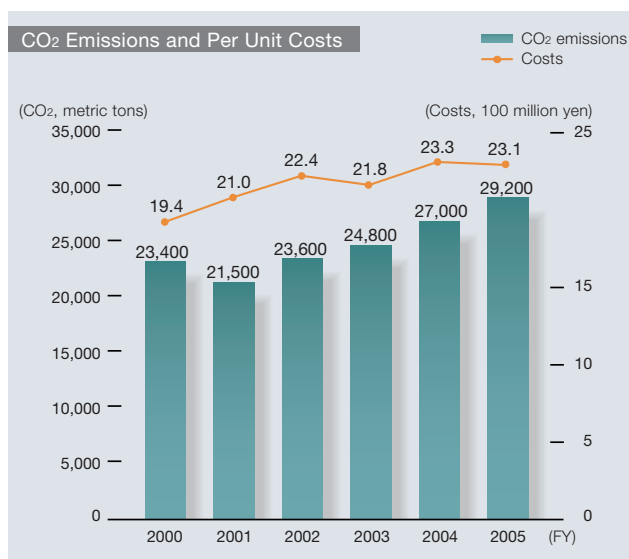
### Combating Global Warming

Group CO<sub>2</sub> emissions are now 9.2% above FY2004 levels. The primary reasons for this increase are increased production and factory expansion. FY2005 emissions per unit sales, however, are still roughly at FY2004 levels.

In FY2005, we eliminated the equivalent of 642 metric tons of CO<sub>2</sub> by fitting air conditioning compressors with temperature control based on the outside temperature (JAE), by converting waste water treatment building pumps to inverter technology and updating lighting facilities (HAE), introducing an energy monitoring system and controlling the number of compressors in use (YAE), and introducing energy-saving compressors (FAE), for example.

Revision of Tokyo's Environment Preservation Ordinance in March 2005 strengthened Tokyo's global warming countermeasures system, affecting our Akishima Plant. The 5-year program that it submitted for combating global warming earned the top ranking (AA) at the planning level. This program calls for a 5.4% reduction from average CO<sub>2</sub> emission levels for FY2002 to FY2004, the reference period, through activities covering the entire Plant.

FY2006 will see horizontal expansion of the above plan as part of stepped up measures to counter global warming.

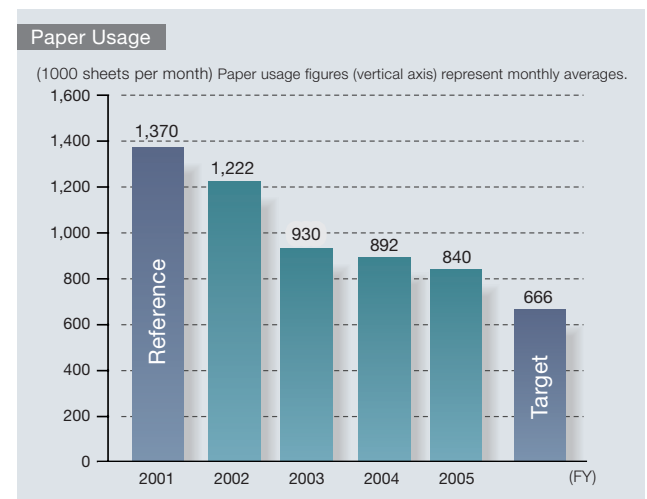


### Conserving Paper with BPR Methods

The JAE Group is in the process of reforming its paper-based operations with activities aimed at pooling data and thus making operations more efficient. Specific measures include introducing scanners for converting paper-based data into electronic format, promoting creative reuse, horizontally expanding the activities of individual Departments, and holding paperless conferences. We are promoting the use of electronic data as is, without hard copy, in operations throughout the entire group.

The original objective was to reduce paper usage by at least 30% from FY2001 levels, but we were able to achieve our final objective earlier than planned with a JAE Group total reduction of 32.1% by FY2003. From FY2004, therefore, our activities have as their goal a reduction of at least 50% from FY2001 levels. Approximately half of our Departments have either already achieved this objective or have it within sight, but the overall result is just 38.6%.

A new work flow system introduced in the second half of FY2005 promises to further promote the use of electronic formats for communications between Departments or even between group companies. The plan is for not just improvement in the processing of limited operations, but establishing a framework under which all sorts of decision-making processes can proceed using just electronic data.



Stop Global Warming!  
Team Minus 6%

The JAE Group is a proud participant in Team Minus 6%, a Ministry of the Environment campaign promoting activities to combat global warming.

#### Definition

●BPR Business Process Reengineering, an approach to boosting operational efficiency by analyzing and then optimizing operation contents and operation flow.



## Management of Chemical Substances and PRTR Data

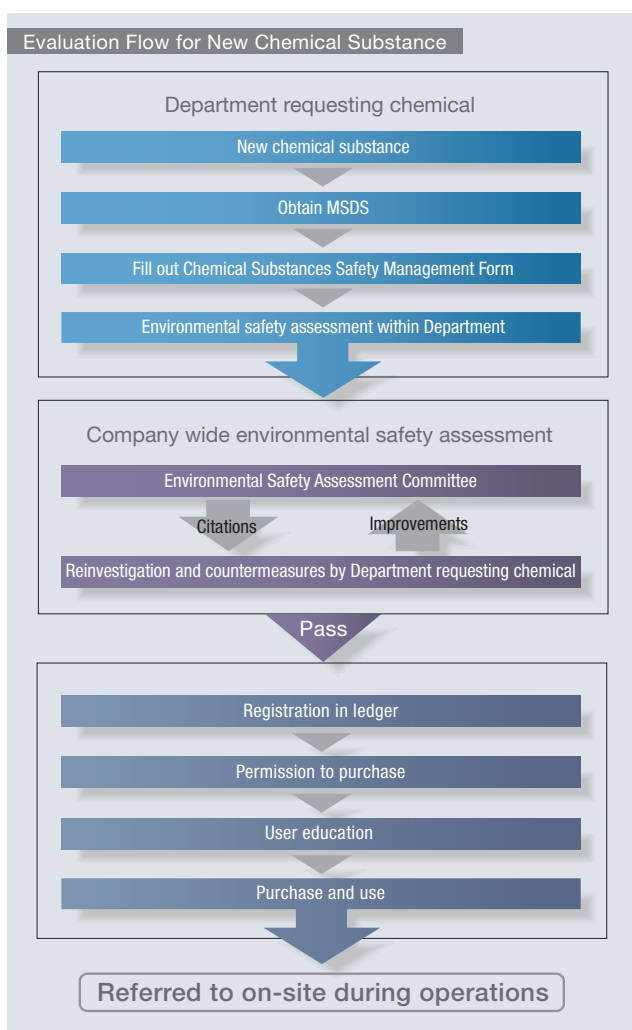
Our thoroughgoing approach to using chemical substances names not just the manager specified by law, but also the Department's chemical substances manager, a chemical substances manager, and the person in charge of that particular chemical substance.

### Management of Chemical Substances

Introduction of a new chemical substance or new equipment, construction works, waste volumes, and other changes require an environmental safety assessment, our in-house pre-assessment system. For a chemical substance, this assessment covers transport, storage, handling, disposal, management system, and other aspects. Under this system, a new chemical substance cannot be purchased until it has passed and been registered.

The flowchart below outlines the pre-assessment process for a new chemical substance.

Each Department using the chemical substance must fill out a separate Chemical Substances Safety Management Form listing not only the general information from the material



safety data sheet (MSDS), but also detailed information for each method using the chemical substance and submit this when requesting the above environmental safety assessment. This information is also used in user education.

The Table summarizes Chemical Substances Safety Management Form registered in FY2005.

#### ■ JAE Akishima Plant

Number registered at the beginning of FY2005	2,075
Canceled	37
New	45
Number registered at the end of FY2005	2,083
Number of distinct chemical substances registered at the end of FY2005	1,596

### PRTR Data

Only two domestic production sites file reports on PRTR restricted substances that they use now or have used in the past. The accompanying Table lists the substances and their totals for the group.

Overall, increased production and moving more work in house have produced a trend toward greater use of such chemical substances, but the most noticeable example among the PRTR restricted substances is nickel. Elimination of brominated flame retardants has steadily reduced, year by year, the amount of antimony used, but the change was only slight in FY2005. The elimination of brominated flame retardants has bottomed out, so we have removed them from our FY2006 JAE site targets and objectives.

The Table also lists figures for lead and hexavalent chromium even though they are outside the report targets. These figures have obviously declined as we totally eliminate lead and hexavalent chromium from our products. Implementation of the EU RoHS Directive should further reduce these figures, but we will continue to use limited amounts in response to customer requests.

#### ■ Trends in Volumes of PRTR-Designated Substances (In tons)

Fiscal Year	2005	2004	2003
Antimony and its compounds	★2.8	★3.7	★★5.6
Inorganic cyanide compounds	★2.0	★2.1	1.3
Hexavalent chromium compounds	0.41	★0.76	★0.77
Nickel	★7.5	★6.5	★6.7
Nickel compounds	★2.4	★2.1	★★2.2
Hydrogen fluoride and its water-soluble salts	★2.8	★3.0	★2.5
Lead and its compounds	0.12	0.4	0.88

★: Subject to PRTR reporting (when handled by multiple sites, the corresponding figure is shown)

#### Definition

● **PRTR** Pollutant Release and Transfer Register. This system represents an attempt to have operators quantize the release of toxic substances, including ones that do not have known effects on human beings, to the environment and take other measures promoting improvement of chemical substance management to ward off environmental degradation. This register was established under the provisions of the Japanese Law regarding the promotion of quantizing the release of specific chemical substances to the environment and improving management thereof.

## Reducing Industrial Waste

Our industrial waste measures follow the Basic Law Promoting Formation of a Recycling Society precepts for suppressing the creation of industrial and other waste, cyclic use of recyclable resources, and appropriate disposal as we strive to minimize our consumption of natural resources and reduce our environmental load as much as possible.

### Progress Toward Zero Emissions

The JAE Group project team, formed in FY2000, was disbanded in FY2001 because we had reached our goal of recycling at least 95% of all waste output, but our sites continued their promotion efforts so that, from FY2004 onward, we have maintained recycling ratios of 99% and higher.

\* The JAE Group defines zero emissions as attaining a recycling ratio of 99% and higher for all waste other than accepted for incineration under local ordinances.

### Appropriate Processing of General Waste, Industrial Waste, and Waste Requiring Special Treatment

Waste treatment strictly follows rules that the JAE Group has set forth for storing waste, subcontracting treatment, managing industrial waste management forms, and reporting or registering with the government based on the Industrial Waste Treatment Law.

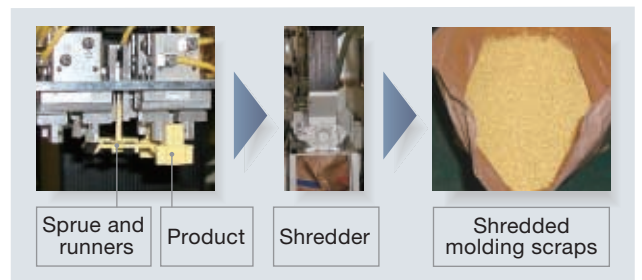
In managing subcontractors and recycling waste with value, we use documentation and on-site checks to verify compliance with all laws, local ordinances, environmental management policy, and the like.



On-Site Check

### From Thermal Recycling to Material Recycling

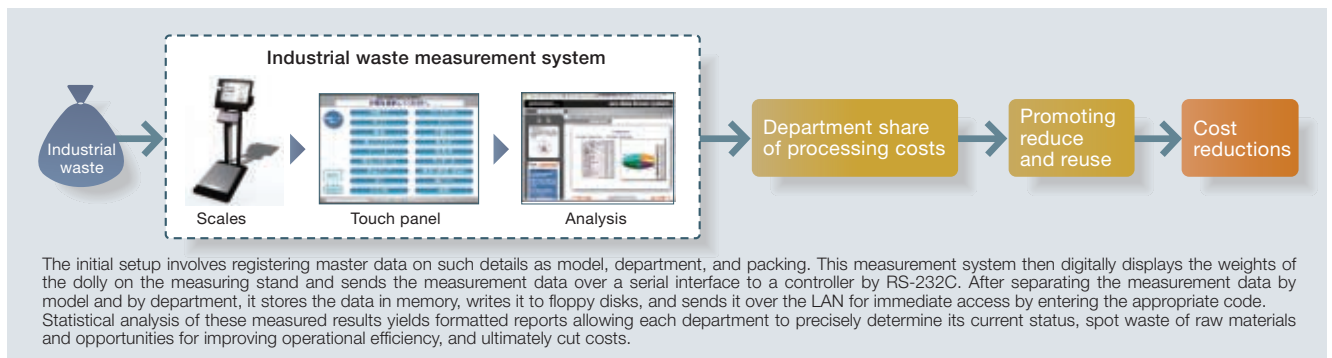
Small lot production has traditionally made it difficult to recycle the sprue, runners, and molding scraps arising during connector ejection molding. Unable to properly separate this waste, our only choice was thermal recycling. From FY2005, however, separation has joined JAE Group targets and objectives for heavy promotion, so our aim is now material recycling, a higher level of recycling. In the first fiscal year, we were able to convert waste plastic into recycled raw material that we could sell, reducing our industrial waste output volumes by 11.6%. We now plan to step up these activities by expanding them to other target materials as well.



### Introducing Measurement of Industrial Waste

Once we agree that waste reduction is an important issue, the first step toward such reduction becomes precisely determining current waste volumes. Traditionally, this has meant each Department recording output and compiling statistics manually. In FY2005, however, the Connector Department at our

Akishima Plant upgraded to an industrial waste measurement system that automatically compiles statistics and analyzes them. Starting in FY2006, we plan to add equipment, expand application to other departments, and, based on the resulting waste volume data, set targets for reduction.



## Environmentally-friendly Logistic Systems

Adopting the Value Stream Map (VSM) philosophy in our improvement activities has changed ways of thinking at our sites. What used to be accepted as the natural way of transporting, warehousing, and mass-producing items is now a target of our activities to eliminate wastefulness. Here we introduce our logistic systems through F/F activities, which has proven highly effective in reducing environmental load.

### Improving Logistic Systems Through F/F Activities

The JAE Group is aggressively promoting the F/F activities to improve our logistic systems both at home and overseas. Improving logistic systems boosting truck loading ratios, reviewing distribution routes, and other efforts to make delivery more efficient have not only had the effect of cutting logistic systems costs, but, on the environment front, also

#### ● Domestic Activities

Continuing on from FY2004, Nikko Logistics, Corp (NLC) promotes direct delivery to the customer. This approach has made a major contribution to reducing environmental load by making delivery more efficient: by reducing truck trips, reducing the use of forklifts during loading and unloading, and simplifying warehouse management.

promises to greatly reduce the environmental load as well by conserving energy by reducing fuel usage, cutting down on the air pollution represented by particulates, NOx, SOx, and other toxic components in truck exhaust, and reducing the greenhouse gas (CO<sub>2</sub>) emissions from burning fuel.

#### ● Overseas Activities

We are aiming for similar effects with our overseas logistics as well by employing shipping companies that do not use intermediate warehouses. Consolidating forwarders, for example, has allowed us to boost export part loading ratios, reduce the number of trucks required from five to three, and generally made delivery much more efficient.

In March 2005, at JAE Philippines, Inc., we changed over to palette sizes more suitable for truck transport make transport more efficient.

## Environment Accounting Data

The JAE Group adopted environment accounting in FY2002. Quantitatively comparing the cost of our environmental activities with their effects helps us ensure their efficiency.

Item	Breakdown	Costs (Unit: 1000 yen)
Total investments for the period	Compliance with the EU RoHS Directive, introducing other equipment, investment in plating waste water treatment facilities, etc.	103,280
Total research and development costs for the period	Compliance with the EU RoHS Directive, other research and development man-hours, etc.	37,730

Statistics sources : JAE Group domestic production sites (JAE Akishima Plant and four production subsidiaries)  
Note: The JAE Akishima Plant includes JAE Services, Ltd. and JAE Engineering Ltd., subsidiaries located on the premises.

Target period : April 1, 2005 to March 31, 2006

Monetary unit : All sums are rounded off to the nearest 1,000 yen.



## Inquiry

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