

Environmental Management

Since we have been aiming at the corporate-wide application of environmental protection activities, all our works have acquired ISO 14001 certification. An environmental control framework is also taking root in our office divisions. Now, we are going to promote the environmental management level in the whole group, as well as encourage the creation of environmental control frameworks in our affiliates.

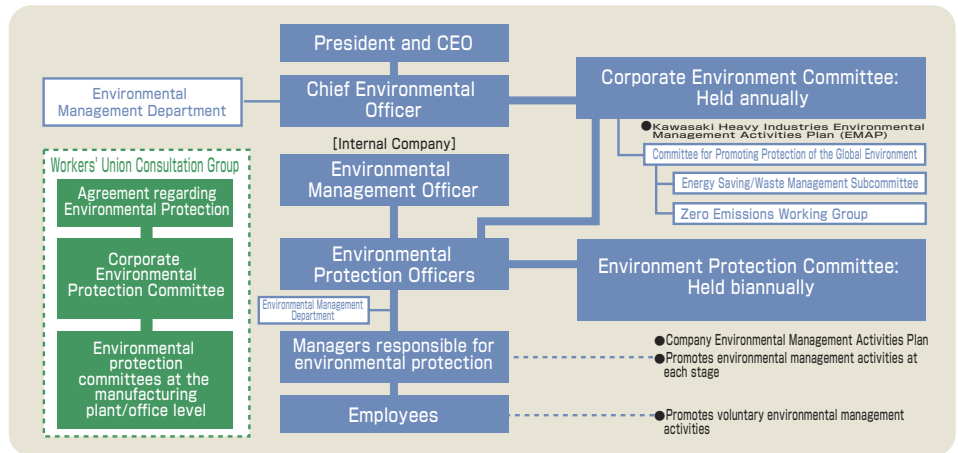
Organization for Environmental Management

Our 4th (FY2003-FY2005) Environmental Management Activities Plan (EMAP) defines the promotion of environmental management for sustainability in the internal company system as well as the commitment of the Kawasaki Group to the environment. In this plan, the organization for promoting environmental management for sustainability after the establishment of Kawasaki Shipbuilding and Kawasaki Precision Machinery (KPM) as independent companies will appear as illustrated on the right.

The major differences from the organization in FY2002 are as follows:

- In each internal company or technology development department, an environmental management officer was appointed.
- Also, in the affiliate company group in the head office that guides the affiliates, environmental management officer was appointed.

[Environmental Management System]



4th (FY2003-FY2005) Environmental Management Activities Plan and FY2003 Key Measures

Item	4th (FY2003-FY2005) Environmental Management Activities Plan	FY2003 Key Measures
Environmental Philosophy	<ul style="list-style-type: none"> • Enhancement of environmental activities to promote environmental consciousness ① Environmental Handbook for Kawasaki Group will be published in FY2004. ② Information technology will be utilized. ③ Education activities will be continued and information will be upgraded. 	<ul style="list-style-type: none"> • Preparation of draft of Environmental Handbook • Planning of environmental education utilizing information technology • Continued reporting of environment-related topics and deepening of information
Environmental Management	<ul style="list-style-type: none"> • Establishment of EMS with major subsidiaries in Japan • Establishment of a technique for analyzing activities of internal companies • Periodic publication of environmental information associated with business management • Realization of online environmental data collection through intranet 	<ul style="list-style-type: none"> • Planning of EMS establishment for consolidated subsidiaries • Investigation into indexes for analyzing environmental management activities • Periodic publication of Environmental Management Information • Investigation into online environmental data collection
Environmentally Conscious Products	<ul style="list-style-type: none"> • Application of Design for Environment (DfE) (product assessment, LCA, etc.) for major products • Promotion of green procurement by acquiring data from sources of procurement • Enhancement of supply of products that promote environmental protection and reduce environmental impact 	<ul style="list-style-type: none"> • Application of DfE for major products • Development of database from supplier survey report about environmental management status, and application of rules about green procurement • Achievements in green procurement of office items • Study trends in environment-related laws and regulations and social needs to be able to expand the scope of products that contribute to environmental protection
Environmentally Conscious Production	<ul style="list-style-type: none"> • No administrative penalty, administrative provision, resident complaint, etc. • Setup of voluntary control standards that addresses social needs • Determination of energy and material flows for each major process • Reduction in total emissions of greenhouse gases to FY1990 level (reduction of 9,500 t of CO₂) • Reduction in total waste production by 5% relative to the FY2000 level (reduction of 3,500 t) • Realization of zero waste disposal in all works by the end of FY2004 • Implementation of hazardous chemical substances reduction program 	<ul style="list-style-type: none"> • No administrative penalty/provision, resident complaint, etc. • Research into possible voluntary control standards • Development of program for acquisition of energy and material flows for major processes • Reduction in emissions of greenhouse gases by 1% relative to FY2002 level • Reduction in waste production by 2% relative to the FY2000 level • Zero waste disposal by Kobe Works (Machinery) and Akashi Works • Development of harmful chemicals reduction program • Promotion of total ban on use of PCB-using equipment
Environmental Communication	<ul style="list-style-type: none"> • Continued publication of environmental report, which contains site-specific data and environmental impact data for major affiliates • Promotion of communications with stakeholders • Positive cooperation in environmental activities of national and local governments 	<ul style="list-style-type: none"> • Continued publication of environmental report, which contains site-specific data • Establishment of a system of risk communication with stakeholders • Promotion of environmental volunteer activities

Environmental Management System

Activities for Acquiring ISO14001 Certification

In FY2002, Kobe Works (Shipbuilding) was awarded ISO 14001 certification, which marked the completion of making an Environmental Management System (EMS) for all the Kawasaki works in Japan.

The Nagoya Office received the designation of Eco-office that was created by Nagoya City. Kawasaki Head Office, branch offices and affiliates will continue to promote the establishment of EMS.



"Eco-office designation" of Nagoya Office

Company/Division	Year and month of certification	Reviewing & registering organization
Rolling Stock, Construction Machinery & Crushing Plant Company	Rolling Stock Division	2002.2 LRQA
	Construction Machinery Division	2000.5 JICQA
	Crushing Plant Business Division	2000.9 NK
Aerospace Company	Aerospace Company	2002.2 BSK
Gas Turbines & Machinery Company	Gas Turbine Division	2000.3 LRQA
	Machinery Division	2000.12 NK
Plant & Infrastructure Engineering Company	Power Plant & Industrial Plant Engineering Division	2001.2 NK
	Environmental Control Plant Division	1999.3 NK
	Steel Structure & Industrial Equipment Division	1999.11 JICQA
Consumer Products & Machinery Company	Consumer Products & Machinery Company	2000.2 DNV
Affiliates	Kawasaki Shipbuilding Corporation	
	Kobe Works	2002.8 NK
	Sakaide Works	2000.8 DNV
	Kawasaki Precision Machinery	1998.2 DNV

Reviewing & registering organization:
 LRQA: Lloyd's Register Quality Assurance
 JICQA: JIC Quality Assurance
 NK: Nihon Kaji Kyokai (ClassNK)
 BSK: Japan Defence Association
 DNV: Det Norske Veritas

Environmental Audit

Environmental Audit is performed at the following three levels:

- ① Environmental Management Hearing held by Environmental Management Department with all the internal companies and divisions.
- ② Internal Environmental Audits performed by each internal company and division within the scope of their EMS.
- ③ ISO 14001 EMS audit conducted by an outside reviewing and registering organization.

Environmental Management Hearing, held by our Environmental Management Department, was introduced in FY2001 as a practice that supersedes previous in-house environmental audits. This internal organization continually monitors and helps ensure that our 3-year EMAP and yearly activities and key measures are ap-

propriately developed and making achievements as expected. Discussion sessions are also held with company presidents so that environmental considerations are effectively reflected in business management. Through these activities, we intend to improve the environmental management levels of the whole group that is defined in our Medium- and Long-Term Environmental Vision.

To promote continued improvement through routine environmental management activities each internal company and division conducts an Internal Environmental Audit and commissions an ISO 14001 audit by an external organization. In particular, internal companies and divisions exchange information about the issues pointed out in a periodic audit by outside organizations, including improvements or preventive measures to improve the quality of their audit systems.

Risk Management

While environment-related laws and regulations are being enhanced or newly enacted, each internal company is fully involved in risk management so that established EMS functions satisfactorily and environment-related trouble is avoided.

Compliance with Laws and Regulations, and Pollution Prevention

In FY2002, we experienced the accidents summarized below, and investigated into the causes of each case and exercised a remedy. We are making efforts to avoid recurrence of similar accidents.

[Administrative provision]

· Sakaide Works: Some wastewater from the washing area flowed into the rainwater drainage channel. As a result, the pH and oil in the channel exceeded the standard values.

[Administrative warning]

· Shiga Combustion Laboratory: Iron rust inside the test furnace was expelled into the nearby residential area.

· Gifu Works: Approximately 10 L of solution containing hexavalent chromium spilled within the site.

· Kobe Works: Oil spilled from the fuel tank of a ship under repair.

Environmental Education

Based on an annual program, each internal company provides environmental education. The whole corporation periodically holds internal environmental audit training courses to train employees who will constitute the core staff for implementing EMS. In FY2002, we held six training sessions, and 118 persons were certified as internal auditors. During the FY1996-

To be able to promptly respond to inquiries about the environment or requests for information disclosure, and to maintain smooth communications with stakeholders (concerned parties) including local citizens and NPOs, we are considering starting a training course for prospective risk communicators.

[Violations, Accidents and Complaints in the Past 5 Years]

FY	1998	1999	2000	2001	2002
Judicial or administrative penalty	0	0	0	0	0
Administrative provision	1	4	0	0	1
Administrative warning	0	0	1	1	3
Resident complaints	3	2	0	4	2

- ※ ● Judicial or administrative penalty: Punishment by judicial or administrative authorities
- Administrative provision: Instructions imparted in writing (e.g. improvement order, etc.)
- Administrative warning: Verbal warning

In November 2002, in our Akashi Works, 0.22 mg/L of trichloroethylene, which is approx. 7 times higher than the environmental standard value, was detected in the ground water. We reported this fact to Akashi City authorities, and have been performing purification and monitoring.

FY2002 period, a total of 1,051 persons were trained including those from affiliates.

The number of people qualified as having knowledge about environmental protection is summarized in the tables to the right.

[Number of Qualified Pollution Control Managers]	
Air	80
Water	84
Noise	37
Vibration	26
Others (Dust, Senior Managers)	19
Total	246

[Number of Qualified Energy Managers]	
Heat	20
Electricity	23
Total	43